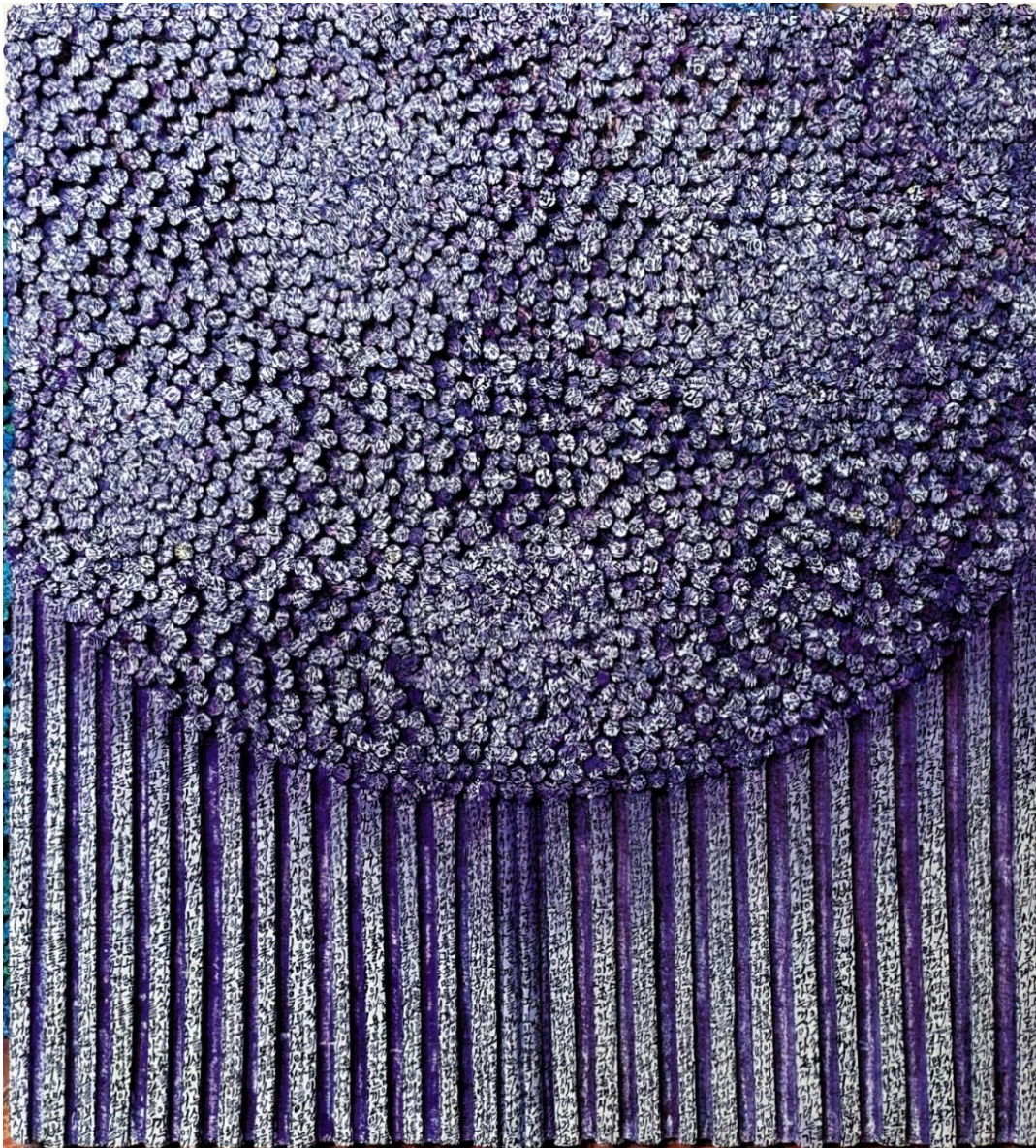




# KAUPA Letters

*Journal of the Korean American University Professors Association*

[KAUPA.ORG](http://KAUPA.ORG)



**Korean American University Professors Association**

**북미한인교수협회**

**June 2021**

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| <sup>2</sup> Dept. of Materials Science and Engineering, Univ. of Central Florida, USA  |    |
| <sup>3</sup> Dept. of Materials Science and Engineering, Seoul National Univ., Korea  |    |
| <sup>4</sup> Dept. of Electrical and Computer Engineering, Univ. of Central Florida, USA  |    |

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**Editorial Board Members**

**Professor Young B. Choi**, *Regent University* (Publisher & Editor-in-Chief)

**Professor Youngsuck Kim**, *Mansfield University of Pennsylvania* (Editor)

**Professor Emeritus Munsup Seoh**, *Wright State University* (Editor)

**Professor Kang-Won Wayne Lee**, *University of Rhode Island* (Editor)

**Professor Jae K. Park**, *University of Wisconsin-Madison* (Editor)

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*For your any questions, please send your e-mail to KAUPA Headquarter at*

*[kaupahq@gmail.com](mailto:kaupahq@gmail.com).*

**Cover Photo: Bed of Roses in Enumeration (헤아림의 꽃길), Huh Hwe-Tae(허회태), © 2021**

Korean Paper (“Hanji”) and Mixed Media, 65cm x 60cm

Emography URL= <https://www.youtube.com/watch?v=dYLrIFuUENI&feature=youtu.be>

Artist URL=<http://moosan.net>

## I. President's Message



Greetings from KAUPA!

*"Hope never abandons you, you abandon it."*

*George Weinberger (American Psychologist, 1929-2017)*

Now, summer is just around the corner. I hope you had a good spring semester in the turbulent pandemic time.

We held an Administration meeting in April 2021 and addressed various outstanding KAUPA issues. Good ideas were discussed. Thank you so much to the attendees! One result of the meeting is the webinar "Facing Anti-Asian Racism: Present and Future Directions" (May 27, 2021), a forum exchanging ideas about the recently emerging anti-Asian racism in

America.

A dedicated KAUPA columnist, Prof. Yeomin Yoon, contributed an essay, *"One Interpretation of Buddha's Teachings"* and another renowned KAUPA columnist, Dr. Semoon Chang, contributed *"The Cobra Effect of Stimulus Package."* Dr. John Jae-Dong Kim contributed an essay *"공감 능력."* Michelle Kim and Lisa K. Son contributed *"Two Generations of Impostors: Metacognitive Oscillations between Confidence and Modesty."* Dr. Shin Gyonggu contributed an article *"Witness of the Gwangju Uprising."* I contributed an essay *"Dosan An Chang-ho."*

Three exciting research papers were presented in the Research in Progress section. I wish to express my sincere thanks to the following contributors: Woo Hyoung Lee (University of Central Florida), Yongho Sohn (University of Central Florida), Changhyeon Yoo, Tae-Jun Ko, Sang Sub Han, Mashiyat Sumaiya Shawkat, Kyu Hwan Oh, and Yeonwoong Jung (University of Central Florida and Seoul National University). Please do not hesitate to submit your precious research results with your best.

Renowned great figures will continue to be introduced. Dr. Esther Pak (박 에스더), 'The First Korean Woman Physician to Practice Western Medicine in Korea' was honored in this issue.

In the Special Section, Dr. Tatiana Rosenstein of Germany contributed an art essay *'허/호/태: 감성의 본질'* about Mr. Huh Hwe-Tae who is an inventor of Emography and his recent artworks. She is a globally well-known art critic based in Europe.

Stay safe and healthy in this hot summer of hope and green!

Grace & Peace,



Young B. Choi, Interdisc. Ph.D.  
Regent University  
The 14<sup>th</sup> KAUPA President



**II. KAUPA Activities****CALL FOR PAPERS****The 2021 KAUPA International Conference (KIC 2021)****- “Interdisciplinary Scholarship Beyond the Borders” -****Virtual, August 2-3, 2021**

Since the beginning of 2020, the eco-system of all academic disciplines has experienced a totally new environment due to the novel coronavirus disease 2019 (COVID-19). With actions and moves in an array of scientific discoveries, communication, and technologies, however, people have adapted to private and public cultures and society for survival. People have sought healings through music, cures from medicines, and support from varying resources. The world is looking ahead and ready for a new chapter of history after the pandemic.

The role of academia in these challenging times can be to diagnose, analyze, and offer solutions for a better world to come post-COVID-19. Effects on all aspects of cross-interdisciplinary research efforts to contribute to society are profound. KAUPA (Korean American University Professors Association) is a forerunner in shaping, maintaining, and inheriting the tradition of cross-interdisciplinary research contributions. The 2021 KAUPA International Conference is intended as an effort for research advancement in a variety of academic fields foreseeing a bright future.

The Conference Committee calls for theoretically, methodologically, and practically sound academic works exploring changing conditions especially in the disciplines of COVID-19, Arts and Humanities, Science, Technology, Engineering, and Mathematics (STEM), and Music. Topics may involve research activities in many contexts, but not limited to music performances, COVID-19 statuses and discoveries, research development and analysis in the Arts and Human Sciences, and STEM projects. Research methodologies may include qualitative, quantitative, comparative,

ethnographic, scientific, critical, and performance approaches. The Conference Committee encourages submissions that draw on academic innovations and advancements in each discipline. All KAUPA scholars in the United States, Canada, and Republic of Korea are welcome to submit their research works to the conference.

The four main sections to submit are as follows.

1. COVID-19
2. Arts and Humanities
3. Science, Technology, Engineering, and Mathematics (STEM)
4. Music.

Please submit an abstract (one page, double-spaced) by **June 30, 2021** in Word format to Dr. Tom Oh ([tom.oh@rit.edu](mailto:tom.oh@rit.edu)) and Dr. Seok Kang ([seok.kang@utsa.edu](mailto:seok.kang@utsa.edu)). If you have any questions about your abstract submission, please send your e-mail to the KAUPA Headquarters at [kaupahq@gmail.com](mailto:kaupahq@gmail.com).

If you have any questions regarding your submission, please contact one of the conference organizers (Tom Oh, Seok Kang, and Young Choi). Submissions will be reviewed by the conference Technical Program Committee (TPC) Members. The Conference Committee will notify submitters of acceptance by **July 10, 2021**.

The instructions for a conference registration to submit your abstract are as the following:

1. Visit KAUPA website.
2. Sign up and upload your information.
3. Submit your abstract.
4. Confirm your registration.

### **Conference Chair**

Young Choi, Regent University

### **Conference Vice Chairs**

Tae (Tom) Oh, Rochester Institute of Technology

Seok Kang, University of Texas at San Antonio

**Advisory Committee Members**

Youngsuck Kim, Mansfield University of Pennsylvania  
Munsup Seoh, Wright State University  
Kang-Won Wayne Lee, University of Rhode Island  
Jae K. Park, University of Wisconsin-Madison  
Semoon Chang, University of South Alabama  
Yeomin Yoon, Seton Hall University  
Helen Kim, The University of Alabama at Birmingham

**Organizing Committee Members**

Tae (Tom) Oh, Rochester Institute of Technology  
Seok Kang, University of Texas at San Antonio  
Jungwoo Ryoo, PennState Altoona  
Seong Nam Hwang, Southeast Missouri State University  
Sam Chung, City University of Seattle  
Jongwook Woo, California State University, Los Angeles

**Section Chairs**

COVID-19: Josephine Kim, Harvard University  
Arts and Humanities: TBD  
Science, Technology, Engineering, and Mathematics (STEM): Seong Nam Hwang,  
Southeast Missouri State University  
Music: Ryu-Kyung Kim, University of Dayton

**Technical Program Committee Members**

Taehee Kim, Sam Houston State University  
Hyuna Park, Brooklyn College of the City University of New York  
Mary Kang, New York University College of Dentistry  
Woo Hyoung Lee, University of Central Florida  
Bomi Kang, Carolina State University  
Jung-lim Lee, Delaware State University



Kyongseon Jeon, Columbus State University

Ryu-Kyung Kim, University of Dayton

Chin S. Park, New York University Rory Meyers College of Nursing

Angie Y. Chung, University at Albany, SUNY

Jaeyoon Kim, Point Loma Nazarene University

Bomi Kang, Carolina State University

Sohee Kang, University of Toronto Scarborough

Sylvia Kim, Fresno Pacific University

Jinho Kim, Lewis University

Jung C. Lee, Milwaukee School of Engineering

Paul Chonkun Hong, The University of Toledo

Heejung An, William Paterson University of New Jersey

Lisa Son, Barnard College of Columbia University



## KAUPA April 2021 Admin Meeting

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### The 1<sup>st</sup> KAUPA Monthly Admin Meeting

April 9, 2021, 7:00 PM – 8:30 PM CDT (8:00 PM – 9:30 PM EDT)

#### Meeting Agenda

1. Opening Remarks – President
2. Introduction – each (led by Operations Director)
3. Presentation of brief plan of each leader – All the leaders
4. Identification of the outstanding issues – led by President.
  - a. KAUPA International Conference 2021 Prep
  - b. Web renovation
  - c. Membership
  - d. KAUPA Letters
  - e. KAUPA Ambassadors Program
  - f. KAUPA Columnists Recruiting
  - g. Others
5. Brainstorming on the outstanding issues – All the leaders
6. Next meeting planning – led by Planning Director.
7. Adjournment – President
8. Photo taking

## Facing Anti-Asian Racism: Present and Future Directions



**Helen Kim**, PhD, is a retired (2015) Associate Professor from the University of Alabama School of Medicine Dept of Pharmacology & Toxicology, where she spent a lifetime as a protein biochemist. She currently stays extremely busy as President of the 501(c)(3) nonprofit organization, the Alabama Asian Cultures Foundation, whose mission is to raise Asian cultural appreciation and education in Alabama by hosting events and programs that showcase Asian arts and cultures.



Mezzo-soprano **Ryu-Kyung Kim**, D.M.A., joined the faculty at the University of Dayton in 2013. She has performed major roles in operas and concert works throughout the world in many prestigious venues including Carnegie Hall and Lincoln Center.



**Lisa K. Son**, Ph.D., Professor of Psychology, joined the faculty of Barnard in 2002. Her research and teaching interests include cognitive psychology, learning, and memory. Her most recent publication was a book written in Korean, on Metacognition.



**Tae (Tom) Oh's**, Ph.D. Professor, Computing and Information Science, Rochester Institute of Technology, research focus has been on Vehicular Area Networks, Data Acquisition and Analytics, Mobile Device Security, Internet of Things (IoT), Sensor Networks, and Assistive Technology (Smart Cane).



**Eung-Jun Min**, Ph.D. is a professor in the Communication Department at Rhode Island College. His research areas are in Media Studies and Global and International Communication. He teaches Communication courses including Mass Media and Society, Introduction to Film and Video, and Media Law.

**WHEN:** Thursday, May 27, 2021, 7 – 8:30 p.m. Central

**WHERE:** <https://utsa.zoom.us/j/99546444344>

Open to all KAUPA members.

Please RSVP at: <https://bit.ly/2RbpjU4>

Hosted by Korean-American University Professors Association (KAUPA)

For more information, please contact Seok Kang, Academic Director for KAUPA,  
[seok.kang@utsa.edu](mailto:seok.kang@utsa.edu)







## 2021 KAUPA Scholarship Announcement

Founded in 1986, the Korean American University Professors Association (KAUPA) is a non-profit organization consisting of Korean-descendant professors in North America, with the common interest of promoting the betterment of society through their talents and expertise.

KAUPA is committed to helping students with their educational expenses while attending school in North America. The awarded amount of each scholarship will be dependent on the budget available for each academic year.

**Application Deadline:** August 1, 2021 (Late application will **NOT** be accepted!)

**Sources of Scholarship Funds:** The KAUPA scholarships are entirely funded by the annual membership fees and endowed funds. KAUPA may receive additional scholarship funds from industries, governments, organizations, and other various sources.

**Sources of Endowed Scholarships:** Three endowed scholarships are provided by the following donors:

1. Yung Bog Chae: 4<sup>th</sup> Minister of Science and Technology in Korea
2. K. Wayne Lee: 12<sup>th</sup> President of KAUPA
3. Jae K. Park: 13<sup>th</sup> President of KAUPA

**Qualifications of Applicants:** KAUPA scholarships will be awarded to Korean descendants who are pursuing an undergraduate or graduate degree at a college or university and aspiring a career in an academic field in North America. A Canadian or US citizenship is **NOT** required.

## Application Information

The applicants should submit a single **compressed .zip file** containing all of the following materials directly to the Scholarship Director Dr. Jung Lee ([lee@msoe.edu](mailto:lee@msoe.edu)):

- Scholarship application form (Please download and use this [fillable PDF file](#));
- Transcripts;
- CV or resume;
- An essay for this year's prompt (submit a 1-page .docx file; use the [Calibri font of 11 pts and a single line spacing](#)): **"How to better promote the awareness of rising anti-Asian hate violence in your community"**; and
- Three letters of recommendation; the recommenders may email-submit their letter directly to the Scholarship Director Dr. Jung Lee ([lee@msoe.edu](mailto:lee@msoe.edu)).

The General Scholarships are open to undergraduate and graduate students in all majors. While the area and qualification of the Endowed Scholarships are chosen by the donors, the endowed scholarship candidates are selected from the same pool of the general scholarship applicants by the Scholarship Selection Committee and the donor(s).

**Awardee Selection:** The Scholarship Selection Committee members will consist of at least five KAUPA members. The Scholarship Director will form the committee. President and Vice Presidents may be asked to join the committee.

**Selection Criteria:** The criteria for KAUPA scholarships may include, but are not limited to, the following:

- Prior academic performance;
- A personal essay submitted with the application;
- Three letters of recommendation from the professors of the applicant (and/or others who have first-hand knowledge of the applicant's capabilities);
- Additional biographical information regarding the applicant's career, academic and other relevant experiences, supporting materials for competition participation, financial need; and
- The Scholarship Selection Committee's conclusions as to the applicant's motivation, character, ability, or potential.

**Awardee Announcement:** The recipients of KAUPA scholarships will be announced in September 2021 through the [KAUPA Facebook](#) and the [KAUPA website](#). In addition, the list of the scholarship recipients will be sent to the KAUPA members, who may notify their institution's recipient to their respective college or university.

**Qualified Expenses:** Educational, living, and travel expenses incurred while attending an educational institution, including:

- Tuition and fees for enrollment and attendance;
- Course-related expenses – fees, books, supplies, and equipment required for taking the courses; and
- Room and board, travel, research, clerical assistance.



**CALL FOR PAPERS****KAUPA (Korean American University Professors Association) Letters**

KAUPA seeks “Research in a Nutshell” papers that will be published in the upcoming issue (a template attached) of the KAUPA Newsletter. The purpose of this CFP is to provide KAUPA members with an opportunity to

- a) showcase their topnotch research and
- b) expect collaborations for future projects among interested members.

KAUPA welcomes members’ research studies summarized in one or two-page that can deliver key findings and implications.

The summary needs to be easily understandable by readers from different disciplines.

Topics encompass from Engineering to Natural Sciences, Human Sciences, and Liberal and Fine Arts, etc. The overall structure of a summary consists of a) Introduction, b) Related Studies, c) Methods, d) Findings, e) Discussion, and f) References.

The submission due date is always open. Please send your submission to Dr. Seok Kang at [academic@kaupa.org](mailto:academic@kaupa.org). Please use a template on the following two pages - **Research Paper Format for KAUPA Letters**.

For additional information regarding the CFP, please contact KAUPA President Dr. Young Choi ([ychoi@regent.edu](mailto:ychoi@regent.edu)) or Academic Director Dr. Seok Kang.

***You are cordially encouraged to submit!***





## Research Paper Format for KAUPA Letters

Author Name<sup>1</sup>, Co-Author Name<sup>2</sup>

<sup>1</sup>Affiliation, <sup>2</sup>Affiliation

### I. INTRODUCTION

These instructions give you basic guidelines for preparing a publication-ready 1 or 2-page paper for the KAUPA Newsletter.

Please follow these instructions as closely as possible to assist in publishing a uniform digest. These instructions have been prepared in the preferred format.

### II. HOW TO FORMAT THE PAGE

#### *A. Page Size and File Format*

Prepare your paper on a Letter size paper 8 1/2" x 11" (21.5cm x 27.9cm). Do not use A4 size paper, as this will cause formatting problems. **Submit the Microsoft Word file of your paper.**

#### *B. Fonts*

Best results will be obtained if you use Microsoft Word or a word-processing program with several font sizes. Try to follow the font sizes specified in Table 1. As an aid to gauging font size, 1 point is about 0.35 mm. Use the Times New Roman font.

#### *C. Margins and Formats*

In formatting your paper, set the top margin to 0.85 inch (22 mm), bottom margin to 1.25 inch (32 mm) and left and right margins to 0.9 inches (22.8 mm). The column width is 3.22 inches (82 mm) with 0.3 inches (7 mm) space between the two columns. It is best to simply use this template.

*One column format is also very fine if you like.*

You should left- and right- justify your columns. Use automatic hyphenation. Please adhere to American English spelling conventions. Please do not number this page.

### III. ILLUSTRATIONS

You can include a maximum of 1 figure and 1 table as needed. Figure caption should be below the figure; table caption should be above the table.

### IV. ACKNOWLEDGEMENTS

Add appropriate acknowledgements as needed.

### V. REFERENCES

1. Authors, “Title of the Article,” *Reference Information such as Journal or Conference Proceedings*, Vol. X, No. Y, pp. 0000-1111, 2013.

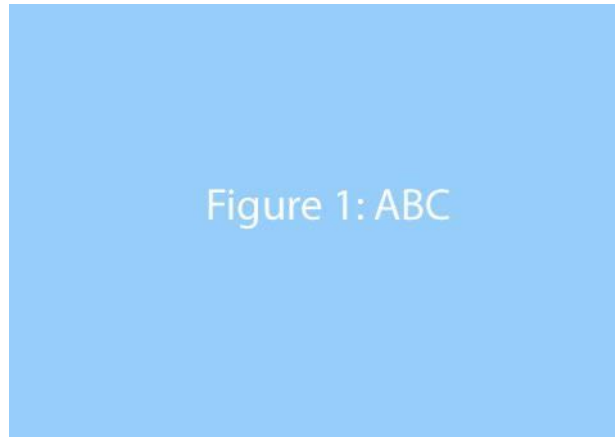


Figure 1: ABC

Table 1: Font Styles for Print-Ready Paper

| Size | Bold       | Italic     | Text Type (example)             |
|------|------------|------------|---------------------------------|
| 14   | <b>Yes</b> |            | Paper Title                     |
| 12   | <b>Yes</b> |            | Presenter's Name                |
| 10   | <b>Yes</b> |            | Co-Author's Name                |
| 10   |            |            | Affiliations                    |
| 10   | <b>Yes</b> |            | Headings<br>( <b>SUMMARY</b> )  |
| 10   |            | <i>Yes</i> | Subheadings ( <i>B. Fonts</i> ) |
| 10   |            |            | Main Text                       |

### III. KAUPA Member News

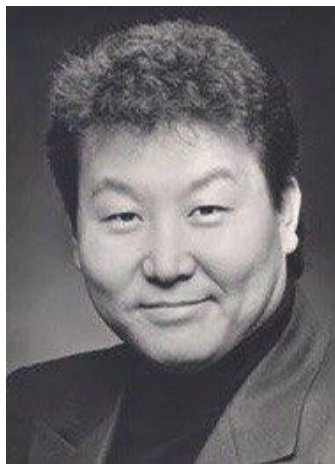
#### The PORTRAIT OF YOUNGSUCK KIM, Mansfield University of Pennsylvania

Jürgen Thym

Professor Emeritus of Musicology

Eastman School of Music

University of Rochester



The interview on which the portrait of Youngsuck Kim is based was conducted by Jürgen Thym, Professor Emeritus of Musicology, Eastman School of Music, University of Rochester.

*Professor Youngsuck Kim, on the voice faculty at Mansfield University since 1988, recently decided to retire at the end of the academic year 2020/21. The music department will lose a superb musician, a resourceful teacher of voice, and a fine conductor. Celebrating his long presence at the university, Hear the Voices, the Newsletter for the Friends of Choral Music at Mansfield University devoted the centerfold story of its April 2020 issue to Dr. Kim. On a sunny afternoon in the middle of March, Youngsuck Kim sat down with the editor of the newsletter to converse about his background, his life in South Korea and in the United States, the highpoints of his professional career, and the prospects in the next chapter of his life. The portrait is reprinted in KAUPA Letters in a slightly expanded version.*

Youngsuck Kim (김영석) was born in Busan (Pusan), South Korea, a bustling port city on the southeast coast of the Korean peninsula. Early on, he discovered that music might be his calling and, after finishing high school, he studied voice at Seoul National University, the premier academic institution in the country's capital, earning the equivalent of a Bachelor of Music degree. Rather than continuing his musical studies, he had to serve in the South Korean army for three years (the length of the draft for young men in a country still technically at war with its Northern neighbor). He was stationed in the eastern mountain region of the DMZ or Demilitarized Zone, one of the hotspots of the Cold War (perhaps only comparable to West Berlin before the Wall came down in 1989); one of the assignments of his unit was to discover underground activities in the area, as North Koreans were prone to build tunnels across the border to smuggle agents or military deployments into the southern part of the country. Fortunately, Kim never encountered military skirmishes during those years.

When his military service was over in 1980, Kim picked up his musical education again. He passed a national exam in music, English, and history that allowed him to continue his studies abroad. He applied to and was accepted by the New England Conservatory in Boston, where he earned a Master of Music degree in 1983. Having set his sights even higher, he enrolled with a full scholarship as

a doctoral student at the University of Miami. “Boston was too cold for me,” he confided, “I wanted to be where it was warm.” Florida provided an additional lure for the aspiring musician: watching dolphins and scuba diving. (It may come as a surprise that Kim is, or was, a licensed scuba diver!) Dolphins and diving did not prevent him from advancing in matters musical: A Doctor of Musical Arts was bestowed on him in 1987.



Kim the singer

Here it is perhaps necessary to catch up with family matters. While still in Korea, Kim met Kyungsook Cho (조경숙), a student of medicine and pharmacology. They got married: a son Francis was born in Boston, a daughter Genevieve followed in Miami. Cho received her M.D. from Ewha University in Seoul, an academic institution founded by American Methodist missionaries, and added a Ph.D. in pharmacology from the University of Miami to her résumé as well as some postdoctoral work at Cornell University. Subsequently, she was offered a professorship at Ewha University. But by that time the children had grown up with English as their native language, causing difficulties with their schooling in Korea, and it was decided to reconstitute the family in the United States. Cho became a doctor at Cooper University Hospital in New Jersey, Kim joined the music faculty at Mansfield University in 1988. That arrangement enabled the couple to retain a two-career marriage and a semblance of family life; it certainly was preferable to lengthy intercontinental flights crossing the Pacific Ocean (which, depending on the winds, could be anywhere between 15 and 18 hours with refueling stops, if needed, in Alaska). Not to mention the cost of travelling by air.

Kim is a person who, most of his life, lived in big metropolitan areas: Busan, Seoul, Boston, and Miami. A small town in Pennsylvania did not seem a permanent solution. Kim admits that he initially thought of Mansfield University as a three-year job before moving on. But the small town and the university exerted a certain lure. He felt welcome, he encountered “really nice people,” and

the University supported him in becoming a “resident alien,” i.e., qualifying for a Green Card. (Meanwhile, he and his wife have become American citizens.) In addition, he noticed that Mansfield, PA was not in the middle of nowhere, as the saying goes, but in the middle of everywhere—in easy driving distance to the cultural and urban centers of the Northeast: four hours to the George Washington Bridge before getting into New York City, four hours to Philadelphia’s Colonial District or Baltimore’s Inner Harbor, and five hours to Washington, DC. “There was a time when I had twenty recitals per year in cities of the Northeast. I would not have been able to keep up with a demanding concertizing schedule had I been stationed in Idaho or Wyoming.” Mansfield, thus, grew on him. A believer in life-long learning, he was also able to have private lessons with teachers of singing in the Northeast and take conducting lessons at Westminster Choir College, just a half-hour drive from Philadelphia.



When Professor Kim was eligible (and approved) for a sabbatical year to recharge his batteries outside of Mansfield, his class of students surprised him with a cake and well-wishes pasted in green colors onto the cake. How can you lose weight with an adoration expressed in such a fashion?

“Mansfield allowed me to become fulfilled as a musician,” Kim summed it up. He had great students in his studio, some of whom have gone on to become professional singers. He is as proud of them as he is of those who have become music educators to teach at colleges, high schools, elementary schools, and community music schools to provide instruction for the next generation of musicians. One of them, a pretty good singer, he admits with a smile, has become a pastor in a Presbyterian Church. (And he added, with another smile: “I hope he insists on a good choral program in his church.”) He has also been fortunate to collaborate with Michael Crum and Todd Ranney, colleagues at Mansfield University in producing works for the musical theatre (musicals and operas). One of the productions, *Forever Plaid*, even was shown in Kim’s native South Korea with Mansfield students in the lead roles. He was the soloist in various concerts Peggy Dettwiler, another colleague and choral director, produced with Mansfield University’s Festival Chorus:



Handel's *Messiah*, Verdi's *Requiem*, Haydn's *The Creation*, and, more recently, Honegger's *King David*. Early in his tenure at Mansfield, Kim even conducted a show choir called the Mansfieldians. "When Jack Wilcox retired," he explained, "the job fell on me to continue the tradition, as the youngest on the faculty: I had no choice, I took a summer course on show choirs in New Jersey and just did it." A show choir does no longer exist at Mansfield, but the name "Mansfieldians" is now carried by the vocal jazz group directed by Sheryl Monkelién.



Kim the conductor in the orchestra pit

In spite of being firmly tied to Mansfield and the US-Northeast, South Korea still beckoned as a performing venue for Kim. (Besides, he had family there: his parents, when they were still alive, expected their son to return, at least once in a while, and a brother and his family lived there as well.) Every year during his more than 30 years at Mansfield, he ventured across the Pacific Ocean to perform recitals or sing in, produce, or conduct operas. The editor of *Hear the Voices* has in his collection a DVD of a wonderful production of Puccini's *Gianni Schicchi* at Seoul National University (see picture with Kim posing in front of a poster in Seoul, Korea). The arts scene in that relatively young country, especially after trading a military dictatorship for democracy in the 1980s, has been inspiring, and Kim must have felt at home there in more than one way.



Kim posing in front of a poster, calling attention to his production of Puccini's *Gianni Schicchi* at Seoul National University





Taking the bows

At this moment, it may be appropriate to confess that the editor of *Hear the Voices* had a voice lesson, perhaps fifteen years ago, and it was with Kim in his Mansfield studio. (He flattered me by saying: “You have a voice!”) What I learned then (and also by observing him in recitals) was that breath support was his mantra and key to his success as a teacher of singing. “Breath is essential in singing,” he confided, “but my teachers did not know how to teach an aspect they recognized as important.” Kim found an answer by studying with Jin Hee Moon, a yoga instructor at Rutgers University (again, close to Philadelphia), with expertise in Indian philosophy and meditation techniques. She revealed to him avenues for breathing and teaching voice that he has put into practice in his Mansfield University studio. “Breathing properly can even help with stage fright,” he added. And there is another trick of the trade connected to breathing: At any pharmacy store in the US, you can acquire a Neti Pot, a gadget with which you can cleanse your sinuses (and I learned about it from Kim many years ago). That kind of cleansing is part of his daily routine, and he attributes that ritual to having only four “colds” or “flus” in thirty years. That’s a pretty good record!

But there is more to Kim’s pedagogy, and some aspects are shrouded in mystery or analogies. It was a surprise to me when Kim quoted a statement by Muhammed Ali, one of the great boxing champions of the twentieth century: “Float like a butterfly, sting like a bee!” How does this apply to the art of singing? “Well,” he said, “you need to remain flexible or ‘float’ before you have gathered the power to deliver the punch line—in a song, in an aria, in any piece of music—and thereby capture your audience.” Or on a less lofty level: “Sharing the expressive power and beauty of music with others is our mission as performers.”



Kim posing with students from his voice studio, who hold up their certificates as winners at a recent NATS (National Association of Teachers of Singing) competition

“What are your plans for the future?” I asked and added: “Retirement is not the end, but just a new chapter in one’s life.” Well, the house north of Williamsport, PA, has been sold in no time. A breathtaking view overlooking the Endless Mountains of Pennsylvania helped. A condominium (still to be completed) overlooking the Delaware River in Bristol, PA, just half an hour north of Philadelphia has been purchased; the three-story apartment has an elevator, just in case the afflictions of old age set in and staircases are difficult to negotiate. The place is close to a Methodist church in New Jersey just across the river where Kim was choral director for several years; it is also close to his children and grandchildren, and it is close to several metropolitan areas, a biotope that makes this cosmopolitan thrive. “It looks like retirement to me,” I ventured to say. And then Kim produced, with a smile, what he had received, just three days ago, in the mail: a license for being an antique dealer in the State of New Jersey. Being a scuba diving instructor in Florida in the 1980s and a dealer of antiques in New Jersey in the 2020s seems to be an unusual way to bookend a splendid career at Mansfield University, but Kim has been successful in so many things: he will manage to astonish us in his new calling as well.



Youngsuk Kim and Kyungsook Cho (on the right) with their children and grandchildren

And after our conversation had come to an end, Kim took me aside: “I must add one more thought.” He paused, as if he wanted to tell me a secret, and then continued. “I would like to express my gratitude to my great colleagues for their trust, support, and patience during all those years.”

PS. The interview on which the portrait of Youngsuk Kim is based was conducted by Jürgen Thym, Professor Emeritus of Musicology, Eastman School of Music, University of Rochester

### **Four Tributes to Youngsuk Kim**

#### **From a recent student**

From the first voice lesson I took with Professor Kim, I felt the special connection we still have today. We see each other for two hours every week: a fifty-minute master class on Tuesday and a one-hour voice lesson on Thursday, and so see each other so briefly (with the exception of opera rehearsals in the fall), upon walking in his office, it feels like I am meeting with a best friend. Professor Kim took my voice to new heights from my first semester here at Mansfield. He has a deep knowledge and passion when it comes to classical music. There is so much conviction in his teaching style. He totally shaped my practice ethic and made me both a better musician and student in the process. The ambition Professor Kim displays is awe-inspiring. He is a fantastic role model, and I am so blessed to have met him.

Cassie Zinkan, Outstanding Senior Nominee, 2018/2019

#### **From one of his first students**

I was privileged to study under Dr. Kim for his first two years at Mansfield. Sitting on the interview team as a student representative, I knew immediately that there would be a connection! And there was, bless his heart! He was going to take an overly sensitive, sniveling, insecure young woman and get more music out of her than she ever imagined possible! Easy? No. Worth it? TOTALLY! Hard work and perseverance was the only acceptable avenue.

Dr. Kim and I connected again about five years ago, and I studied with him for roughly another year. As if taking me on once wasn't enough for him! These lessons culminated in giving a recital in my home church. The reason? I had to have a goal! The recital was actually his goal for me, and I'm very appreciative that, with just the right amount of toughness and tenderness, we were able to achieve this goal! It was a combination of exhilarating and terrifying! However, his calm demeanor let me know that everything would be alright, and it was!

In my junior year of college, feeling completely overwhelmed and lost, I decided that I would quit. It was because of Dr. Kim's encouragement, kindness, understanding, and a very “matter of fact” talking to, that I was able to continue—even when things felt difficult—and obtain my degree. Dr. Kim was and is a man who has uncompromisingly high standards and who can pull more out of any student than they ever dreamed possible. It was an honor and privilege to study with him, both as a young adult, and as a “more seasoned” woman. (Let's face it - an old lady!)

Best wishes on your retirement, Dr. Kim. You have been an inspiration and blessing to the many lives you have touched. I know this first-hand and send you all my love.

Wendy Rosner (Class of 1989), Lewistown, PA, Teacher at Juniata Christian School, McAlisterville, PA

**From the staff pianist in the music department**

Dr. Kim's mentorship has been an invaluable gift over the years. Our successful and rewarding collaboration and our friendship has left a footprint in my life. I will always treasure the perspective and insights about musical expression he has so generously shared.

"It is the supreme art of the teacher to awaken joy in creative expression and knowledge."

BRAVO, Maestro!

Linda Seipler, Staff Pianist, Mansfield University

**From a non-traditional student**

In the fall of 2015, I auditioned for placement in the Festival Chorus at Mansfield University. There, I met three people to whom I am spiritually indebted, one of whom was Dr. Youngsuck Kim, who accepted me into his studio as a non-matriculated student. I was seventy years old at the time and was in sad shape. I had lost my wife to cancer two years earlier which led to my loss of interest in life in general, including dreams of a singing career.

Dr. Kim changed all that. After five years of study with him, I have a completely different outlook on life, I sing better than I did as a young man, and I have to thank Dr. Kim for both. Dr. Kim is a master of many talents, too numerous to elaborate upon here. The greatest of these is his instinctual skill as a voice teacher, which appears to be a natural extension of his multi-faceted life experience and personality. Of the many benefits I have received from his training, his most impactful is a clear definition of what constitutes good vocal technique, and how to obtain it. He describes this process concisely with knowledge and conviction. His use of imagery is awe-inspiring. With a few short words, he paints a picture in a student's mind that is more effective than any long-winded dissertation.

Some of these images are shared with all his students. Before singing an aria, for example, he frequently reminds a pupil to sing with "Sing with cool head and then warm heart", "Float like butterfly and sting like a bee" and "the eyes of a genius and the mouth & jaw of an idiot." Other comments might be directed to specific individuals: "Stand up straight, Richard, it makes you look younger!"—an effective strike to one's vanity, but, nevertheless, a constructive suggestion. These instructions were always given with kindness or humor, and reveal Dr. Kim's empathy with all his students, reflecting his concern for their professional and personal growth. Simply put, Dr. Kim brings "humanity" to his lessons.

Congratulations, dear friend, and mentor! I wish you and your family long life and much happiness on the road ahead.

Richard Weston, oldest living student and admirer of Dr. Kim

**Professor Edward T. Chang Published the Book ‘Pachappa Camp: The First Koreatown in the United States’**

Professor Edward T Chang (장태한) of University of California, Riverside uncovered the buried past of early Korean American history in Riverside, California by publishing the book ‘Pachappa Camp: The First Koreatown in the United States.’

He is a professor of Ethnic Studies and the founding director of the Young Oak Kim Center for Korean American Studies of University of California, Riverside.

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<https://news.ucr.edu/articles/2021/04/27/uncovering-buried-past-early-korean-american-history-riverside>

**Professor Kyeyoung Park Published the Book ‘LA RISING: Korean Relations with Blacks and Latinos after Civil Unrest’**

Professor Kyeyoung Park (박계영) of University of California, Los Angeles published the book ‘LA Rising: Korean Relations with Blacks and Latinos after Civil Unrest (LA 항쟁: 한인들의 흑인 및 라티노와의 인종관계 변화.)’ The book deals with the racial relationship issue regarding the Korean Americans after LA Rising.

She is a professor of Anthropology and Asian American Studies of UCLA.

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## IV. Research in Progress

### Announcement

#### KAUPA Best Paper Awardees of KAUPA Letters Volume 8, Number 4

KAUPA selected the following three KAUPA Best Papers by evaluating the papers published in the Research in Progress section of KAUPA Letters Volume 8, Issue Number 4 which was published on April 1, 2021. KAUPA is awarding three KAUPA Best Papers per each issue. Please submit your research progress to KAUPA Letters.

The author(s) of the highest quality paper will be awarded also a gift donated by our corporate sponsor Mommy's Pot with a KAUPA Best Paper Award certificate. Professors Seok Kang of the University of Texas at San Antonio and Hyungjoon Kim, Hanbat National University, Korea were honored this time.

Congratulations!

***Information-Seeking on Coronavirus Disease 2019: Communication Factors Influencing Behavioral Intention***

Seok Kang, Sophia Dove, University of Texas at San Antonio  
Hyungjoon Kim, Hanbat National University, Korea

***한국 여성들의 목소리(Korean Women's Voices)***

Kyoung Cho, University of South Florida

***Digital Versus Conventional Dentistry: Effectiveness in Evaluating a Crown Preparation***

Mary Kang and Jong Kil Kim, New York University College of Dentistry

## Microelectrodes for Biofilm and Corrosion Research in Drinking Water Distribution Systems

Woo Hyoung Lee

Associate Professor, Department of Civil, Environmental, and Construction Engineering  
University of Central Florida  
Orlando, FL, 32816, USA

### Abstract

Corrosion including biocorrosion is an important, but poorly supported topic in water systems for which there is a definite need for advancements, and microelectrode techniques can offer the potential for advancing the field because they enable focus at the interfaces where reactions are occurring. Further development of this area of research has great merit for sustainable water infrastructure management. The use of microelectrodes has been improved our understanding of disinfectant biofilm penetration and associated biofilm viability and *in situ* reactivity at metallic pipes, leading to better biofilm control strategy and corrosion control practice for clean and safe drinking water.

### 1. Introduction

Corrosion of drinking water plumbing materials significantly deteriorates drinking water quality and causes a failure to supply safe water to the public. As a result of the Lead and Copper Rule [1], many water utilities in the U.S. have evaluated corrosion control strategies. A better understanding of the fundamental mechanisms contributing to the rates and magnitude of corrosion at the surface of pipe materials can lead to improved corrosion control strategies, reduction of the costs for distribution system maintenance and conservation of drinking water quality. Although conceptual theories regarding the surface chemistry of corroding metals in drinking water exist, actual measurements of water quality parameters at these surfaces need to be made. A better understanding of the fundamental mechanisms contributing to the rates and magnitude of corrosion at the surface of pipe materials can lead to improved corrosion control strategies, reduction of the costs for distribution system maintenance and conservation of drinking water quality. In this paper, we will explore the application of various microelectrode techniques which have been used for evaluating biofilm penetration and investigating oxidation-reduction potential (ORP) changes at metallic pipes during disinfection processes.

### 2. Microelectrodes for biofilm and corrosion research

A needle-type electrochemical microsensor (3–15  $\mu\text{m}$  of tip diameter) represents one of the most prominent, novel methods for studying water-solid interface (e.g., membrane, biofilm) without destroying the structure. It is a non-destructive analytical method with a high spatial resolution (as tip size). It consumes low analyte and the sample can be measured undisturbed and repetitively. It also provides a fast response, along with low sensitivity to stirring (minimal artifact due to turbulence/diffusivity gradients). Microprofiles can be measured using microsensors by moving the sensor tip along a transect, logging data at defined points in space. Either profiling into objects (i.e., biofilm or sediment) or profiling towards object surfaces (i.e., metal, concrete, or membrane) is possible. Various kinetic parameters including net specific consumption and production rates can

be estimated from the measured concentration profiles. The proposed research will fabricate and apply various needle-type electrochemical microsensors, which are capable of probing the full depth of a biofilm, determining the profile of the relevant water quality parameters (e.g., dissolved oxygen, nitrate, nitrite, pH, phosphate, and ammonia) with a high spatial and temporal resolution, and enabling calculations of the relative contribution of water-solid interface water chemistry dynamics and biofilm activity. Figure 1 shows an experimental set-up for microprofiling performance using microsensors. From the measured concentration profiles, important kinetic parameters at a given location can be determined. These include constituent flux ( $J$ ), diffusion coefficient ( $D$ ), the maximum reaction rate ( $K_s$ ), and disinfectant biofilm penetration. The microsensors are very useful for understanding dynamics and kinetics in complex environmental aquatic systems such as ultrafiltration, bio-membrane processes, and biofilm processes.

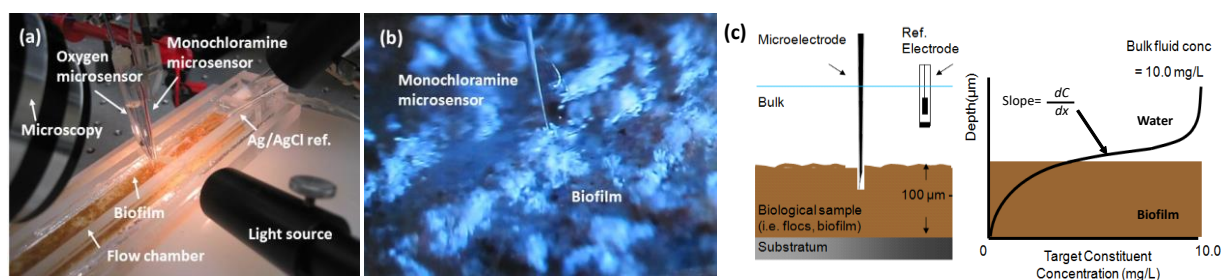


Figure 1. Microprofiling performance: (a) an experimental set-up of microprofile measurement. (b) a microsensor approaching to a biofilm, and (c) a microsensor approaching to an aged copper surface [2].

### 3. Disinfectant biofilm penetration and its effect on biofilm activity and viability

Biofilm is considered more resistant than suspended cultures, and thus it is important to understand the dynamics of biofilm activity and viability related to disinfectant biofilm penetration. We directly measured free chlorine and monochloramine penetration in a laboratory-grown nitrifying biofilm [3] (Fig. 2), demonstrating that monochloramine penetrates faster and farther into biofilm compared to free chlorine and that minimal free chlorine biofilm penetration occurred even after applying it to a biofilm that has been fully penetrated by monochloramine [4]. This indicates that free chlorine application may only inactivate the outer biofilm, leaving the inner biofilm unaffected by free chlorination, depending on the application (i.e., exposure time, flushing procedure, and bulk water concentration) and system (i.e., pipe materials) species [4]. Preliminary research using thick nitrifying biofilm (~2,000  $\mu\text{m}$  thickness) showed that free chlorine required 16 days to achieve 75% penetration of the biofilm [5], unlike monochloramine which showed full biofilm penetration in about 2 days. The free chlorine penetration was also associated with a decrease of biofilm thickness from sloughing due to the strong oxidation of free chlorine, implying a potential increase of suspended bacteria in the system when conducting free chlorine biofilm burn. In general, free chlorine biofilm penetration compared to monochloramine was limited and slower, and corresponded directly with a decrease in viability, showing that bacteria survived for several days where the free chlorine was not penetrated (Fig. 3). From the results, it was hypothesized that free chlorine demand will increase along with a retardation of free chlorine biofilm penetration when considering reactive materials like ductile iron and copper.

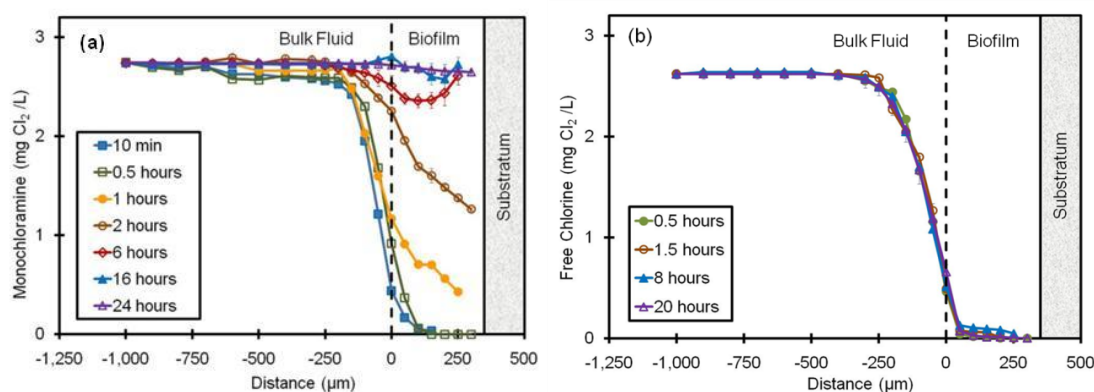


Figure 2. *In situ* disinfectant biofilm profiles upon exposure to (a) monochloramine and (b) free chlorine, highlighting the difference in biofilm reactivity and penetration between monochloramine and free chlorine. Biofilm surface is defined as 0  $\mu\text{m}$  depth [3].

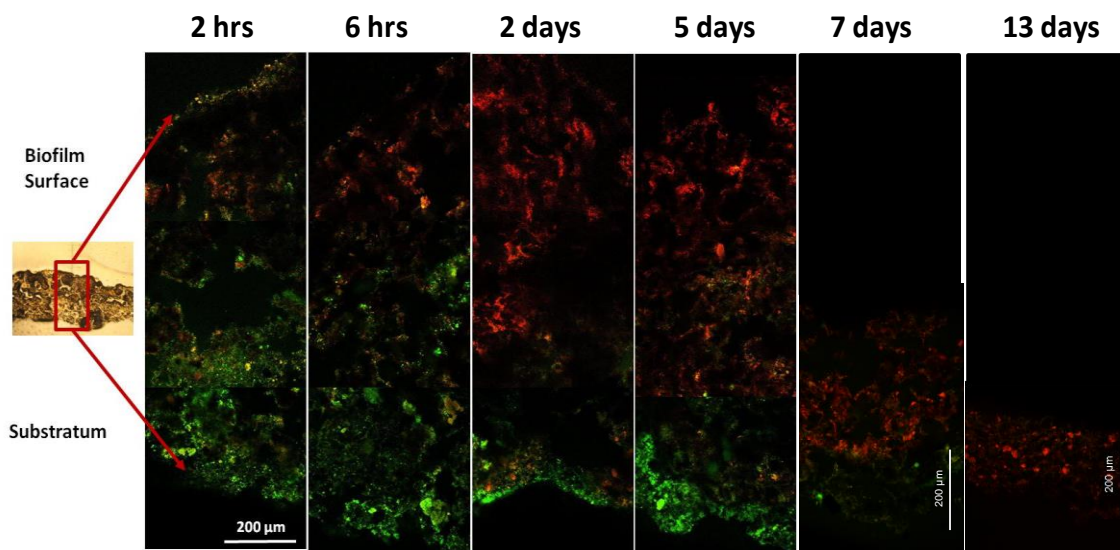


Figure 3. Representative confocal laser scanning microscopy (CLSM) images of cross-sections of cryoembedded biofilm stained with Live/Dead BacLight. Biofilm viability progression during free chlorine application. Green color: SYTO9 stained viable cells, Red color: PI stained nonviable cells (i.e., membrane compromised cells). The images are oriented such that the image bottom represents the slide surface, and the image top represents the bulk fluid. The scale bar equals 200  $\mu\text{m}$  [6].

#### 4. Development of a novel method for *in situ* metal surface microprofile measurements

A recessed and glass capillary-based microelectrode is fragile and easily broken when it touches the base of hard surfaces such as metal, limiting its repetitive application for investigating metal-liquid or metal-biofilm-liquid interfacial processes temporally and spatially. Because of this limitation, most studies using microelectrodes have been limited to microbial mats, sediments, biofilms on soft substratum (e.g., agar and fiber membrane), and soft tissues [7-14]. To overcome this challenge, we developed a novel guide-microsensor to avoid breaking the real microsensor when it touches the pipe surface (Fig. 4). It is a platinum microelectrode without recess where the

tip is encased in a high concentration (10% v/v) cellulose acetate membrane which provides flexibility and physical strength. By using the guide sensor, we successfully measured monochloramine concentration profiles to within 5  $\mu\text{m}$  above a ductile iron coupon surface without tip breakage (Fig. 4(c)) [15]. This advance in a microscopic analytical technique will enable direct investigation of in situ redox chemistry dynamics at metal surfaces which is transformative for advancing our understanding of corrosion and biocorrosion.

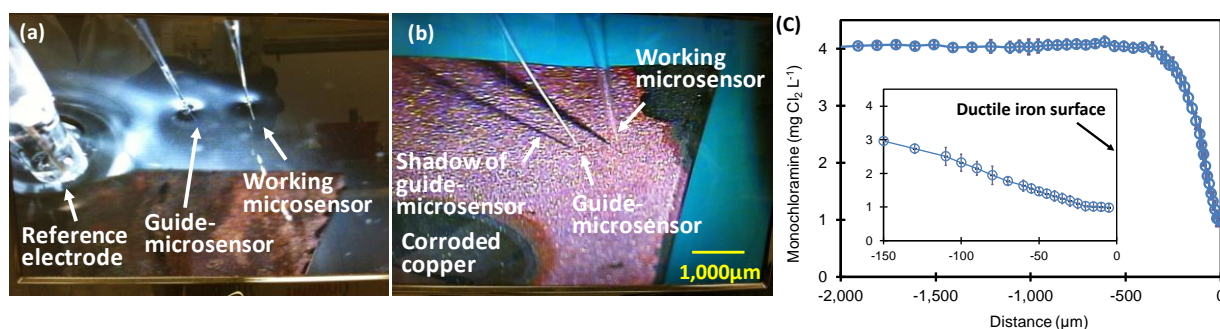


Figure 4. *In situ* metal surface microprofile measurements: (a) microsensor tip positioning using light reflection at the water surface, (b) metal surface detection by monitoring inflection of a guide microsensor, and (c) a representative monochloramine concentration profiles above a ductile iron surface. The inset in (c) has a modified scale to clearly show the concentration gradients up to 5  $\mu\text{m}$  above the metal surface.

## 5. ORP variation on metal coupon surfaces

ORP reflects the oxidation status of water systems and many studies have used ORP monitoring for water disinfection control [16-18]. Chlorine loss leads to an ORP drop and soluble metals increase [19], while a chlorine increase leads to an ORP increase, metal precipitation [20, 21], biofilm sloughing [6], and DBP formation [22]. In this study, ORP microprofiles were measured before and after the experiments in two different areas (no corrosion and corroded exam locations) on ductile iron coupons and four different transition areas (areas with a color change) on copper coupons during monochloramine application (50  $\text{mg C L}^{-1}$  DIC, pH 9.0, 3  $\text{mg P L}^{-1}$  phosphate, and 4  $\text{mg Cl}_2 \text{ L}^{-1}$  monochloramine) (Fig. 5). Initially, the change in ORP ( $\Delta\text{ORP}$ , mV vs. Ag/AgCl) from the bulk water to the metal surface was  $-112$  mV (average of three locations) and  $-62$  mV for ductile iron and copper, respectively. After 7.5 hours of test water application, the  $\Delta\text{ORP}$  of the ductile iron with the visible corroded area was similar to that measured with the new ductile iron ( $-89$  to  $-117$  mV), but the  $\Delta\text{ORP}$  of the aged copper where the color had visibly changed generally increased ( $58$ – $133$  mV) compared to the new copper (Fig. 5). Over time, the ductile iron showed relatively stable redox potentials at two different locations where visible corrosion occurred. However, for copper and as with the pH microprofiles, the ORP microprofiles demonstrated greater variation as compared to ductile iron. In addition, a sudden increase of ORP was observed at 200  $\mu\text{m}$  above the aged copper surface (Fig. 5), indicating that more oxidants are present in this location [23].



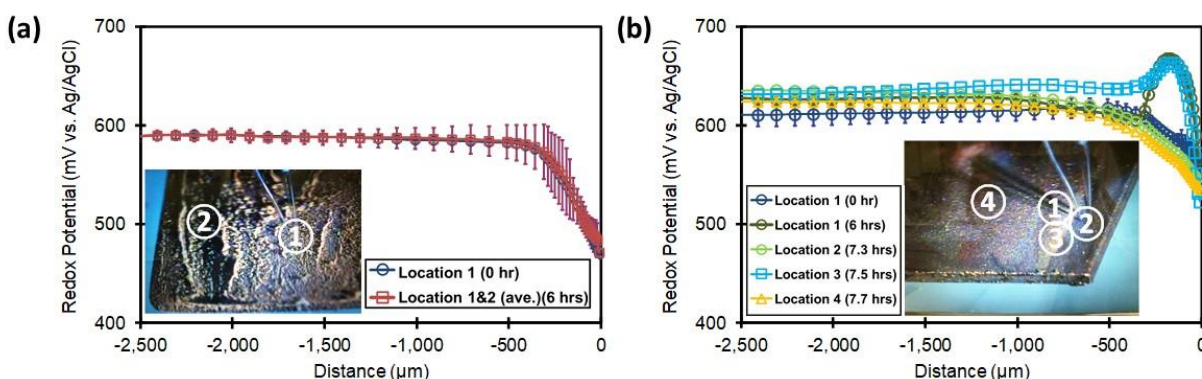


Figure 5. ORP variations on (a) ductile iron and (b) copper coupon surfaces during monochloramine application. Initial ORP microprofiles (0 hr) were compared with final (6–7.7 hrs) OPR microprofiles (#1 and #2 for ductile iron) and/or color change (#1 to #4 for copper). Experiment 16A (ductile iron) and 16B (copper): 50 mg C L<sup>-1</sup> DIC, pH 9.0, 3 mg P L<sup>-1</sup> phosphate, and 4 mg Cl<sub>2</sub> L<sup>-1</sup> monochloramine.

## 6. Conclusion

The research will continue to provide a fundamental understanding of the dynamics of water/metal surface chemistry and the mechanism behind the persistence of biofilm in different reactive pipe materials of water distribution systems. Greater scientific insight regarding the fundamentals of corrosion and biocorrosion under various water environments will lead to improved corrosion-prevention strategies and thus better overall water infrastructure maintenance as well as public safety.

## 7. Acknowledgements

This research was partially supported by the United States Environmental Protection Agency (USEPA) (Contract No. EP-C-05-056/ WA No.2-47). The U.S. Environmental Protection Agency, through its Office of Research and Development, funded and managed, or partially funded and collaborated in, the research described herein. It has been subjected to the Agency's peer and administrative review and has been approved for external publication. Any opinions expressed are those of the authors and do not necessarily reflect the views of the Agency, therefore, no official endorsement should be inferred. Any mention of trade names or commercial products does not constitute endorsement or recommendation for use.

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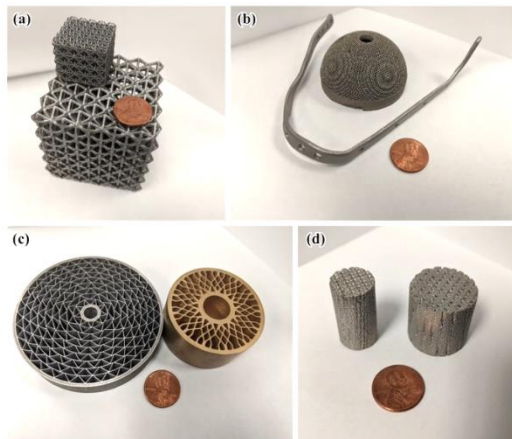
## Understanding and Improving the 3D Printability of Metallic Alloys for Laser Powder Bed Fusion Additive Manufacturing

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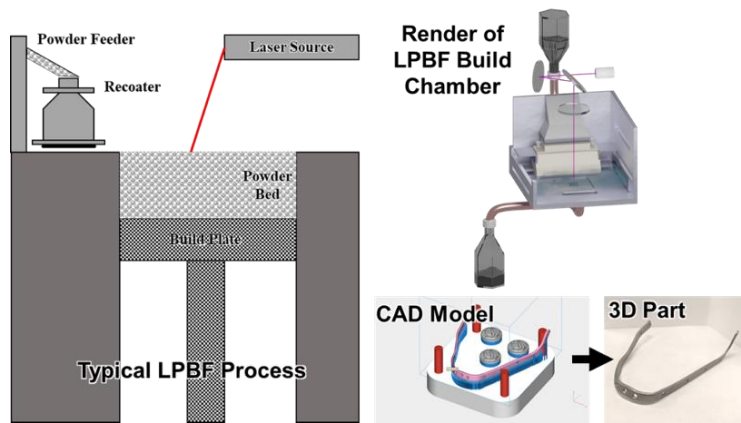
### I. INTRODUCTION

Additive manufacturing (AM), more commonly known as 3D printing, is an emerging technology with potential to “produce” or “manufacture” complex shapes as seen in Figure 1, which cannot be manufactured using conventional manufacturing technologies [36]. AM also offers, through its agility and portability, customized, on-demand, and even on-site manufacturing (e.g., home, hospitals, smart factory... earth, space stations, moon, or Mars). However, for AM of metallic alloys, there is a technological bottleneck. Most commercial alloys available for engineering application have not been created with AM in mind, and in fact, many high-performance engineering alloys are not suitable for AM due to extensive formation of flaws such as porosity and solidification cracking. This technological bottleneck in turn presents an opportunity to design and develop new and/or modified metallic alloys that can desensitize AM process variables and take advantage of thermo-kinetic environments associated with AM technology. Therefore, AM technology is envisioned with a new paradigm in advanced materials development and component manufacturing by utilizing the AM technology as tools to rapidly produce, assess and characterize materials with new/modified compositions and novel microstructure.



*Figure 1. Examples of complex parts built with AM technology called laser powder bed fusion: (a) lattice structure, (b) mandible and patellofemoral biomedical implants, (c) flame arrestors, and (d) bone scaffolds. All parts were manufactured with the SLM™ 125HL at University of Central Florida.*

One of the most popular AM technology is laser powder bed fusion (LPBF) [2] that has an origin from Fockele & Schwarze (F&S) of Germany, circa 1995 [3]. In this AM process, a layer of powders is spread out, and selected regions within the powder layer, i.e., powder bed, are scanned with high-energy laser for selective melting and solidification. So LPBF is commonly referred to as selective laser melting (SLM). After the first layer is melted and solidified, the build plate moves down by a small increment, and the next layer of powder bed is applied, so that the fusion of metallic powders can be repeated to print (or build) 3D objects that were designed on computer (e.g., computer aided design, CAD). While there are many parameters that control the structural integrity and performance of the printed object, most important parameters are considered



to be laser power (W), laser scan speed (mm/sec), distance between adjacent scans known as hatch spacing (mm), and the powder layer slice thickness (mm). A schematic illustrating the LPBF process is presented in Figure 2.

*Figure 2: Schematics illustrating the LPBF process for AM of engineering components.*

## II. TECHNOLOGICAL BOTTLENECK

While AM has a potential to be transformative and is cited as one of the ten technologies that would bring about the smart factory in industry 4.0 [4], there are techno-social challenges that require scientific understanding, engineering accomplishments, socio-economic policies, and environmental resolutions. Among these, for a materials scientist/engineer, lack of available metallic alloys for LPBF is considered a critical bottleneck that hinders the technological breakthrough and adaptation for “metal 3D printing.”

To put this challenge in proper perspective, it is worthwhile to note that there are thousands of materials that have been discovered, designed, developed, and refined throughout our history. Consider the history of civilization, defined by stone age, bronze age, iron age, and modern age of flight and information brought to us by mastery of Ni-base superalloys for turbine engines and semiconductors/interconnects/storage for your devices. Our history has been defined by the discovery and mastery of materials, and our technological dreams have been limited by the materials that can perform in reality. To that end, modern metallic alloys have been designed, developed, and refined, since the invention of cast irons and steel in 17<sup>th</sup> century which enabled the steam engine and the first industrial revolution. And now there are thousands of “commercially” available metallic alloys, carefully designed for specific processing/manufacturing routes and for specific engineering application. However, unfortunately none were developed with AM in mind, and most of them are, unfortunately not suitable for AM technology such as LPBF. This is because of metallurgical phenomena through interacting with high power, rapidly moving laser, which lead to keyhole pores<sup>1</sup>, lack-of-fusion flaws and solidification cracking<sup>2</sup> due to high temperature, high temperature gradient and rapid cooling-solidification associated LPBF as shown in Figure 3. Out of hundreds of metallic alloys commercially available [5], only about 20 compositions are considered “certified” for LPBF AM for commercial products, and unfortunately, these are available, perhaps not due to their outstanding properties or performance in engineering applications. Rather, they are certified for use because they are considered highly “printable” -

<sup>1</sup> Keyhole pores can be considered as bubbles that form during boiling, which are frozen within solid materials due to rapid solidification.

<sup>2</sup> Cracks that form in solid due to thermally induced stress during solidification with extremely rapid cooling ( $10^4$  to  $10^7$  K/sec).



resistant to solidification cracking, and fuse well without keyhole porosity formation. So, materials scientists and engineers are now tasked with design and development of new, high-performing metallic alloys that possess excellent LPBF printability/buildability. Modifying existing commercial alloys with minor compositional change, typically less than 1%, to improve the printability/buildability is also being investigated in parallel.

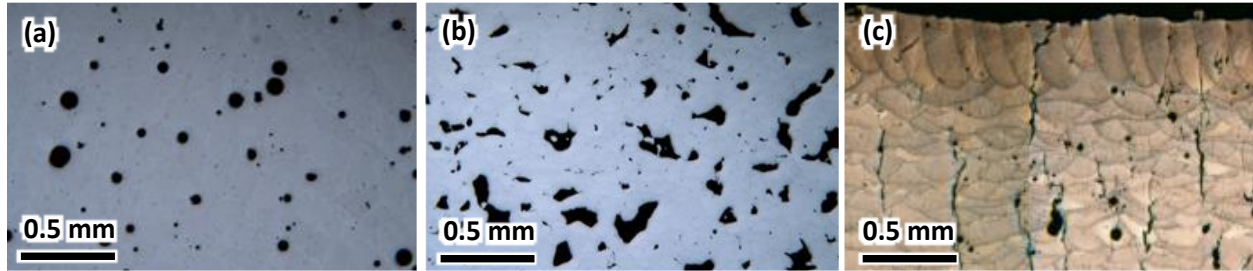


Figure 3. Micrograph illustrating the characteristics of (a) keyhole pores, (b) lack-of-fusion flaws and (c) solidification cracking, all of which are detrimental to integrity of manufactured engineering components.

### III. DESIGN AND DEVELOPMENT APPROACHES FOR METALLIC ALLOYS

While keyhole pores and lack-of-fusion flaws can be eliminated by appropriate selection of LPBF parameters (i.e., not too hot, and not too cold), mitigation of solidification cracking shown in Figure 3(c) remains a challenge because it is compositionally inherent in many commercially important alloys when they are rapidly solidified under extreme temperature gradient, such as in LPBF. Therefore, regardless of LPBF parameters employed, these cracks appear and negate structural integrity, strength, and fracture resistance of manufactured engineering component. To combat this challenge, a significant research effort has been carried out (and many still on-going) and identified three basic strategies to eliminate the solidification cracking as presented in Figure 4.

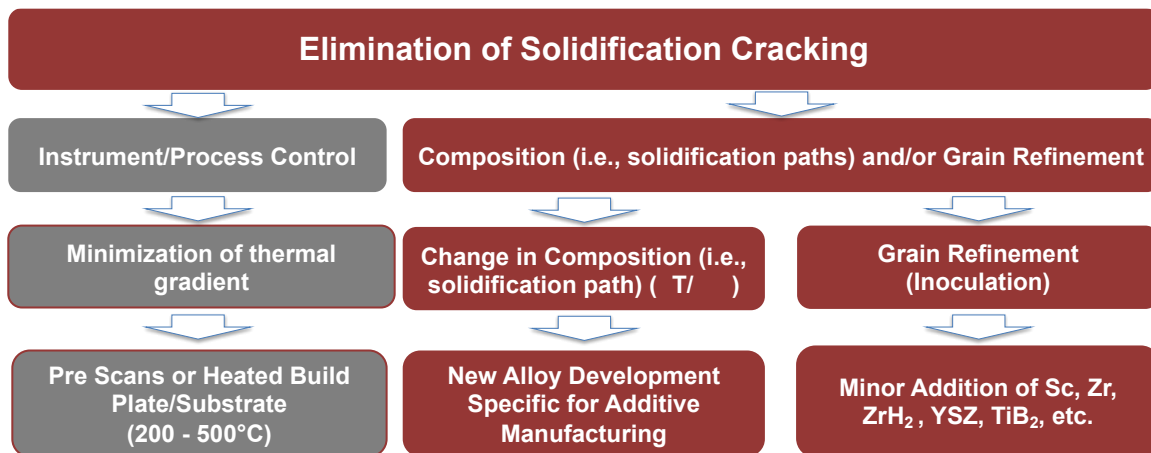
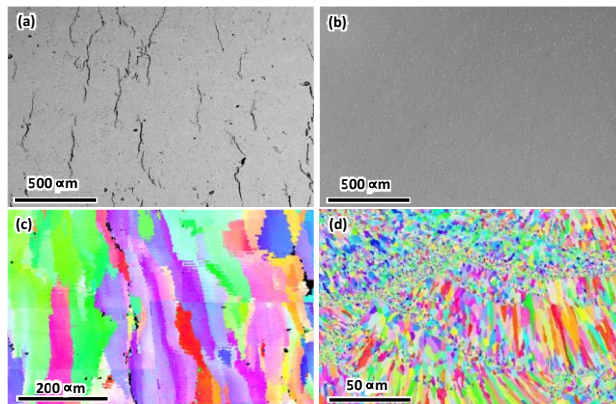


Figure 4. Technical strategies to eliminate solidification cracking during LPBF AM technology.  $\partial T / \partial f_s$  refers to change in temperature ( $T$ ) over change in fraction solidified ( $f_s$ ), and is a characteristic of particular metallic alloy composition.

There is an “instrument” control approach where thermal gradient during solidification is reduced by heating up the build stage or pre-scanning the previous layer solidified to warm up the part. The approach we are examining is founded more on the design and modification of alloy composition so that (1) the alloy solidification behavior, quantified by  $\partial T / \partial f_s$ , in terms of cracking tendency is reduced or (2) by so-called grain refinement (or inoculation) approach so that the solidifying metallic alloy can become more strain tolerant. A series of fundamental work involving both computation and experiment has been carried out to “document” alloy composition dependence of solidification cracking [5-7] and several strategies [8,9] have been put forward for experimental validation. These studies will help pave the way to new metallic alloys specifically designed and developed for LPBF. They are, at least in theory, designed to fuse with ease, and are not prone to keyhole pores or solidification cracking. Experimental validation is in progress.

More practical and short-term solution to “lack of available metallic alloys for LPBF” is the second approach involving grain refinement (or inoculation). This approach is based on minor modification of existing commercial alloy with addition of elements that promote nucleation of grains, i.e., development of strain tolerant fine-grained microstructure [10,11] as demonstrated in Figure 5. Extensive solidification cracking, observed in Figure 5(a) for commercial “aluminum alloy 7075” produced by LPBF, is completely eliminated with a minor addition of grain refiner, 1.0 wt.% (Sc+Zr), as seen in Figure 5(b). Corresponding grain microstructure<sup>3</sup> shows solidification cracks along the columnar grains that are as large as several hundred micrometers up to a few millimeters for unmodified 7075 alloy in Figure 5(c). Elimination of solidification cracking seen in Figure 5(b) corresponds to grain size reduction down to less than 50 micrometers, some as small as 5 micrometers for the (Sc+Zr)-modified, grain-refined alloy. In fact, this grain refine microstructure has yielded superior load-bearing ability as per Hall-Petch relation [12,13]. Moreover, this approach

appears to be uniformly applicable for most commercially important aluminum alloys [14].



*Figure 5. Secondary electron micrographs of (a) unmodified and (b) grain-refiner-modified aluminum alloy 7075 produced by LPBF. Corresponding grain microstructure observed electron backscatter diffraction micrographs for (c) unmodified and (d) grain-refiner-modified aluminum alloy 7075 produced by LPBF.*

The long-term impact of AM would be a “game-changer” for manufacturing enterprises [15]. So, changes in alloy composition, whether for a new or modified alloy must be scrutinized with extensive and repeated validation of manufacturing, testing and analysis for proper certification before commercial engineering applications. However, the emergence of AM technology has opened opportunities for materials scientists and engineers (and even for those identified themselves as metallurgist) to design and develop new materials with a materials processing platform that can rapidly explore new materials with a built-in ability to manufacture engineered

<sup>3</sup> Colors in micrographs in Figures 5(c) and 5(d) represent different grains with various orientations and demonstrate the size distribution of grains in solid materials.

components. This materials development activities must be accompanied by understanding of the scientific foundation associated with AM technologies. Interestingly many of the scientific foundations behind AM technology such as LPBF has been well established by our previous scholars in the field of alloy solidification [16] and welding [17]. Scientific and technological links between traditional “metallurgy” and new “materials science and engineering,” perhaps aided by extensive computation and artificial intelligence will pave the way to fulfill the potential of AM technology in the not-too-distant future.

#### **IV. SUMMARY AND EPILOGUE**

Additive manufacturing or 3D printing is an emerging technology with potential to manufacture complex and unique engineering components through its agility and portability, customized, on-demand, and even on-site manufacturing. Limited availability of metallic alloys deemed suitable for AM such as LPBF is one of the technological bottlenecks, which in turn, represents opportunities to design and develop new and/or modified metallic alloys specifically for AM. Moreover, AM technology presented new paradigm in advanced materials development with built-in component manufacturing capability. Technical approaches to design and develop new metallic alloys and to modify existing ones have been presented and discussed with respect to composition-dependent solidification behavior and microstructural development such as grain refinement.

Human history has been defined by discovery and mastery of materials. Emergence of 3D printing and additive manufacturing technology may represent the true “mastery” of materials. 3D printing is currently at its infancy, and we are dealing with scientific and technological challenges associated with metallic powders and fusion by laser melting, as described in this manuscript - perhaps analogous to carving of wooden blocks for woodblock 2D printing (200AD in China). The history of 2D printing has evolved, as we know, with notable contributions by movable metal typeset by Koreans, German printing press, American invention of typewriters, and of course, all sorts of printing technology connected to personal computers. Consider a future where 3D printing is available for both inorganic and organic substances, atom-by-atom, and molecule-by-molecule. For example, your dinner could be printed – yes, the food, drink, plate, utensils, napkins, etc. In fact, we have seen this technology in a popular science fiction such as Star Trek known as “the replicator.” Perhaps this vision is why so many small and medium businesses specializing in 3D printing are popping up all around the world, identifying themselves as “manufacturers,” a role traditionally reserved for global corporate entities and their vendors.

#### **ACKNOWLEDGEMENTS**

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## Mechanically rollable photodetectors enabled by centimeter-scale 2D MoS<sub>2</sub> layer/TOCN composites

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### Abstract

Wafer-scale CVD-grown 2D MoS<sub>2</sub> layers delaminated from their growth wafers are decisively integrated onto cellulose TOCN substrates and subsequently “rolled up” to the desired 3D structures. These new MoS<sub>2</sub>/TOCN composites of three-dimensionally rollable forms demonstrate intriguing photo-responsiveness unattainable with traditional photodetectors of fixed physical forms.

### I. Introduction

In recent years, two-dimensional (2D) transition metal dichalcogenide (TMD) layers have been extensively explored for unconventional optoelectronics owing to their extraordinary material properties coupled with van der Waals (vdW) bonding-enabled relaxed assembly.<sup>1, 2</sup> Such advantages project opportunities for realizing “mechanically reconfigurable” devices of exotic structures achieving an unprecedented level of multi-dimensional flexibility; *i.e.*, devices capable of reversibly accommodating severe mechanical deformation upon external stimuli preserving their intrinsic opto-electrical functionalities, impossible with conventional bulky and rigid 3D semiconductors.<sup>1, 3</sup> Two-dimensional (2D) molybdenum disulfide (MoS<sub>2</sub>) layers are suitable for visible-to-near infrared photodetection owing to their tunable optical bandgaps.<sup>1-4</sup> Also, their superior mechanical deformability enabled by extremely small thickness and van der Waals (vdW) assembly allows them to be structured into unconventional physical forms, unattainable with any other materials.

Large-area (> a few cm<sup>2</sup>) 2D MoS<sub>2</sub> layers grown by a chemical vapor deposition (CVD) were integrated onto transparent and flexible substrates composed of 2,2,6,6-tetramethylpiperidine-1-oxyl (TEMPO)-oxidized cellulose nanofibers (TOCNs) by a direct solution casting method. We developed MoS<sub>2</sub>/TOCN composite materials and explored them for mechanically reconfigurable photodetectors. Centimeter-scale chemical vapor deposition (CVD)-2D MoS<sub>2</sub> layers were directly integrated into TOCN substrates via a water-assisted drop-casting method and were subsequently rolled into 3D tubular forms with preserved structural and optical integrity. These composite materials in three-dimensionally rolled forms exhibited a large set of intriguing photo-responsiveness, well preserving intrinsic opto-electrical characteristics of the integrated 2D MoS<sub>2</sub> layers, *i.e.*, light intensity-dependent photocurrents insensitive to illumination

angles as well as highly tuneable photocurrents varying with the rolling number of 2D MoS<sub>2</sub> layers which were impossible to achieve with conventional photodetectors.

## II. Methods

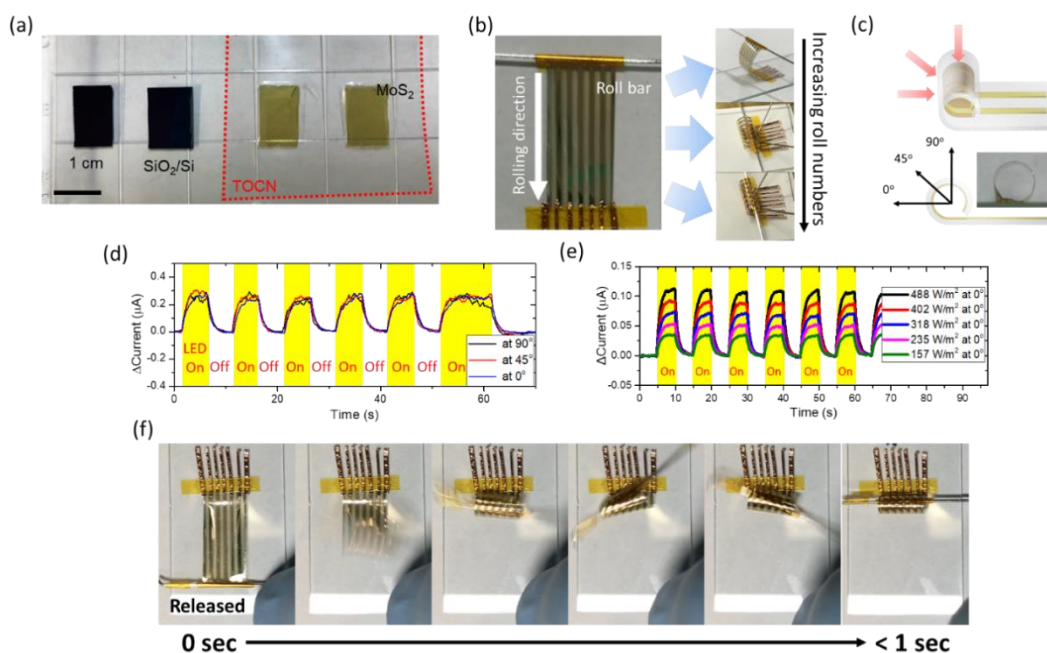
### *CVD growth of centimeter-scale 2D MoS<sub>2</sub> layers*

SiO<sub>2</sub> (300 nm thickness)/Si wafers were cleaned by ultrasonication in acetone, isopropyl alcohol (IPA), and deionized (DI) water to remove any organic impurities. Mo seeds of controlled thickness were deposited on the wafers by e-beam evaporator (Thermionics VE-100) at a deposition rate of 0.05–0.12 Å/s and at a base pressure of below  $5.5 \times 10^{-6}$  Torr. The Mo-deposited wafers were kept at the center of a CVD furnace chamber (Lindberg/Blue M Mini-Mite) along with sulfur (S) powder ( $\geq 99.5\%$ , Sigma-Aldrich) placed on an alumina boat at the upstream side. The CVD chamber was pumped down to 40 mTorr, and ultra-pure argon (Ar) gas was supplied at a flow rate of 100 sccm (standard cubic centimeters per minute). Subsequently, the CVD furnace was heated up to 800 °C in ~50 mins and was maintained at the temperature for another ~50 mins, followed by natural cooling to room temperature.

### *Solution-casting integration of 2D MoS<sub>2</sub> layers on TOCN substrates*

Commercially available slurry TOCN (CELLULOSELAB) in water (1 wt%) was mixed with DI water. After dilution to 0.5 wt%, it was subsequently sonicated for a few hours, and its completed dispersion was directly poured onto a SiO<sub>2</sub>/Si wafer covered with as grown 2D MoS<sub>2</sub> layers. The prepared sample was dried at room temperature for >48 hours until the casted TOCN was thoroughly dried and turned transparent. After the drying stage, the TOCN-attached 2D MoS<sub>2</sub> layers were gently delaminated from the SiO<sub>2</sub>/Si growth wafers.

## III. Results



**Figure 1.** (a) Optical image of original SiO<sub>2</sub>/Si growth wafers (left) and 2D MoS<sub>2</sub> layers integrated on a TOCN substrate after delamination from the wafers (right). (b) Mechanical rolling of a tubular MoS<sub>2</sub>/TOCN device using a rolling rod (left panel) to control its roll number (right panel). (c) Illustrations for the angle-varying optical illumination into a MoS<sub>2</sub>/TOCN tubular device. The inset shows a side-view image of a representative device. (d) Time-dependent photocurrents from an identical sample under a periodic illumination with varying illumination angles. (e) Time-dependent photocurrents from an identical sample under a periodic illumination with varying illumination intensities. (f) Time-lapsed snapshot images of a tubular MoS<sub>2</sub>/TOCN device spontaneously changing from the flatten state (left) to the rolled state (right) demonstrating its flexibility and elasticity.

We fabricated mechanically reconfigurable 3D tubular photodetectors by “rolling up” centimeter-scale CVD-2D MoS<sub>2</sub> layers integrated on TOCN substrates, as illustrated in Fig. 1a. The fabrication starts with a wafer-scale CVD growth of 2D MoS<sub>2</sub> layers with a typical lateral dimension of ~10 cm x 2 cm on top of a SiO<sub>2</sub>/Si wafer.<sup>4, 5</sup> The CVD growth is performed by thermally sulfurizing Mo seed films of the controlled thickness (typically, ~1–6 nm). Separately, TOCN dispersion is prepared using commercially available TOCN slurry in water (1 wt%) by employing the recipe developed in our previous report.<sup>3</sup> Subsequently, it is directly drop-casted onto the SiO<sub>2</sub>/Si wafer with as-grown 2D MoS<sub>2</sub> layers and is subsequently dried in air at room temperature. Fig. 1a shows optical images of original SiO<sub>2</sub>/Si growth wafers with as grown 2D MoS<sub>2</sub> layers removed (left) and the identical 2D MoS<sub>2</sub> layers transferred and integrated on a TOCN substrate (right). The images confirm that the 2D MoS<sub>2</sub> layers on the TOCN substrate precisely reproduce the original shape and size of the growth wafers, confirming the excellent fidelity of their water-assisted delamination. Furthermore, the TOCN substrate - the area within the red dotted lines - is optically transparent (~90%), rendering suitability for opto-electrical studies. Fig. 1b demonstrates that as-prepared MoS<sub>2</sub>/TOCN samples can be manually rolled up using a rolling bar, which precisely controls their rolling numbers. Photo-responsive characteristics of three-dimensionally rolled-up samples were characterized by a collimated 625 nm light-emitting diode (LED; THORLABS) with varying illumination angles of 0, 45, and 90°, as illustrated in Fig. 1c. The inset presents a side-view image of a representative sample. Fig. 1d shows plots of a time-dependent change in photocurrent induced by a periodic illumination of a 625 nm LED (intensity: 488 W/m<sup>2</sup>), obtained from an identical sample prepared with Mo of 6 nm. The illuminations were performed at three different angles of 0, 45, and 90° as shown in Fig. 1c, maintaining an identical illumination distance irrespective of the angle variation. It is apparent that the photocurrent periodically increases (and decreases) upon the LED is turned on (and off), which is well-retained at varying illumination intervals of 5 seconds and 10 seconds. The results indicate that the 2D MoS<sub>2</sub> layers integrated on TOCN substrates are highly photo-responsive owing to their well-preserved semiconducting characteristics irrespective of their 3D mechanical deformation. Furthermore, the TOCN substrate exhibits high optical transparency (~ 90%) which negligibly affects the photo-responsiveness while sustaining the mechanical robustness of the rolled 2D MoS<sub>2</sub> layers. Fig. 1e shows representative plots of intensity-dependent photocurrent with varying intensities from 157 to 488 W/m<sup>2</sup> with a same illumination distance. The results show

a well-resolved increase of photocurrent with increasing intensity, which is highly reversible upon periodic illuminations at an interval of 5 seconds. Lastly, we demonstrate the mechanical reconfigurability of MoS<sub>2</sub>/TOCN rollable photodetectors by testing their flexibility and elasticity. Fig. 1f shows time-lapsed snapshot images of a previously rolled MoS<sub>2</sub>/TOCN sample which is initially held by a rolling rod. Once the rolling rod is released from its initially flattened state, the sample quickly returns to its rolled state in less than one second. Once the device is rolled up again, it still exhibits well-preserved opto-electrical characteristics confirming excellent reversibility.

#### IV. Conclusion

In conclusion, we integrated large-area CVD-2D MoS<sub>2</sub> layers on optically transparent TOCN substrates and identified their mechanical deformation-driven opto-electrical properties. By rolling up MoS<sub>2</sub>/TOCN composites in a controlled manner, we developed 3D tubular photodetectors operating by photo-responsive 2D MoS<sub>2</sub> layers and identified their highly tunable photocurrents varying with geometrical parameters. The method to convert 2D MoS<sub>2</sub> layers into 3D rollable forms developed in this work is believed to be applicable to other 2D TMD layers. Furthermore, the design principle and working mechanism of 2D layers-based 3D photodetectors can further help explore 2D TMD layers-based unconventional devices in mechanically reconfigurable forms.

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## V. Announcements

### A Pilot Academic Exchange with Korean Universities: KAUPA-Korea Program

- KAUPA is recruiting members who want to join a pilot ‘KAUPA-Korea Program’ which can be implemented during the summer vacation of 2021 (tentatively) or through sabbatical opportunities as an invited or a visiting scholar to Korean universities.
- KAUPA will do the best to establish mutual relationships with Korean universities’ international offices interested in joining the KAUPA-Korea Program.
- If you are interested in the program, please send an e-mail to the President ([ychoi@regent.edu](mailto:ychoi@regent.edu)) with your information, including a target Korean university, the period of stay, your website URL, etc. More details about the program will be announced later.

### KAUPA Ambassador Program (KAP)

If you want to volunteer as a representative of your university or college, you are a very good candidate as a KAUPA Ambassador of your institution. The initial term of appointment is two years, and it can be extended every two years.

The responsibility of an Ambassador is mainly key liaison work between KAUPA and your university or college.

KAUPA is planning to appoint one KAUPA Ambassador for each member institution. Your volunteering is highly encouraged. Please send your e-mail of intent to the address [kaupahq@gmail.com](mailto:kaupahq@gmail.com) or the President if you are ready to serve all the KAUPA members of your university or college.

If your volunteering request is accepted, a Certificate of Appointment will be sent to you from the KAUPA headquarter as an evidence of your service for KAUPA as a KAUPA Ambassador to your university/college.

The following members were appointed as KAUPA Ambassadors. Congratulations!

- Heung Joo Cha, Associate Professor, University of Redlands, CA
- Helen Cho, Professor, Davidson College, NC
- Ho Soon Michelle Cho, Texas Woman’s University, TX
- Kyung Cho, Professor, University of South Florida, FL
- Won Cho, Professor, University of Alabama at Birmingham, AL
- Dong H. Donna Choi, Professor, Park University, MO
- Hyeri Choi, Assistant Professor, Idaho State University, ID
- Angie Y. Chung, Professor, University at Albany, NY



- Chan-Jin (CJ) Chung, Lawrence Technological University, MI
- Sam Chung, Professor, City University of Seattle, WA
- Misoon Ghim, Professor, St. Joseph's University, PA  
(Prof. Ghim was also appointed as a KAUPA Ambassador to the Asian American Music Society.)
- Hyo-Joo Han, Associate Professor, Georgia Gwinnett College, GA
- Seong Nam Hwang, Assistant Professor, Southeast Missouri State University, MO
- Yumi Hogan, Adjunct Faculty, Maryland Institute of College of Art, MD
- Paul C Hong, Professor, The University of Toledo, OH
- Kyong Seon Jeon, Professor, Columbus State University, GA
- K. Casey Jeong, Associate Professor, University of Florida, FL
- Sun-Ah Jun, Professor, University of California, Los Angeles, CA
- Eunyong Jung, Assistant Professor, SUNY Cortland, NY
- Bomi Kang, Professor, Coastal Carolina College, SC
- Jinyoung Kang, Assistant Professor, Mary Baldwin University, VA
- Seok Kang, Professor, The University of Texas at San Antonio, TX
- Albert Kim, Assistant Professor, Temple University, PA
- Bryan S. Kim, Assistant Professor, Syracuse University, NY
- Eunjin (Anna) Kim, Assistant Professor, University of Southern California, CA
- Jaeyoon Kim, Professor, Point Loma Nazarene University, CA
- Jeong-Hee Kim, Professor, Texas Tech University, TX
- Jinho Kim, Assistant Professor, Lewis University, IL
- Kristine Kim, Associate Professor, Kennesaw State University, GA
- Ryu-Kyung Kim, Lecturer, University of Dayton, OH
- Texu Kim, Assistant Professor, San Diego State University, CA
- Young Kim, Assistant Professor, Marquette University, WI
- Doyuen Ko, Associate Professor, Belmont University, TN
- Eun-Joo Kwak, Associate University, Mansfield University of Pennsylvania, PA
- Chong Kyoon Lee, Assistant Professor, James Madison University, VA
- Eun-Joo Lee, Associate Professor, East Stroudsburg University, PA
- Jaesub Lee, Professor, University of Houston, TX
- Jeonghwa Lee, Professor, Shippensburg University, PA
- Jung C. Lee, Associate Professor, Milwaukee School of Engineering, WI
- Jung-lim Lee, Associate Professor, Delaware State University, DE
- Sangwon Lee, Associate Professor, Ball State University, IN
- Soo-Kyung Lee, Professor, University at Buffalo, NY
- Woo Hyoung Lee, Associate Professor, University of Central Florida, FL
- Yong Gyo Lee, Associate Professor, University of Houston-Victoria, TX
- Jee Hyun Lim, Lehigh University & William Patterson University, NJ
- Jaewook Myung, Assistant Professor, Southern Methodist University, TX
- Hyuntae Na, Assistant Professor, Penn State Harrisburg, PA
- Gon Namkoong, Professor, Old Dominion University, VA
- Won Gyun No, Assistant Professor, Rutgers University, NJ
- Tae-Sik Oh, Assistant Professor, Auburn University, AL
- David C. Oh, Associate Professor, Ramapo College of New Jersey, NJ

- Tae (Tom) Oh, Associate Professor, Rochester Institute of Technology, NY
  - Indy Nohjin Park, Associate Professor, Oklahoma City University, OK
  - Insun Park, Assistant Professor, The University of Akron, OH
  - Moon-Sook Park, Associate Professor, University of Arkansas, AR
  - Jinsook Roh, Assistant Professor, University of Houston, TX
  - Jungwoo Ryoo, Professor, Penn State Altoona, PA
  - Felix Jaetae Seo, Professor, Hampton University, VA
  - Seong Sub Seo, Professor, Albany State University, GA
  - Sangwon Suh, Professor, University of California, Santa Barbara, CA
  - Sung Un Yang, Professor, Indiana University Bloomington, IN
  - Soon Suk Yoon, Professor, Western Illinois University, IL
  - Yeomin Yoon, Professor, Seton Hall University, NJ
  - Misook Yun, Professor, Youngstown State University, OH
- (In alphabetical order of each ambassador's last name)

### KAUPA Columnist Wanted

Are you interested in writing your opinions or thoughts? If you want to contribute essays regarding your teaching and research or any interested areas to our flagship publication outlet *KAUPA Letters*, you are qualified to be a 'KAUPA Columnist.' Currently, the following nine members are serving as KAUPA Columnists:

- Professor Heejung An, William Paterson University of New Jersey, NJ, Education
- Professor Semoon Chang (ret.), University of South Alabama, AL, Economics
- Professor Young B. Choi, Regent University, VA, Computer Networking & Telecommunications
- Professor Paul C. Hong, The University of Toledo, OH, Operations Management and Asian Studies
- Professor Helen Kim (ret.), The University of Alabama at Birmingham, AL, Pharmacology & Toxicology
- John Jae-Dong Kim, M.D. (invited), Los Angeles, CA
- Professor Youngsuck Kim, Mansfield University of Pennsylvania, PA, Music
- Dr. Gyonggu Shin (invited), Gwangju International Center, Korea, English Literature
- Professor Lisa Son, Barnard College of Columbia University, NY, Psychology
- Professor Jongwook Woo, California State University, Los Angeles, CA, Information Systems
- Professor Yeomin Yoon, Seton Hall University, NJ, Finance, and International Business

(In alphabetical order of each columnist's last name)

We are recruiting KAUPA Columnists in more diverse academic areas. If you are interested, please send the following information:

- Your name
- Your e-mail address
- Your university/college name
- Your teaching/research or interested area(s)
- Your essay writing related experience

to the President or e-mail address [kaupahq@gmail.com](mailto:kaupahq@gmail.com).

The initial term of appointment is two years. We are planning to publish at least four issues of KAUPA Letters per year, so the maximum number of your essay contributions would be eight. You are cordially invited to apply.

## Research Funds

Special Guidelines for Submitting Collaborative Proposals under U.S. National Science Foundation (NSF) and the South Korean Institute of Information & Communications Technology Planning & Evaluation (IITP) Collaborative Research Opportunities

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Relevant URL=NSF and IITP

## Journals

### ETRI Journal

*ETRI Journal* is an international, peer-reviewed multidisciplinary journal edited by Electronics and Telecommunications Research Institute (ETRI) in the Republic of Korea. The main focus of the journal is to provide an open forum to exchange innovative ideas and technology in the fields of information, telecommunications, and electronics. For the Aims & Scope of the journal, [click here](#).

[Source: ETRI Journal homepage at Wiley Online Library:  
<https://onlinelibrary.wiley.com/journal/22337326>]

### Journal of Global Awareness

The *Journal of Global Awareness* (JGA) is a scholarly forum for the exchange and dissemination of knowledge, expertise, and research focused on global awareness issues.

The journal aspires to enhance our understanding of political, economic, social, demographic, technological, and environmental issues among global community members. It provides a forum for the exchange of research and knowledge on issues related to globalization. The journal's goal is to promote awareness of the diversity of cultures within our global communities and to recognize that all human beings are included in the process of globalization and that we all must strive to increase sensitivity to issues related to this process.

Authors may submit scholarly manuscripts from a wide variety of relevant disciplines that stress the issues related to global awareness.

JGA is published biannually.

[Source: St. John's University journal homepage: <https://scholar.stjohns.edu/jga/>]

*J-Institute*

한국의 경운대학교 항공보안경호학부 조성구 교수께서 KAUPA 로 보내온 학술정보를 소개합니다.

1. 동북아시아권의 학술적 가치를 높이기 위해 국제적 가시도가 높은 영문 저널을 발간하게 되어 시작된 J.Institute 는 2015 년부터 준비하여 2016 년 6 월 창간호를 발간하게 되었습니다.
2. 현재, 대한민국국회도서관, 일본국회도서관에 납본하고 있으며 국내에서 KCI 등재후보학술지로 국내의 모든 대학교수님들이 연구실적을 해당 학교에서 인정받을수 있는 등급으로 성장하였습니다.
3. 작년 12 월 SSCI 의 전단계인 ESCI 에도 등재신청을 해놓았으며, 2 년전 SCOPUS 등재신청을 한 결과 내년 초 10 종 중 5 종의 저널이 재심사를 받는 일정을 소화하고 있습니다.
4. 보다 자세한 정보는 [www.j-institute.jp](http://www.j-institute.jp) 웹사이트에서 지금까지 발간된 원고 및 임원진 등을 살펴 보실수 있습니다.

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KCI, KJC, EBSCO, ProQuest, Exribris, Google Scholar 등에서 Open Access 로 색인되고 있습니다.

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> Protection Convergence

> International Journal of Martial Arts

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> International Journal of Terrorism & National Security

> International Journal of Military Affairs



> International Journal of Human & Disaster

> Public Value

> Robotics & AI Ethics

◆ 발간일 및 원고 마감일

|          | 1 월 | 2 월         | 3 월  | 4 월 | 5 월         | 6 월  | 7 월 | 8 월         | 9 월  | 10 월 | 11 월         | 12 월  |
|----------|-----|-------------|------|-----|-------------|------|-----|-------------|------|------|--------------|-------|
| 원고<br>마감 |     | <b>2/10</b> |      |     | <b>5/10</b> |      |     | <b>8/10</b> |      |      | <b>11/10</b> |       |
| 심사<br>종료 |     | 2/20        |      |     | 5/20        |      |     | 8/20        |      |      | 11/20        |       |
| 게재<br>확정 |     | 2/25        |      |     | 5/25        |      |     | 8/25        |      |      | 11/25        |       |
| 발간       |     |             | 3/30 |     |             | 6/30 |     |             | 9/30 |      |              | 12/30 |

◆ 논문집필 양식: A4 8-10p 내외 (4500 단어 내외 abstract 포함)

◆ 발간비용: 심사비+게재비: 300,000 만원 / 연회비 100,000 만원 (게재확정 후 납부)

◆ 해외 DB 추진 일정

1. KCI 후보 → KCI 등재 (2023 년 5 월 계속평가 예정)

2. Scopus 등재 추진 (2021 년 재심사 진행 예정)

3. ESCI 등재 추진 (2021 년 등재 발표 예정) → SSCI

◆ 담당자연락처: 조성구 82 10-8030-8811 <j-institute@hanmail.net>

[Call for Book Chapters](#)**Springer Book Project***Encyclopedia of New Populism and Responses in the 21 Century***Themes for writing Essays****Long Essay – (3000 – 4000 words)**

1. Religion and Economic decision making.
2. Post – modern Feminism.
3. Innovation economics
4. Migration and uneven development
5. Triple bottom Line in Sustainability
6. Neo-mercantilism,
7. Secularisation hypothesis
8. Capabilities and functionings
9. Populism in Management and Business Studies
10. Well-being
11. Constitutional economics
12. Economics of law
13. New institutional economics
14. Neuro economics
15. Economic analytics
16. Rationality and Bounded Rationality
17. Information asymmetry
18. Rent-seeking behaviour
19. Self-interest with guile
20. Ecocentrism
21. Nudge
22. Populist National Movement
23. Populism in the post COVID-19 world

**Populism in Management and Business Studies****Paul Hong\***

Global Supply Chain Management and Asian Studies

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**Paul Hong** is Distinguished University Professor of Global Supply Chain Management and Asian Studies at the University of Toledo, USA. His articles have been published extensively in journals including *Journal of Operations Management*, *Journal of Supply Chain Management*, *International Journal of Production Economics*, *Journal of Business Logistics*, *Corporate Governance: An International Review*, *Journal of Business Research*, *Journal of Service Management*, *Management Decision*, *Business Horizons* and *European Journal of Management*. Since 2012, he coauthored with Dr. Young won Park for several books including *Rising Asia and American Hegemony* (2020; Springer), *Creative Innovative Firms* (2019; Springer), *Building Network Capabilities in Turbulent Competitive Environments* (2012 and 2014, CRC-Taylor Francis). His research interests are in global supply chain management, entrepreneurial innovation, and interfaces of ToP and BoP. He is Corresponding Author. He can be reached <[Paul.Hong@utoledo.edu](mailto:Paul.Hong@utoledo.edu)>

### **Populism in Management and Business Studies**

Increasingly, populism is receiving attention in management and business studies (M&BS). M&BS populism is described both in positive and negative light depending on perceptions, impacts and contexts. M&BS populism for the needs of those who are not included in the perceived elite class establishment. M&BS populism usually combines elements of strong political stances opposing established norms of large government, business, and mainstream interests.

Specific terms related to populism in management and business studies are chosen based three criteria: (1) evidence of populism movement;(2) recognition in reputable publications (books and journals); (3) wide usage in management and business studies and organizational contexts.

Key topics include the following but not limited to:

- **Global Economies (e.g., Globalization, Nationalism, Top of Pyramid, Base of Pyramid, Micro-Financing, Global Supply Chain Management)**
- Market System Reform (e.g., Collective Actions, Market Populism, Occupy Wall Street,, Middle Class Populism, Business Nationalism, Stakeholder Governance, managing diversity, inclusive workforce, Sensitivity Training, Identify Politics)
- Organizational Reform Movement (e.g., Corporate Activism, Stakeholder Capitalism, , Corporate Social Responsibility, Sustainability, Public-Private Partnership)
- **Investor Activism (e.g., Investor Populism/Valuation, Pop Finance, Crowd Funding, Investor Nationalism)**
- Technology-driven Innovation (e.g., Sharing economy, Co-value creation, Co-evolution, Open Innovation, Open Access, Digital Capitalism, Digital Transformation, Platform Innovation, Smart Cities, Disruptive Innovation),

### **Populism in Economics**

#### **Economics and New Populism: Concept Note**

In the twenty first century national systems, both economic and political, in various parts of the world have and are going through dramatic changes. There is a shift in the issues that attract the attention and responses of common people and policy makers. In the twentieth century attention of policy makers and debates as well as discourses in the public space had revolved around

economic redistributive conflict. However, emergence of populism, that has been brought about due to diffusion of social media, the internet and repeated financial crisis, shifted the focus of discourse from distributive issues to debates located in themes such as nationalism, social conservatism, and social progression. Putting it another way public debate and discussion has veered around two strands namely nationalism and social conservatism on the one hand and cosmopolitanism and social progressive viewpoints. In fact, these two have and are emerging as two opposing blocks in the way economic policy making, academic and intellectual discourse are shaping up.

These changes have been witnessed in no isolated manner across geographies but has pervaded into a global phenomenon covering South Asia, Far East Asia, Europe, North America, and South America. The finer nuances of these changes are the shifting of attention from traditional class struggle to simultaneous attention to conservative, progressive and cosmopolitan values systems. This creates a certain puzzle. Recent economic crisis that many economies witnessed undoubtedly shifted the focus back to the economic welfare state but through conservative channels which also condescend to shrinking the role of the economic welfare state. So new ideas about public versus private provisioning and about essential versus non-essential goods or services have beginning to get foregrounded. These changes imply shift in attention from class-based stratification to stratification located in cultural identities.

Ironically, these churnings are not restricted to the economic policy making elite but is spreading even among the common folk as it were, with mobilizations from the lower rung of the population. In other words, the demographic spread of such economic processes is public and people centric too. The introspection and questions that these changes bring about are very critical such that ideas, models, and conceptualizations in the science of economics need a very subtly nuanced reorientation. So, what are the turns, economics must take to accommodate these populist views? What are the opposing positions in the knowledge base of economics? Has economics taken cognizance of such populist and anti-populist thought patterns? How will it change or how has it changed the study of economics? These debates will be focus of attention in this section of the encyclopedia.

#### **Long Essay – (3000 – 4000 words)**

24. Religion and Economic decision making.
25. Post – modern Feminism.
26. Innovation economics
27. Migration and uneven development
28. Triple bottom Line in Sustainability
29. Neo-mercantilism,
30. Secularization hypothesis
31. Capabilities and functionings
32. Well-being
33. Constitutional economics
34. Economics of law
35. New institutional economics
36. Neuro economics

37. Economic analytics
38. Rationality and Bounded Rationality
39. Information asymmetry
40. Rent seeking behavior
41. Self-interest with guile
42. Ecocentrism
43. Nudge

### **Populism and Culture**

Concept Note: Then and Now.

Dr. Jose C C and Dr Vagishwari,  
CHRIST (deemed to be University).

Populism as an idea is as well as an intellectual discourse has consistently been confined with in the domain of Political Science, Cultural Studies or Sociology. Rarely have historians engaged with it actively. The absence of such an engagement is ironical, when the study of Populism stems from a certain historical rootedness and spans out into many arenas, ranging from politics to personal and individual family histories. The emphasis on community representations, culture as an important source for historical construction, the voices of the subalterns by various schools of History, ranging from the Annales to the Post-Colonial and Post-Modernist historians is an evidence of the possibilities of inclusion of Populism in History. The ideational approach by Cas Mudde who argued that ideas that underlie populism must be the sole determining factor in its understanding, rather than the economic systems or political events of the day, strengthens the urgency of the need for History's and Historians engagement with Populism.

Writings on populism have covered a wide spectrum of contesting and rejecting it to that of upholding the approach as the most egalitarian and inclusive one. Richard Hofstadter in his Age of Reform termed the populists as regressive losers in the process of Modernization. At the other extreme was Lawrence Goodwin who articulated the idea that the populist movement was one of the largest democratic mass movement in his Democratic Promise: The Populist Movement. In between these two swings are the ideas that populism needs to be reclaimed from the right wing, because structurally, it has more left orientation. History of 20<sup>th</sup> century world was dominated by these two ideological polarities, where Populism was represented by individuals such as Roosevelt, Peron, Mahatma Gandhi, Jayaprakash Narayan, to mass movements such as the anti-colonial struggles.

A major feature of populism has been the domination of Revisionist history, in all parts of the world. This revisionism has an ever-widening arch, that envelopes, individual political leaders such as Donald Trump, Nigel Farage, Political Movements and Protests, Local Histories, Oral Narratives, Urbanism, Visual and performing arts and many other spaces. This Revisionist trend combined with exclusionist policies are driving the policies and priorities of States and Societies all over the World in 21<sup>st</sup> century. The far right AfD party in Germany represents the populist stand of opposing immigration. Similar is the stance of Swiss People's Party, that has catapulted it into a mainstream political voice in Switzerland. The cry of Post-Colonial Studies is to reconstruct historical experience from non-Euro American centric perspective, has gained it



populist support. Hence this project intends to navigate amongst these extreme stands, exploring why and how Populism should be read in Historiography.

### **Then and Now (History):**

#### **Long Essay: (3000 words)**

1. Elites (aka: Social Class; Work Specialization; Social Structure – how elitism leads to populism in historical perspective) – Dr John Dean confirmed
2. Populist Leader (aka: Marie LePen, Nigel Farage, Donald Trump – How did they become populist leaders, populist policies) – **Dr. Paul Hong** (The University of Toledo, USA) confirmed
3. Digital populism (aka: online campaigns, twitter, Facebook, e.g., Jasmine revolution) –

#### **Short essay: (1000-1500 words)**

1. Government (types, democracy – electoral participation) - Sanjay Lal Senior Lecturer in Philosophy at the Department of Humanities at Clayton State University, USA – Confirmed. Suggested to write a long essay.
2. Language (aka: Native Language; Language Acquisition; Literacy) – Mithilesh Kumar (Dept. of English, Christ University).
3. Religion (aka: Organized Religion [excluding cults]) – Sindani KIANGU  
Professor of History, University of Kinshasa, DRC, 00243 81 513  
2326, [kiangusindani@yahoo.fr](mailto:kiangusindani@yahoo.fr)
4. Social Media. Social Mobility. Strongmen (aka: The New Political Demagogues; Government –how populist measures create political demagogues) - Prof. Dr. Michael Allen, Professor at the Department of Philosophy at East Tennessee State University.  
*Logic of Populism and how this results in a Politics of Strongmen, adding relevant examples, both first and third world.*
5. Social Sciences in Education (aka: relevance of social sciences in education, shrinking of space) – Dr Anitha Kurup, NIAS, Bangalore

### **Populism in International Relations (Samples)**

#### **Populist Leaders**

Populist leaders: Vladimir Putin  
 Populist leaders: Donald Trump,  
 Populist leaders: Viktor Orban  
 Populist leaders: Recep Tayyip Erdogan  
 Populist leaders: Jair Bolsonaro  
 Populist leaders: Moon Jae in (Korea)  
 Xenophobia

#### **Short Essays:**

sovereignty  
new isolationism  
new nationalism

electoral behaviour,  
Political rhetoric  
Illiberalism  
authoritarian populists  
demagogues  
jingoism  
politics of exclusion  
Pluralism  
neo-sovereignty



*Encyclopedia of New Populism and Responses in the 21 Century*

Guidelines for Authors

Dear Author,

Thank you for agreeing to contribute to the *Encyclopedia of New Populism and Responses in the 21 Century*. These short guidelines have been organized to simplify the process of preparing and submitting your manuscript(s). Please take the time to read them carefully. You will find everything you need to know at a glance in the table below. Further details are given on the following pages.

*New Populism and Responses* mainly seeks to explain, define, and update the recurring forms of populism in the 21st century. Examples used in this Introduction are limited to English speaking countries. But populism's existent expressions are ecumenically global. Like any long-lasting perennial organism, it is sturdy and comes in a variety of forms adaptable to environmental changes. In political or cultural terms its expression has been neither exclusively left, center, nor right. Populism contains multitudes, dates back centuries before it was identified with its modern name.

Populism has become a hot button issue in the recent times. The UK's Sunday heavy *The Guardian* published about 300 articles in 1998 that used the term "populism" or "populist" and by 2016 its use had skyrocketed to over 2,000. And growing. Probably the single greatest catalyst to date that injected populism into the world's Internet common discourse, that infused it into journalism right, left and center and awakened populist political activism was the Great Recession of 2007-08 and the subsequent global deprivations it engendered. In today's world populism

promises to remain and renew its intensity due to the covid-19 pandemic's deleterious effects on most nations middle and low-income groups, specially minorities.

In sum, some reasons among many why it is time for populism to be relocated, identified, and given refreshed 21st understandings. It has a shifting nature among people, events, causes that constantly demands fresh studies. It is a social and cultural phenomenon both universal and. In our 21st century world it is a product of our shared cultures and each our own exceptional deep culture.

This Encyclopedia is unique in its composition as it includes all the major disciplines of Social Sciences and thus will be a one stop source of nine different disciplines looking at new Populism.

### Everything at a glance

|                         |  |
|-------------------------|--|
| <b>Aims &amp; Scope</b> | <ul style="list-style-type: none"> <li>• tertiary literature (digested knowledge/established information in the field)</li> <li>• stand-alone-article</li> </ul>   |
| <b>Authors</b>          | <ul style="list-style-type: none"> <li>• small number of authors (we advise no more than two per chapter)</li> <li>• Please include the name of all article authors in the correct order with their affiliations in the manuscript.</li> </ul> <p><i>Authorship changes are not permitted after a chapter has been submitted.</i></p>  |
| <b>Length of text</b>   | <ul style="list-style-type: none"> <li>• <b>Word count in the range of</b> <ul style="list-style-type: none"> <li>• 200-300 words: Brief entries</li> <li>• 1000-1500 words: Short essays</li> <li>• 3000 words - Long Essays</li> </ul> </li> </ul>   |
| <b>Structure</b>        | <ul style="list-style-type: none"> <li>• <b>Chapter title</b></li> <li>• <b>Authors:</b> Please include the name of all chapter authors in the correct order with their affiliations in the manuscript.<br/><i>Authorship changes are not permitted after a chapter has been submitted.</i></li> <li>• <b>Abstract</b></li> <li>• <b>Keywords</b> (please provide 4-8 keywords)</li> <li>• <b>Introduction</b> (length depends on the topic)</li> <li>• <b>Main Text</b> (please re-name the heading)</li> <li>• <b>Cross References</b> (to other articles or chapters)</li> <li>• <b>References</b> (should be restricted to the minimum number of essential references compatible with good scientific practice)</li> </ul> <p><b>Each of these headings should be a level 1 heading. Please do not modify this structure. You are free, though, to add subheadings within the headings provided.</b></p> |
| <b>Heading levels</b>   | <ul style="list-style-type: none"> <li>• do not use more than 3 heading levels.</li> </ul>   |

|  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>clearly identify and each level (using numbering or formatting)</li> <li>Never skip a heading level</li> </ul>  |
| <b>Reference citation</b>                            | <ul style="list-style-type: none"> <li>Author Year (for the direct quotes)</li> </ul>  |
| <b>Reference list</b>                                | <ul style="list-style-type: none"> <li>Include a reference list at the end of each chapter (up to 5)</li> <li>Include all works that are cited in the chapter and that have been published (including on the Internet) or accepted for publication.</li> </ul> |
| <b>Personal communications and unpublished works</b> | <ul style="list-style-type: none"> <li>to be mentioned in the text</li> <li><b>Do not use footnotes</b> as a substitute for a reference list.</li> </ul>   |
| <b>Reference style</b>                               | <ul style="list-style-type: none"> <li>Basic Springer Style</li> </ul>   |
| <b>Index</b>   | <ul style="list-style-type: none"> <li>Add 1-2 index terms per manuscript page.</li> <li>Highlight them in <b>green</b> within the text or provide a separate list of index terms</li> </ul>   |
| <b>Figures/tables/permissions</b>                    | <ul style="list-style-type: none"> <li>Add figures and tables with caption.</li> <li>Obtain permission for all copyrighted content and mention © in caption (with permission of /courtesy of...)</li> </ul>  |

During the project, you may consult the Editors in Chief and Section Editors, for queries regarding the content of the contributions. For aspects relating to format and structure and general queries, please contact your Development Editor for the project at Springer (Contact details will be shared shortly):

Up-to-date information including contacts, organization, and the aims and scope of the project is available at Meteor.

**Please keep the following in mind while preparing your contributions.**

#### Scientific Level of Your Contribution

Reference content is easily accessible, synthesized, and established knowledge. Therefore, your contribution should be clear and concise and be a comprehensive and up-to-date overview of your topic. Also, define and explain all specialized terminology and avoid technical jargon whenever possible, as this work is aimed at undergraduate and postgraduates in the academics and professionals from the various disciplines and industries who are interested in applying knowledge of this work in their respective fields.

#### PLEASE AVOID:

- Footnotes or endnotes (including acknowledgments)
- Using the contribution's title as a header for any part of the text

- First-person usage
- Any form of brand promotion or advertising
- Adding your name and other parts of your affiliation into the running text. This metadata should appear at the beginning of the chapter and will be captured separately.

#### 4. Citations and References

**In-text citations** should follow the **Author Year** system, e.g., (Smith 2000).

**References:** Please follow **Basic Springer style** while preparing your list of references. See following for example:

- **Journal article:** Smith J, Jones M Jr, Houghton L (1999) Future of health insurance. *N Engl J Med* 965:325–329
- **Journal article with DOI:** Slifka MK, Whitton JL (2000) Clinical implications of dysregulated cytokine production. *J Mol Med* 78:74–80. doi:10.1007/s001090000086
- **Book:** Smith J, Brown B (eds) (2001) *The demise of modern genomics*. Blackwell, London
- **Book chapter:** Brown B, Aaron M (2001) The politics of nature. In: Smith J (ed) *The rise of modern genomics*, 3rd edn. Wiley, New York, p 234–295
- **E-book:** Marius, A, Jonas, B (2012) Ionotropic glutamate receptors. Retrieved from <http://...> Sarah, A, Julia, B (2010). *Neuromuscular junctions*. doi: xx-xxxxxxx
- **Online document:** Doe J (1999) Title of subordinate document. In: *The dictionary of substances and their effects*. Royal Society of Chemistry. Available via DIALOG. <http://www.rsc.org/dose/title of subordinate document>. Accessed 15 Jan 1999

#### 5. Cross-References

Please login to the project website on SpringerMeteor to view the current table of contents. Include a list of related chapters that may be of further interest to your readers.

#### 6. Figures and Tables

- Color figures can be submitted. All figures and illustrations will appear in color online.
- There may be restrictions for color use in the print version; therefore, we advise that you create art that can be readily understood in both settings, e.g., using different line types (broken dashes and solid lines) as well as different color shades to plot lines. Please do not refer to color elements in the text.
- Figures should always be submitted as separate image files in any one of these five standard formats: **JPG/JPEG, GIF, PNG, EPS, or TIFF**. The minimum resolution should be 300 dpi for photographs, 1,200 dpi for drawings. Please do not use figures downloaded from the Internet as the resolution would not be high enough.
- Please indicate/include in your chapter text the following: 1) the placement of image files, and 2) an explanatory legend.

#### 7. Permissions

**Authors are responsible for sourcing figures, obtaining the necessary permission to use them, and any associated fees.** All figures and graphics should be original. While using figures/tables or any other material from other sources, please request permission from the copyright holder (usually the publishing house or author) to use them.

#### **8. Deadlines**

In order to publish this book as soon as possible and to keep all contributions up to date, please submit your manuscript within the **deadline** mentioned in your **invitation**.

Upload manuscript files to the Web-based editorial and manuscript management system, Springer Meteor. For instructions on navigating the platform, refer to the Meteor quick guide for authors. All submitted chapters will be reviewed for content and structure.



Academic Meetings



**CHRIST**  
(DEEMED TO BE UNIVERSITY)  
BANGALORE - INDIA

**UT** THE UNIVERSITY OF  
**TOLEDO**

# NEW POPULISM AND RESPONSE OF 21ST CENTURY

**INTERNATIONAL VIRTUAL CONFERENCE**  
24<sup>th</sup>- 25<sup>th</sup> September 2021

CHRIST (Deemed to be University) Bangalore, India and The University of Toledo, Ohio, USA, together with other collaborating institutions, are organizing an International virtual conference on the theme: New Populism and Responses of 21st century.

The current conference seeks to define, debate and update the recurring forms of populism in the 21st century.

For more information visit:  
<https://npc.christuniversity.in/about>



## About the Conference

CHRIST (Deemed to be University) and The University of Toledo together with other collaborating institutions are organizing an International virtual conference on the theme: **New Populism and Responses of 21st century**. The current conference seeks to define, debate, and update the recurring forms of populism in the 21st century.

The aim of the conference is to bring the experts from the different disciplines to discuss around the theme, which will enhance the understanding of the changing facets of Populism. The outcome of these discussions will be converted into publications. The organizers are planning to publish a reference work and conference proceedings of the selected works. This will give an opportunity for the participating institutions to network and collaborate on research and publication.

## Organising Institutions



Christ (Deemed to be University), India



The University of Toledo, USA

## Conference Chairs



**Dr. Joseph Chacko Chennattuserry**  
Pro Vice-Chancellor  
Professor of International Studies, Political Science and History  
Christ University, India



**Dr. Paul C Hong**  
Distinguished University Professor  
John B. and Lillian E. Neff College of Business and Innovation  
The University of Toledo, USA

For further quires contact through [npc@conference.christuniversity.in](mailto:npc@conference.christuniversity.in)

**Conference: 2021 New Populism and Responses of 21<sup>st</sup> Century**  
**2020 GSCM Conference**

**Special Journal Issues: Journal of Operations Management**

**Books: Creative Innovative Firms (Springer, 2019) ;**  
**Rising Asia and American Hegemony, (Springer, 2020)**

### **The 2021 Korean Cultural Center of Chicago Composition Competition**

The 2021 Korean Cultural Center of Chicago Composition Competition invites composers to submit Korean-themed choral compositions for SATB chorus. The competition is open to composers of all ages and nationalities. The monetary award for the winner is \$1,000 and the awarded works will be performed by the KCCoC Choir in 2022. For more details, please visit <http://www.kccoc.org/wps/project/2021-kccoc-composition-competition/>

### **The Korean Computer Scientists and Engineers Association in America Seminars**

The virtual seminar was hosted by Korean Computer Scientists and Engineers Association in America (KOCSEA) on Wednesday, March 3, at 8:00 PM EST (Thursday, March 4, at 10:00 AM KST), as part of the 2021 KSS (KOCSEA computer scientists and engineers Seminar Series).

Two invited speakers presented the following topics:

#### **1. "Beyond Deep Learning"**



Dr. Yoonsuck Choe  
Professor  
Computer Science & Engineering  
Texas A&M University

#### **2. "Tech Trends After COVID-19"**



Dr. Seon Ho Kim  
Associate Director  
The Integrated Media Systems Center at Viterbi School of  
Engineering  
The University of Southern California

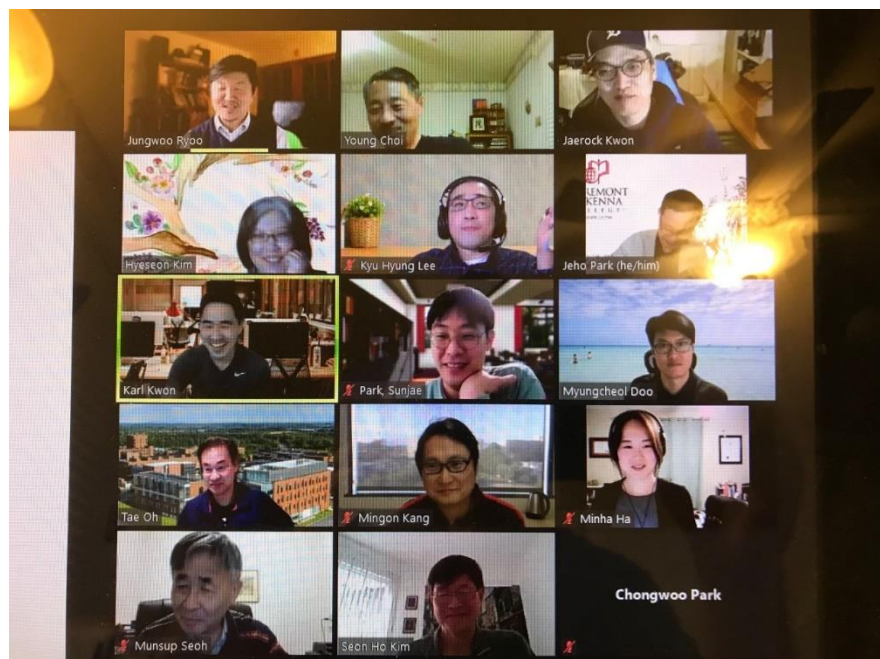
#### **3. "Compassionate and Mindful Emergency Remote Teaching"**





Dr. Jungwoo Ryoo, Professor of Information Sciences and Technology  
The Pennsylvania State University-Altoona

Wednesday, April 14, at 8:00 PM EST (Thursday, April 15, at 9:00 AM KST)

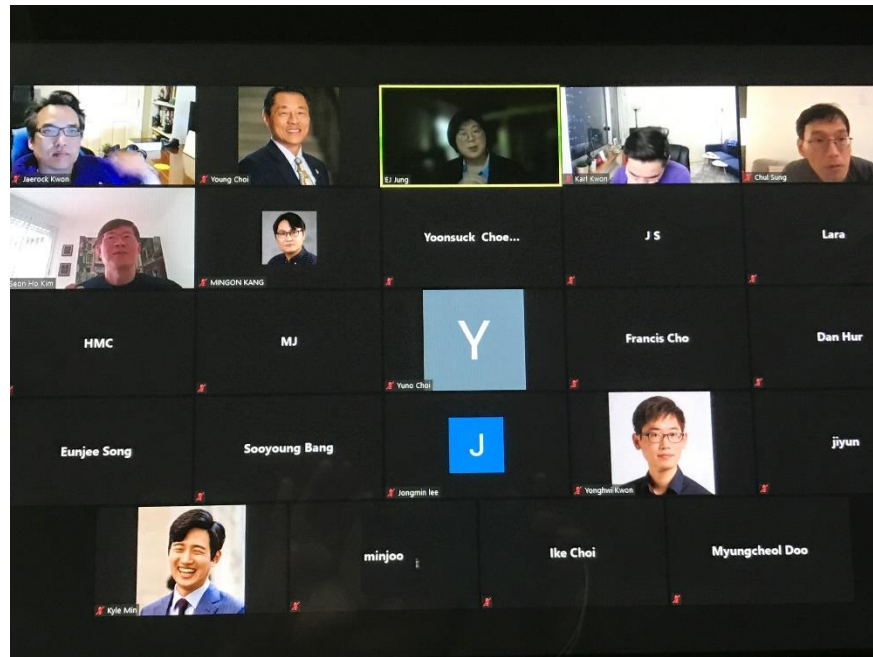


The KSS features presentations, discussions, and resources while shining the spotlight on engaged projects, ideas, discussions, and Korean computer scientists and engineers in the US and Korea.

재미한인정보과학자협회 주관 세미나 시리즈

5월 5일 수요일 동부 시간 오후 8시 (한국시간: 5월 6일 목요일 오전 9시)

“비트코인 8000 만원 시대, 전문가에게 듣는 블록체인 신경향” 라는 제목으로 블록체인 전문가 샌프란시스코 대학교 정은진 교수님을 모시고 암호화폐의 핵심인 블록체인에 대한 기초적인 이해와 최신 트렌드에 대하여 이야기를 듣는 시간을 가졌습니다.



정은진 교수님께서서는 현재 샌프란시스코 대학교에서 부교수로 재직중이십니다. 1999 년에 분산 시스템과 비잔틴 오류 허용을 공부하기 시작했고, 2001 년, 2002 년부터 인증 (사람이나 컴퓨터가 주장하는 아이디의 실소유자임을 증명하는 것), 보안, 암호학 (정보를 도청하거나 위·변조하는 것을 막기 위한 기술을 연구하는 학문)을 공부하셨습니다. 2006 년에 인증으로 박사 학위를 받았고, 현재 블록체인 판에서 여러 가지 재미있는 프로젝트와 강연을 하고 계십니다. 유튜브 리얼밸리 시리즈에서 재미있는 강의로 20 만 뷰를 기록하고 계십니다. 다음 링크는 교수님의 유튜브 강의 요약편 입니다. “누구나 한 번에 이해할 수 있는 블록체인 강의” <https://www.youtube.com/watch?v=kl5pkhbqz3k>

Dr. Eunjin (EJ) Jung is an Associate Professor in Computer Science at University of San Francisco. She is interested in building a BAR-tolerant blockchain, which tolerates rational participants in addition to Byzantine faulty participants using game-theoretic approaches.

비트코인 8000 만원 시대, 시대 블록 체인을 가장 쉽게 이해할 수 있는 강의 !!

Bitcoin 등 cryptocurrency에 대한 많은 관심들이 전 세계로 부터 쏟아지고 있습니다. 이러한 cryptocurrency 는 Blockchain 을 기반으로 작동을 하고 있습니다.



**The 2021 KOCSEA Monthly Seminar Series (KSS): June 2021**

The Korean Computer Scientists and Engineers Association in America (KOCSEA) hosts a virtual seminar as follows as part of the 2021 KSS (KOCSEA computer scientists and engineers Seminar Series).

Please mark your calendar.

Date:

Wednesday, June 2, at 8:00 PM EST

(Thursday, June 3, at 9:00 AM KST)

Dr. Yong-Guk Kim will present:

“강화학습기반 자율주행 드론”

Dr. Yong-Guk Kim is Professor in Computer Science  
at Sejong University

The Zoom link for the seminar is <https://umich.zoom.us/j/97063854134>

The meeting will be recorded and the recording will be publicly available.

The KSS features presentations, discussions, and resources while shining the spotlight on engaged projects, ideas, discussions, and Korean computer scientists and engineers in the US and Korea.

Please join us at [https://urldefense.com/v3/\\_https://www.kocseaa.org/v2/join-us\\_!!CHfpmW4!1nqZyDj4svlMtPhqyNccOOTK\\_3UM1Y8VgBjGxSdfxJMFRaWsBDUiGDU\\_NpksPiOc\\$](https://urldefense.com/v3/_https://www.kocseaa.org/v2/join-us_!!CHfpmW4!1nqZyDj4svlMtPhqyNccOOTK_3UM1Y8VgBjGxSdfxJMFRaWsBDUiGDU_NpksPiOc$) to receive the latest news and job postings.

**KSCEE-KOTAA-KOCSEA Joint Conference  
on Artificial Intelligence in Smart Cities**

Conference website:

<https://www.kocseaa.org/v2/conference-on-artificial-intelligence-in-smart-cities/>



Objectives:

This technical event is

- 1 To share cutting-edge research knowledge in artificial intelligence (AI) and civil engineering
- 2 To promote a network opportunity among professionals and students
- 3 To share ideas and research trends between three APS (KSCEE, KOTAA, KOCSEA) by having discussions and speeches from scholars invited/participating

Participating APS:

- The Korea-American Society of Civil and Environmental Engineers (KSCEE)
- Korean Transportation Association in America (KOTAA)
- The Korean Computer Scientists and Engineers Association of America (KOCSEA)

Organizing committee:

- Chair:
  - o Dr. Jun-Seok Oh (KSCEE President)
- Co-Chairs:
  - o Dr. Boohyun Nam (KOTAA President)
  - o Dr. Jaerock Kwon (KOCSEA President)
- Committee Members:
  - o Dr. Sung-Hee Sonny Kim (KOTAA VP1)
  - o Dr. Kate Hyun (KOTAA VP2)
  - o Dr. Byungkyu Brian Park (KSCEE VP)
  - o Dr. Changmo Kim (KSCEE Secretary)
  - o Dr. Mingon Kang (KOCSEA VP)

Theme:

The main conference theme is “Artificial Intelligence in Smart Cities” and the specific subtheme includes:

- Sensing Technology
- Robotics & Autonomous Vehicles
- Data Analytics
- Communication & Security

Conference Program:

The virtual conference will have a 3-hour program with parallel 3 technical and panel sessions in the areas of autonomous, sensing, robotics, data analytics, security & apps.

| Item no. | Description  | Time    |
|----------|--|---------|
| 1        | Plenary talks  | 30 min  |
| 2        | Technical session (3 ~ 4 parallel sessions; 4 invited speakers for each session) | 60 min. |
| 3        | Panel discussion   | 30 min. |
| 4        | Poster session (selected students) & Networking                                  | 30 min. |
| 5        | Closing (include award announcement)   | 30 min. |

### Schedule

- Call for Abstracts: March 1 – March 21
- Review Abstracts: March 21 – March 27
- Announcement of Final Program: March 28
- Conference Registration: March 1 – March 31
- Conference: 8 PM EST - 11 PM EST April 7, Wednesday, 2021

## Job Opportunities

- Courtesy of KSEA Job Opportunities Link: <https://ksea.org/us/information/job-opportunities/>

### 1. Research Specialist 1 or 2 at LTRC

Research Specialist 1 or 2 Position at LTRC in the area of Pavement Engineering/Materials

Research Specialist 1 or 2  
Louisiana Transportation Research Center  
College of Engineering  
Louisiana State University  
Baton Rouge, Louisiana

Applicant link:

[https://lsu.wd1.myworkdayjobs.com/LSU/job/0122A-Louisiana-Transportation-Research-Center/Research-Specialist-1-or-2\\_R00054361](https://lsu.wd1.myworkdayjobs.com/LSU/job/0122A-Louisiana-Transportation-Research-Center/Research-Specialist-1-or-2_R00054361)

### 2. MIT OCR

MIT OCR just opened a program director position with life science backgrounds and knowledge of Korean (and/or Japanese) culture and language.

[https://careers.peopleclick.com/careerscp/client\\_mit/external/jobDetails/jobDetail.html?jobPostId=20320&localeCode=en-us](https://careers.peopleclick.com/careerscp/client_mit/external/jobDetails/jobDetail.html?jobPostId=20320&localeCode=en-us)

**Jewan John Bae**  
Program Director

Massachusetts Institute of Technology  
Corporate Relations  
One Main Street, E90-1201  
Cambridge, MA 02142  
[jewanbae@mit.edu](mailto:jewanbae@mit.edu)  
+1-617-253-0416 Direct  
+1-617-852-7639 Cell  
<http://ilp.mit.edu/>  
<http://startupexchange.mit.edu>

### 3. Western Research Institute

Project Leader

Western Research Institute (WRI), a leading research and technology development company located in Laramie, Wyoming, seeks a Project Leader to join the Asphalt & Petroleum Technologies Business Unit.

**Brief Description of Duties:** Develop and lead projects in the design, characterization, and testing of asphalt materials (binders and asphalt aggregate mixtures), mostly industry oriented. Characterization includes physical (rheology, mechanics, thermal analysis), chemical (chromatography, spectroscopy) and physical-chemical (microscopy). Primary focus will be on physical characterization dealing with an emphasis on rheological and thermal properties of binders and some mixture testing. Prepare and contribute to reports for publication and/or presentation to clients or the professional community. Contribute to, or direct, the preparation, presentation, and follow-up of multi-scale proposals. Develop solutions to complex problems. Manage the research and support personnel assigned to specific projects/programs. Responsible for routine maintenance, troubleshooting and repair of laboratory instruments and equipment. An experienced Project Leader will assume marketing and project development activities. Such activities include initiation, development and management of contacts and contracts with clients and design of project outlines and budgets.

**Minimum Qualifications:** PhD degree in civil engineering, materials science, chemistry or chemical engineering and experience in research and project development or an equivalent combination of education and experience from which comparable knowledge was acquired. Must be able to work efficiently in a team environment, be self-motivated, autonomous, and work under a variety of challenging research conditions. Strong written and oral communication skills and a positive outlook are essential.

**Preferred Qualifications:** The preferred candidate will have strengths in critical thinking, innovation, development of scientific hypothesis and research planning, problem solving, strong technical skills and a commitment to results and organization, strong work ethic, management skills, proposal writing (NCHRP experience is a plus), public speaking in front of large audiences, communication skills with clients and partners and a good team spirit. Experience in the industry is a big plus.

Position is available immediately and open until filled. Email resume and cover letter to Michelle D. Holmes, HR Manager, Western Research Institute, 3474 N. 3rd Street, Laramie, WY 82070. E-mail address: mholmes1@uwyo.edu.

#### **4. TxDOT MTD**

TxDOT MTD - Asphalt Binder Branch has vacancies for Chemist, Transportation Engineer (PE required), Technician for asphalt binder testing, and Metrology specialist for asphalt binder lab equipment calibration. Please share the links below with any qualified and interested candidates you might know.

- Chemist II, III or IV - Materials and Tests Division, Flexible Pavements Section - Cedar Park Campus Texas Dept. of Transportation CEDAR PARK

- Transportation Engineer III or IV - Materials and Tests Division - Cedar Park Campus Texas Dept. of Transportation CEDAR PARK
- Material/Process Inspect I or II - Materials and Tests Division, Asphalt Binder Branch, Cedar Park Campus Texas Dept. of Transportation CEDAR PARK
- Metrology Specialist I - Materials and Tests Division - Cedar Park Campus Texas Dept. of Transportation CEDAR PARK

Enad Mahmoud, P.E.  
Flexible Pavements Section Director  
TxDOT - Materials and Tests Division  
(512) 506-5217 (Office)  
(512) 221-8957 (Cell)

## 5. Seegene

당사는 분자진단 전문기업으로서 진단 시약, 장비를 개발/제조/판매 하고 있으며, 작년 COVID-19 확산 등으로 회사 매출 등 외형이 급격히 확대되어 제 2의 도약을 위해 대규모로 인력을 채용하고 있습니다.

(당사 홈페이지 링크 : <http://www.seegene.co.kr> / 당사 채용사이트

링크 : <https://seegene.recruiter.co.kr> )

해외 business 가 90% 이상인 상황에서 Global Talent 의 중요성은 더욱 커지고 있어 작년 하반기 이후 해외 인재들을 적극 채용하고 있으며, R&D 부문도 해외 개발현지화, 공동연구 등 확대를 위해 해외 석박사급 Molecular Biologist 에 대한 니즈가 매우 커지고 있습니다.

현재 당사 대규모 2Q 채용이 진행되고 있어 첨부와 같이 채용 공고문을 전달드리며, 많은 인재가 지원하실 수 있도록 협조를 요청 드립니다.

문의:

윤자호 과장, +82-2-2240-5018      C.+82-10-5175-3193, [jhyoon2@seegene.com](mailto:jhyoon2@seegene.com)



## 6. 한양대학교

저는 대한민국 서울의 한양대학교 국제학부에 재직중인 류주한교수라고  
합니다.[한양대학교 국제학부 \(hanyang.ac.kr\)](http://hanyang.ac.kr)

저희 대학 특히 저희 학과에서는 미국에 재직중이신 경영학, 경제학분야 한인교수님을  
본교로 초빙하기 위해 노력을 기울이고 있습니다.

주변 분들중에 눈 여겨 보신 분들이 계시면 적극 추천해 주시면 감사드리겠습니다.

늘 건강에 유의하시고 먼 미국에서 국내외 후배학자들을 항상 지원해 주시고 어려운  
시기마다 국익을 대변해 주시는 회장님께 다시한번 감사드립니다.

류주한 배상

## 7. 서울시립대학교

서울시립대학교 교통공학과 2021 년 하반기 교수[전임교원] 초빙 공고를 알려드립니다.  
서울시립대학교 교통공학과에서는 유능하고 경쟁력 있는 인재를 양성하기  
위한 2021 년 하반기 전임교원을 아래와 같이 모집합니다.

1. 초빙분야 및 인원 : 교통계획 또는 교통공학 2명 (단 한 명은 여성 전용)
2. 인터넷 접수 : 5.17(월) 10:00 - 5.24(월) 17:00 [한국시간 기준]
3. 부속서류 접수기간 : 5.20(목)10:00 - 5.25(화) 17:00 [한국시간 기준]

\* 기타 세부내용은 서울시립대 홈페이지의 공고문을 확인하시기 바랍니다.

\* 재임용 및 승진 내부 규정은 학과 홈페이지를 참고하여 주시기 바랍니다.

([https://www.uos.ac.kr/urbansciences/transport/korNotice/allList.do?list\\_id=transport-rule](https://www.uos.ac.kr/urbansciences/transport/korNotice/allList.do?list_id=transport-rule))

## VI. Essays & Poems

### One Interpretation of Buddha's Teachings

**Yeomin Yoon**

*Professor of Finance and International Business at Seton Hall University*



According to prominent French thinker Jean-François Revel, "Buddhism arouses so much interest in the West nowadays. First and foremost, it is because Buddhism fills a gap vacant by the desertion of Western philosophy in the area of ethics and the art of living." (See Jean-François Revel and Matthieu Ricard, *The Monk and the Philosopher*)

According to Revel, the whole territory regarding *the path of wisdom* [emphasis added] has been abandoned and left without an heir by Western philosophy. It is that vacant ground that Buddhism now occupies.

As Revel states, many Westerners (and some Easterners, in my opinion) have misunderstood and misrepresented Buddhism "as a doctrine of inaction." They have taken *nirvana* to be some "vegetative lethargy." That is a long-standing misrepresentation based on trivial interpretation and flagrant mistranslation.

Revel takes, as an example, the case of the Dalai Lama. Although the Chinese Communist Party calls him a "jackal in monk's clothing," he is known as a "man of peace" in the West. "The Dalai Lama's humble, practical, and courageous sagacity, respecting an ethical ideal even in the tragic circumstances he has to work with as spiritual and political head of a martyred people, seems to be in a completely different dimension from the ineffective omniscience of so many career statesmen."

Indeed, Buddhism is not a religion in the sense Westerners usually understand. It is not based on the notion of a creator and therefore does not require an act of faith. Buddhism can be defined as a path of transformation that leads from confusion to wisdom, from suffering to freedom. (See Matthieu Ricard and Wolf Singer, *Beyond the Self – Conversations between Buddhism and Neuroscience*.)

On May 19, 2021 (or May 26 in India and Nepal), the Buddhists celebrated and meditated on the 2565th birthday of one of the most remarkable human beings in history, Buddha or also known as Sakyamuni. I want to share with *the readers of the KAUPA Letters* my thoughts on Sakyamuni's teachings and interpretation of the essence of his teachings.

Although I am not a Buddhist, I often read Buddhist scriptures. Whenever I read them, Buddha poses Socrates' question, "How should I live?" that seems to have been abandoned by Western philosophy.

The whole of Buddha's forty-five years of teachings transcribed from speech to writing by his disciples amounts to an astounding several thousand volumes<sup>[1]</sup>. I would not venture to say what the underlying message of all these volumes is – that is a task well beyond my capabilities – but let me share with the readers one anecdote.

Many years ago, at a certain temple, a young monk asked a senior monk, "What is the core of Sakyamuni's forty-five years of teaching?" Without a moment's hesitation, the elder monk replied, "Exceed." Namely, exceed your teacher.

A teacher like Sakyamuni is a person who has attained an awareness of where he stands, his place in the order of things. I interpret the elderly monk's response that Sakyamuni was essentially calling upon his disciples to exceed, to mean that each one of us, like Sakyamuni, can attain this awareness of one's place.

Buddha is often likened to a lion roaring over his kingdom from atop the mountain of truth. Thus, his teachings are like a lion's roar reverberating through the forests of ignorance.

An old tale has it that when a mother lion gives birth, she carries her young to the top of a mountain, and one by one sends them tumbling with a little shove down the hillside. The cubs that crawl their way back to her the mother keeps, deeming them worthy of saving. Those who do not reach her are left to fend for themselves on the hillside.

Sakyamuni teaches us that like the lion cubs that survive, each of us can find his/her way to the top of his/her own mountain, great or small.

I often feel that Sakyamuni keeps telling me that "If I, Sakyamuni, have Buddha-nature, then you too have Buddha-nature." I also think that, in Buddhist teaching, we are not meant to merely watch from the foothills a procession of teachers to follow but to keep up with and eventually overtake our teachers.

A Buddhist friend who has three grown-up children told me recently: "The times when I am happiest as a father are those times when I see that my children have exceeded me, when they have gone beyond what I have learned and achieved. Unlike me at their age, they have already understood that the only genuine backbone of all our actions is responsibility – responsibility to something higher than *my family, my country, my company, and my success.*"

I believe that Buddha would feel much the same joy if he were to see his disciples, his followers attain the same level of enlightenment as his own and perhaps go even beyond.

Buddha explained that we are plagued by three deadly poisons of the soul: Greed, Hatred, and Ignorance. To overtake one's teacher, one must first overcome within oneself these poisons. It is akin to the first uncertain steps a lion cub must take on his way back to the top of the mountain.

There is an old Korean saying that defeating the marauders of the road is easy but defeating the marauders of the soul is difficult. But we must defeat them to attain an awareness of Self, to reach

the summit from which Buddha let out his great lion's roar for forty-five years, two and a half millennia ago.

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[1] For example, a [Korean](#) collection of the *Tripitaka* ([Buddhist scriptures](#) and the Sanskrit word for "three baskets") is organized in over 1496 titles and 6568 volumes. The *Tripitaka Koreana* (lit. *Goryeo Tripitaka*) or *Palman Daejanggyeong* ("Eighty-Thousand *Tripitaka*") was carved onto 81,258 [wooden printing blocks](#) in the 13th century. It is the world's most comprehensive and oldest intact version of Buddhist canon in [Hanja](#) script, with no known errors or errata in the 52,330,152 characters. See [https://en.wikipedia.org/wiki/Tripitaka\\_Korean](https://en.wikipedia.org/wiki/Tripitaka_Korean)

## The Cobra Effect of Stimulus Package

**Semoon Chang**

*Professor of Economics (ret.), University of South Alabama*



Sometimes, policy makers make policies to solve a problem with good intention, but the outcome can be worse than the problem that they intended to solve. This phenomenon is known as the cobra effect. The term, cobra effect, originated from India under the British rule.

Story goes that the British government was concerned about the number of venomous cobras in Delhi. The government offered a bounty for every cobra that they kill. Initially this policy was highly successful because many people caught venomous cobras for the monetary reward.

As time went on, however, people had a different idea, and began to breed cobras for the reward money. When policy makers discovered what people were doing, they cancelled the policy. When cobra breeders found that the reward policy was cancelled, they stopped breeding but released the cobras that they were breeding. At the end, the cobra population was greater after the reward policy than before.

Stated in simple terms, the cobra effect refers to the solution to a problem that makes the problem worse.

There is a danger of a possible cobra effect when a huge amount of money was made available under numerous anti-pandemic programs in the United States and beyond. In the U.S., over 2 trillion dollars (2,000,000,000,000) were injected to the economy under the Coronavirus Preparedness and Response Supplemental Appropriations Act, the Families First Coronavirus Response Act, the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the Paycheck Protection Program and Health Care Enhancement Act, and more.

The amount of money made available under the monetary policy was just as enormous. These loan programs are called facilities such as the commercial paper funding facility, main street lending facility, paycheck protection program liquidity facility, primary market corporate credit facility, and several more.

How will this huge amount of money and credit made available affect the future of the economy? No one knows, but the big picture can be explained.

From the view of economic impact alone, the biggest danger is inflation. If inflation speeds up to a hyper level, we could get into the boom-and-bust cycle. Currently, no one expects that to happen. Leaders of the Federal Reserve Bank are counting on their ability of timely control of money supply to keep the economy from over-heating during the recovery phase from the pandemic. If the control of money supply cannot be carried out in timely manner, there is a small possibility of the cobra effect looming on the horizon.

Even if money supply can be carried out in a timely manner, there is a big elephant in the room in that the large amount of borrowing created a significant amount of debt burden on the government budget in many years to come.

In retrospect, the large amount of liquidity injection was needed, but could have been made available more thoughtfully. First response should have been numerous food bank branches, free medical services, and mediated rent control so that basic needs of everyone are met. Unfortunately, there was a large amount of assistance that may be wasteful expenditures by some, if few, thoughtful people.

June 30, 2020, issue of the Washington Post reports that the Federal Reserve buys “existing bonds of 800 companies on the index, including Apple, Microsoft, Verizon, Comcast, Toyota BMW” and many more, clearly benefitting their bondholders. Aaron Klein of the Brookings Institution is quoted in the Washington Post article to have said “Why is the solution buying Apple, Microsoft and Comcast debt? ... Is the problem in America that the holders of Apple stock need more help?” (Aaron Klein of Brookings Institution)

Respected economist Michael J. Boskin of Stanford University stated in the AEA Papers & Proceedings 2020 that large increases in debt “pose many major risks, including much higher taxes and lower future incomes; in the extreme, eventual inflation risk; and serious intergenerational inequity.” Even the globalist OECD stated in June 2020 that “Strong fiscal support is warranted but it has consequences,” and “Public spending should be well-targeted to support the most vulnerable and provide the investment needed for a sustainable recovery.” When the stimulus money flows to people who do not need money, cobras may crawl under the disguise of inflation and possible recession. \*\*\*

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*Dr. Chang's more articles contributed to The Korea Times also can be accessed by clicking [The Korea Times URL](#).*



## Dosan Ahn Chang-ho

**Young B. Choi**

*Professor of Information Systems Technology & Cybersecurity, Regent University*



“There are days when truth must be followed, and justice must be achieved. Even if you die, please do not lie.” - Word of Dosan -

Dosan Ahn Chang-ho (도산 안창호(島山 安昌浩), 1878-1938) is well known among the Koreans. But, in fact, I feel personal that not many people know and follow his deep spirit of patriotism and love deeply and take an action. I am also one of the people who are embarrassed by not following him, but I have recently been reading his biography and have learned and felt through his turbulent life, so I would like to summarize them briefly and write them down and try to renew my determination to follow him.

My first interest in him started from my curiosity about the “Heungsadan (YKA: Young Korean Academy),” one of the clubs recommended to me joining when I was a college student. In fact, I thought of YKA as just one of the college clubs, but as I began my life as an immigrant for a long time in the United States, I would like to trace the traces of Dosan as I learned about the footsteps of his devoted love for the country, especially in the Korean American community. I tried a personal attempt.

In particular, Kim Sang-An, my elementary school teacher, has been devoted to Dosan's YKA movement throughout his life. So more and more, I became interested in Dosan's noble personality, his spirit and thoughts, and methods of training, and his unselfish devotion and love for the nation. As for me, the desire to learn and practice the spirit came into my mind.

There are Four Spirits of Dosan as the following.

- Sincerity: Be patient with the truth.
- Hardworking: Strive for action.
- Loyalty: Do your best for yourself.
- Braveness: Be strong and energetic.

The Three Major Disciplines of Dosan are as the following.

- Wisdom
- Virtue
- Health

After reading his biographies and thinking about the qualities Dosan hoped for each member of our nation, I chose the ten demerits as follows.

1. Let's love each other.

It is thought to be the virtue that Dosan Ahn Chang-ho emphasized the most. Apart from the religious background, the importance of this virtue need not be said anymore.

2. Be honest.

Reading Dosan's biography tells the story of Korean Gaeseong ginseng marketers who were active in San Francisco in the early 1900s. Seeing that Chinese ginseng was deceived as being produced in Kaesong, Korea, and arguing about fixing prices and invading each other's business districts, Dosan advised them to do business honestly, and eventually, they accepted Dosan's recommendation. Besides this, the honesty of bankruptcy is handed down through various anecdotes.

3. Let's be sincere.

At the orange farm in California, Dosan's words, "Even if you pick one orange, you have to pick it with all your heart," the Korean people are impressed, and stories are being introduced that completely changed the perception of the dirty Korean village in the mainstream American society through flower gardening and cleaning. Dosan has a reputation for sincerity, never neglecting even small things, and doing his best in silence whether others see it or not.

4. Let's study.

Dosan's desire for education led to his lifelong efforts and dedication to foster human resources for the nation by establishing several educational institutions. He emphasized that it is very important to cultivate "strength" by studying hard to become a wise citizen, as shown in the Wisdom emphasized in the three major disciplines.

5. Let's help each other.

Dosan, whose selflessness rather than selfishness, was stronger than anyone else, emphasized the attitude of helping and living with each other, namely, love.

6. Let's trust.

He emphasized that the Korean people should be able to trust each other whenever there is an opportunity. Dosan said he kept the promises he had once made, and he said that being a reliable person is very important to his life.

7. Let's be frugal.

In his own actions, Dosan showed how he could use the money he earned through sound labor more efficiently and help people in other difficult situations.

8. Let's be diligent.

Dosan was a very diligent man, and his diligence became an example of the Korean community, and many Koreans who were influenced by his outstanding leadership naturally respected and followed him.

9. Let's be healthy.

As seen in the body emphasized in the three major disciplines, Dosan emphasized a healthy body and a healthy mind.

10. Don't fight.

As it is now, it seems that Koreans fought a lot everywhere, like the Kaesong ginseng marketers of San Francisco mentioned earlier. When Dosan sees them, he is heartbroken and shocked, so he decides to become a spiritual leader who is the centerpiece of the Korean American community. Considering the item of Virtue among the three major disciplines of Dosan, this item together with the items 1-3 and 5-8 above, we will take action to build virtue. It is thought to be one of the specific items that can be done.

Of course, even though Dosan's wishes for each of our nations are not exactly as accurate as of the above ten items, the ten items above are based on his four major spirits and three major disciplines, and I summarized them while reading the biography of Dosan. These are the specific virtues Dosan, the teacher of our nation longed for each member of the Korean people to practice hard in their lives.

There are a number of independence activists in Korea, but not many people like Dosan have presented specific items of the four spirits and three major disciplines in terms of national consciousness reform and have shown them as a lifelong practice.

In that respect, in order for our nation to become a truly advanced international citizen, the items of spirit and cultivation proposed by Dosan must be eagerly and faithfully implemented. It is important to become a materially advanced country, but I believe that becoming a spiritually advanced country is equally important. In this respect, if our nation becomes an advanced country both in terms of material and spirit, it would be no better.

In this respect, the teaching of Dosan, the great pioneer of the nation, who has been ahead of the times by loving and serving the nation with devotion and love for the rest of his life continues to resonate with us today. \*\*\*

#### References

1. Collection of Ahn Chang-ho, Byung-wook Ahn, Chang-ho Ahn, Koo Kim, Kwang-Soo Lee, et al., Cheongpodo Publishing, Korea, 2007.
2. Story of Dosan Ahn Chang-ho for Children (Dosan Ahn Chang-ho's Commemoration Project), written by Ji-gang Yoon, Yumi Won's painting, Children's Edition, Korea, 2005.
3. Look at this person-Dosan Chang-ho Ahn, Sang-An Kim, USA, 2020.

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*Prof. Choi's more interesting essays, Korean/Chinese poems and photos can be accessed at <https://www.ktown1st.com/blog/VALover> freely.*

*His recent book "Selected Readings in Cybersecurity" was published by Cambridge Scholars Publishing Ltd. in United Kingdom in 2018. Currently, he is serving as a member of Advisory Board of Computer Science and Computer Security areas of Cambridge Scholars Publishing Ltd.*

## 공감 능력

김 재동 (LA, 의사/수필가)



### - 서로 다름을 인정할때, 공감이 시작된다-

지금은 꽃피는 계절이다. 여기저기 주변에서 앞다투어 꽃망울이 터진다. 모양과 색깔이 다르기에 더욱 아름답다. 보고 보아도 ‘다른’모습이어서 일까, 자연은 언제보아도 새롭다. 꽃뿐만 아니라 나무나 산모양 마쳐도 다 제각기다. 똑같은 나무라해도 굵기와 가지의 굵은 모습들이 어느하나도 같은게 없다. 똑같은 산인데도 계절따라 산색이 달라 보이고, 오전 오후 시간따라 음영의 농도가 달라진다. 이 얼마나 절묘한 창조의 신비인가! 서로 ‘다름’이 축복임을 깨닫게 되는 순간, 우리는 비로소 놀라움을 체험할 수밖에 없게 되는것 아닐까!

‘인간’만해도 그렇다. 자그만치 함께 숨쉬며 사는 인구수가 70 억이나 되니, 무슨 차이가 있으랴? 생각되지만 천만의 말씀이다. 누구 하나 같은 얼굴이 없다. 심지어 쌍둥이 마쳐도 엄마는 어렵지않게 가려낼 정도다. 성장하면서 더욱 차이가 벌어져 모든 인간은 저마다 유일무이한 자기만의 특성을 지니게 된다.

이런 특성이 바로 각자의 ‘개성’이다. 그렇니, 서로다른 개성이야말로 얼마나 소중한 인간존재의 자산인가 말이다

### -개성을 이해해야 ‘공감능력’이 자란다 -

언젠가 신문지상에서 <공감이 안되는 이유>라는 글을 읽은적이 있다. 데이브레이크 대학원 ‘모니카이’ 코디네이터가 쓴 글이다. 그녀의 말에 의하면, 오랫동안 한국을 방문하여 30 년만에 만난 옛 학교동창들과의 모임에서 그동안의 생각과 경험들을 듣는데 갑자기 한 생각이 머리에서 가슴으로 ‘툭-’ 떨어지는 경험을 했다는 것이다.

“신기하네! 어쩔 이렇게 사람마다 생각과 신념과 가치관이 다를 수 있을까?” 모두가 열변을 토하는데 가만히 들으니 그 기준은 자신들의 경험과 살면서 학습된 지식, 무엇보다도 세포마다 녹아있는 자기가족들과의 가치관과 문화임을 발견했다는 것이다.

인간은 어린시절부터 자신이 속한 환경으로부터 정보를 체득하고 해독하여 자신만의 생각의 틀과 구조를 만드는데 이를 인지심리학에서 schema(도식)라 부른다고 한다. 이는 주변인물들과의 상호작용과 일련의 상황을 겪으며 형성되기 때문에 각자는 자기가 체험한 세상에서 만들어진 독특한 인지구조, 즉 자신만의 ‘소 우주’를 만들게 된다는 것이다.

하여, 그녀의 결론은 서로 다른 사람과 소통과 공감을 이루어 내기 위해서는 나의경험과 신념을 기준으로 상대를 이해하는게 아니라, 상대의 소우주속에 들어가 그 사람의 입장에서 그를 이해하려는 ‘공감능력’의 훈련이 필요하다는 것이다.

### - 서로 다른 개성은 ‘축복’이다-

알고보면, 인간뿐만 아니라 자연도 문화도 ‘차이’가 있어야 매력적이다. 서로 다르기에 끌리는 힘이 바로 매력이다. 남자와 여자사이에 서로 다른 특성이 서로를 끌어 당기는 매력의 신비임을봐도 알 수 있기에 말이다. 그런면에서 보면, 인간삶의 근본문제는 결국 나와다른 생각과 견해를 ‘차이’의 다양성으로 볼것인지, 아니면 흑백논리와 같은 ‘틀린것’으로 볼것인지에 달려있다. 전자는 이해와 축복을 가져다 주는 반면, 후자는 반목과 불행을 불러오기에 말이다.

우리 주위를 둘러보면, 아직도 개성을 무시하고 사람들을 똑같은 틀로 붕어빵식으로 찍어내려는 환경이 주를 이루고 있다. 대부분의 부모마저 자기자녀를 개성에 맞는 열정적인 아이로 키우려하는 대신, 부모와 선생앞에 그저 순한 양처럼 고분고분 따라주는 착한아이가 되기만을 바란다. 그렇게해서 좋은 성적을 얻어 아이들의적성은 상관없이 의사나 변호사같은 부모가 바라는 틀안에 집어 넣으려 하고있는 현실 아닌가! 그렇게해서 과연 인간에게 행복이 오는것인지 깊이 생각해볼 일이다.

사람의 행복은 자기가 ‘하고 싶은’ 꿈을 바라보며땀흘릴때 찾아온다. 어려서부터 운동에 취미가 있는아이는 적성을 살려 스포츠계로 내보내야 신바람나게 살수있다. 예술에 미친 아이를 가기 싫어하는 의대에 보내 현미경앞에 평생 붙들어 놓은다면, 이는 분명 질식 일보직전의 삶이다.

인간은 저마다 ‘단 한번’밖에 살수없는 소중한 삶을 자기개성대로 꿈을안고 살아간다.  
비록 여건이 여의치않아 그 삶이 남의 눈에 띄지않는 들꽃같은 미소한 삶일지라도, 우리  
모두 이세상에 함께 사는 소중한 존재임에 틀림없다. 그때문에 오늘도 우리에게 서로  
다른 각자의 개성을 이해하고 존중할줄 아는 “공감 능력”이 절실히 필요한것 아닐까. \*\*\*

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DrJohnKim33@gmail.com

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## Two Generations of Impostors: Metacognitive Oscillations between Confidence and Modesty

**Michelle Kim**

*Bergen County Academies*

&

**Lisa K. Son**

*Barnard College*

As a high school senior, I oscillate between *confidence* and *modesty*.

As a college professor, I oscillated between *modesty* and *confidence*.

In elementary school, when the teacher asks, “Who knows the answer?” I think that I do.

In elementary school, when the teacher asked, “Who knows the answer?” I knew that I did.

Inside my mind, the answers are there, but they are my private reflections.

Inside my mind, the answers were there, but they could have been expressed aloud.

My thoughts, feelings, and memories are mine, only I have access to them.

My thoughts, feelings, and memories were to be communicated, since only I had access to them.

In Korea, expressions of my individual self are thought of as boastful.

In America, expressions of my individual self were thought of as required.

In America, hiding behind a silent face are thought of as deception.

In Korea, hiding behind a silent face were thought of as maturity.

In school, on the tennis court, my backhand bullets down the line.

In school, on the musical stage, I hit the harmonies among the chorus.

When the coach asks, “Did you win the point?” I stand silently.

When the director asked, “Who sang that part?” I stood silently.

I did win the point, but I’m just lucky.

I had sung the part, but I was just lucky.

If I receive a compliment, I know I’m a fraud.

If I received a compliment, I knew I was a fraud.

When I succeed, it’s only I because I work extra hard, not because I have talent.

When I succeeded, It was only because I worked extra hard, not because I had talent.

It's the same with all my achievements, neurotic hard work or luck.  
It was the same with all my achievements, luck, or neurotic hard work.

I often fail to reach perfection, but it's okay because I can seem humble.  
I often failed to reach perfection, but it was okay because I could seem humble.

Confidence, or even overconfidence, can be bold, the mark of a risk-taker.  
Confidence, and certainly overconfidence, was brash, the mark of a show-off.

As a Korean-American, I know of the comfort of oscillating between confidence and modesty.  
As a Korean-American, I knew of the burden of oscillating between confidence and modesty.

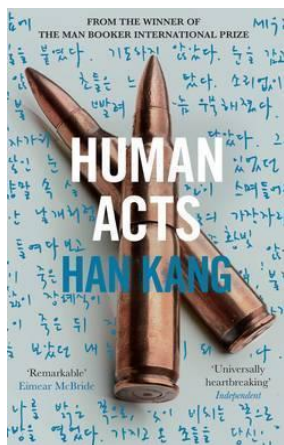
As I move forward, I will put on my impostor mask.  
As I look back, I strive to remove my impostor mask.

\*\*\*

## Witnesses of the Gwangju Uprising<sup>4</sup>

SHIN Gyonggu

Director, Gwangju International Center



HAN Gang, who won the Man Booker International Prize in novel for *The Vegetarian*, considers the *Human Acts* (소년이 온다) as her best work.<sup>5</sup> She wrote it as she was driven by the strong obligation to share the tragedy of the Gwangju Uprising with her readers. The feeling of duty often forces her to continue to write. She often hurts her wrists since she overworks herself with the computer keyboard. This obsession gave the honor to Korea to be the first Asian country to produce the first awardee of the Man Booker International Prize. Many publishing companies of the world began to pay attention to the writers of Korea for their prospective authors.

Recently, I met Dr. Paul Courtright who finished a memoir *Witnessing Gwangju* both in Korean and English. He happened to be a Peace Corps volunteer in May 1980 near Gwangju. He experienced an extreme frustration and helplessness while observing the tragic incidents occurring in front of him. He refused to follow the order of the US Embassy to leave Gwangju. He and other colleagues decided to stay to see and to be with more helpless citizens. At night he could not get to sleep due to the shocking scenes he saw. Writing down the notes of atrocities was the only way for him to lower the anger and to get to sleep in preparation of observing more the next day. This first memoir by an international witness would not have been possible 40 years after the Uprising without his obsession of putting down notes every night and without his indebtedness to the victims he could not help.

I was surprised to read an article on the result of the questionnaire to university students at the early 80s on the most important event after WWII: 80% of the students considered the Gwangju Uprising as more important than even the Korean War. Still there is no argument needed that the May 18 Democratization Movement was the epoch-making moment toward the political and cultural revolution of the 1980s of Korea.

I met many people from other parts of Korea and even from other parts of the world for the sake of visiting the sites of the Gwangju Uprising. The lack of many English speakers available in the 1980s obliged me to be a free site guide for the international visitors. I still remember showing one of the reporters to the apartment of Mr. Jeon Gyerang (the father of a victim) near the Chonnam National University Campus. He calmly explained how he handled the body of his own son. I also remember

<sup>4</sup> I originally planned to write about the big influence of the university professors to the democratization of Korea. But the 41<sup>st</sup> of May 18 Movement anniversary obliged me to deal with the reasons of the influence of May 18 to the democratization of Korea.

<sup>5</sup> <https://www.goodreads.com/book/show/30091914-human-acts>

the legendary human rights lawyer Mr. Hong Namsun, who surprised me and the international visitor with the full bow on his knees. His voice was soft and kind while explaining the situation and the direction of the movement based on the principles of finding the truth, compensation of the victims, recovery of honors of the Gwangju citizens, and prosecution of perpetrators.

Mr. Soh Yujin was a powerful orator and analyst of the world politics in two languages. His life changed while he was in the U.S. after he saw the atrocities in the photo book of the Gwangju Uprising, the publication of which was possible thanks to Hinzpeter, the German journalist featured in the 2017 film *A Taxi Driver*. He decided to come to Gwangju in the early 1990s after more than 10 years of anti-military government activism in the U.S. as the General Secretary of Mintong-ryeon (Korean Congress for Democracy and Reunification in North America), which was established by Kim Daejung. He wanted to spend his life to share the Spirit of the Gwangju Uprising in Asia while not following the steps of his colleagues in the Mintong-ryeon, who returned to Korea to become members of the national parliament or to work in the administration. He visited every corner of the South East Asian countries connecting the democracy activists to the spirit of the May 18 Movement and the democracy of Korea for more than 20 years till he died and was buried in the Gwangju Mangwol-dong Cemetery last year.<sup>6</sup> His Asian network used to cover all South Asian countries including Sri Lanka, Indonesia, Myanmar, Thailand, and Cambodia. He was the contact person when the May 18 Foundation awarded the first Gwangju Prize for Human Rights to the first President of East Timor in 2000.

Professor George Katsiaficas is not less enthusiastic on the Gwangju Uprising than any other researchers. He was also so much inspired by the dynamics of the Korean democracy that he began to visit Korea every year and even to stay here in Gwangju as a visiting scholar. He played the same role as Mr. Soh did with his writing on Gwangju and Korea. We can find 20 articles including *Remembering Yoon Sang-won* (2017).<sup>7</sup> He is not only a writer but also a powerful speaker with a penetrating voice in private and public meetings. Without the international reporters and scholars like him, the significance of the Gwangju Uprising would have been much lower in the Western hemisphere.

There are numerous more dedicated people who have been contributing to the project of sharing the spirit of democracy and human rights of Gwangju and Korea. The significant number of books, papers, movies, and novels about the Gwangju Uprising as seen in the following table would not be possible without the dedication of many scholars and artists. Majority of the research and cultural outputs have been produced not by the Gwangju citizens but by people outside Gwangju in Korea and around the world.<sup>8</sup> It is amazing to find a number of novels, movies, and TV dramas on the Gwangju Uprising, which is comparable to that of the Korean War.

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<sup>6</sup> [https://www.hani.co.kr/arti/area/area\\_general/894651.html](https://www.hani.co.kr/arti/area/area_general/894651.html)

<sup>7</sup> <https://www.eroseffect.com/korea>

<sup>8</sup> It took me quite a time to find the resources and have them organized in person. The number of articles on the Korean War is too many to list and count. You can find the list in my newly created blog in Tistory: <https://shingyonggu.tistory.com/>

| Category                   | Korean War | Gwangju Uprising | Jeju Uprising |
|----------------------------|------------|------------------|---------------|
| Scholarly books in Korean  |            | 166              | 0             |
| Scholarly books in English |            | 20               | 4             |
| Research articles          |            | 136              | 81            |
| Articles in ResearchGate   |            | 64               | 7             |
| Novels                     | 53         | 83               | 9             |
| Movies                     | 36         | 21               | 7             |
| TV dramas                  | 16         | 5                | 0             |

It is painful for us to be infected with the virus of justice as were Han Kang and many others. But taming the pain in a productive way gives back a positive energy to us to participate in building a just and sustainable community locally and globally. \*\*\*



*Dr. SHIN Gyonggu is Professor Emeritus of Chonnam National University (CNU). He taught at CNU for 31 years. While teaching, he enjoyed the privilege to be the Fulbright senior scholar in 1995, and to get selected as one of the eight best teachers of the university in 2006 for the first time in CNU. He served the university in various functions including as the Language Center Director for four years and as the Dean of the International Affairs for four and half years till two months before he retired in 2013. He has been the executive director for Gwangju International Center (GIC) with no payment since 1999, which serves the local international community with 18 staff with the help of volunteers and 1,000 fee paying members. The GIC has been organizing the World Human Rights Cities Forum (WHRCF) since 2014 to develop it as one of the most significantly contributing human rights gatherings of the world. He has been working with the City of Gwangju as a senior advisor for human rights and international affairs since 2015.*

## VII. News

### **Ms. Jieun Park, JD Received the 2021 Grotius Award for Academic Excellence in International Law**

Congratulations!

A recipient of the 2017 KAUPA Scholarship, Ms. Jieun Park, JD will **receive the 2021 Grotius Award for Academic Excellence in International Law**, and will be recognized at the Golden Gate University (GGU) School of Law Class of 2021 Commencement Ceremony on May 14th, 2021.

She was honored by the faculty as the graduating student who has demonstrated the highest levels of achievement in the field while at Golden Gate University.

Again, congratulations!

#### *Reference:*

#### Scholarship Fund and Awardees (2017)

Scholarship Committee was established in 2016 as follows:

Prof. Kee Bum Kang of Naval Postgraduate School (Chair)

Prof. Dewey Ryu of University of California at Davis

Prof. Nakho Sung of Tufts University

Prof. Young Suk Kim of Mansfield University

Prof. K. Wayne Lee of the University of Rhode Island (Ex Officio)

The KAUPA Scholarship Committee selected following two recipients:

Mr. Daejin Kim of Georgia Institute of Technology

**Ms. Jieun Park of Western Michigan University Law School.**

These scholarships will be awarded with a check of \$1,500 each on May 5, 2017.

The Scholarship Committee received contributions from the following agencies, members, and supporters (as of 12/25/17):

Korea Electric and Power Corporation (KEPCO) (\$600)

Prof. Emeritus Nakho Sung (\$470)

Prof. K. Wayne Lee (\$235)

Prof. Emeritus Jae O. Kang (\$200)

Prof. Jae Kwang Park (\$135)

Prof. Emeritus Ki-Hyun Kinney Kim (\$100)

Prof. Emeritus Chong Min Lee (\$100)

Prof. Young B. Choi (\$100)

Prof. Keebum Kang (\$100)

Prof. Youngseok Kim (\$70)



Prof. Emeritus Sekyung Shklar (\$65)  
Prof. Mun Shik Son (\$65)  
Dean Duck Joo Yang (\$50)  
Prof. Emeritus Hongtae Thomas Hahn (\$40)  
Prof. Emeritus Hai-Lanne Kang (\$35)  
Consul General Song Jun Ohm (\$35)  
Prof. Junseok Oh (\$35)  
Dr. Woosung Hwang (\$35)  
Dr. Do Yeong Kim (\$35)  
Mrs. Jeebock Hong Lee (\$35)  
Mr. Juhyung Harold Lee, JD (\$35)  
KAUPA General Fund (\$425)

Total (\$3,000)

## Grad Student Wants to Help Visually Impaired People ... Just Like Himself



Article Source: Jim Carlson, PennState News, May 8, 2020,  
<https://news.psu.edu/story/619293/2020/05/08/academics/grad-student-wants-help-visually-impaired-people-just-himself>

Dr. JooYoung Seo is an incoming assistant professor in the School of Information Sciences (iSchool) at the University of Illinois at Urbana-Champaign (UIUC), RStudio's trusted data-science instructor (e.g., Tidyverse & Shiny), and internationally certified accessibility professional.

(Article source: Biography of his homepage at <https://jooyoungseo.com/>)

## VIII. Useful Websites and IT Tips

### Korean American Story

Mission:

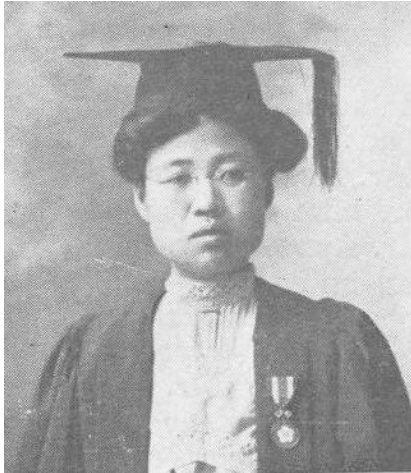
TO CAPTURE, CREATE, PRESERVE AND SHARE  
THE STORIES OF THE KOREAN AMERICAN EXPERIENCE

<http://KoreanAmericanStory.org>

## IX. Pioneers

**Esther Pak (에스더 박: 1876 or 1877-1910)**

**The First Korean Woman Physician to Practice Western Medicine in Korea**



Esther Park, First Female Medical Doctor in Korea

URL=<https://ethnoscopes.blogspot.com/2019/09/esther-park-first-female-medical-doctor.html>

(Article source: EthnoScopes : Tracks of an Anthropologist)

Esther Park

URL=[https://en.wikipedia.org/wiki/Esther\\_Park\\_\(physician\)](https://en.wikipedia.org/wiki/Esther_Park_(physician))

(Photo source: Wikipedia)

## X. Special Section

### 허회태: 감성의 본질

**Dr. Tatiana Rosenstein**



허회태 (茂山, '무'는 "무성한", 산은 "산"을 뜻 함)는 잘 알려진 한국의 서예가이자 현대예술가이다. 중국서예를 탐험하다 무산은 전통적 글쓰기를 넘어서 그 자신이 하나의 새로운 형태를 만들어 이를 새로운 수준의 예술적 표현으로 발전시켰다. 시간이 지남에 따라 그의 작품은 예술과 자연에서 영감을 얻어 인간이 만들어 낸 것이 아닌 더 추상적인 형태를 취하게 된다. 무산은 감성, 기분 및 다른 마음의 상태에 초점을 맞추고 서예의 대상에 대한 고정관념에서 벗어나서 자신의 예술적 자유를 탐구하면서 그들에 의해 부과된 구속으로부터 벗어나고자 하였다. 어떤 하나의 방식으로 그는 자신의 감정을 붓과 융합하여 자신을 표현한다.

허회태는 2005 년에 2 차원 붓글씨 그림을 몇몇 작품은 조각이라고도 할 수 있는 3 차원 예술품으로 바꾸어 이를 획기적인 작품으로 만들었다. 그러나 아티스트가 모델링하여 재료를 캔버스에 추가하여 객체를 생성하지만 이를 우리가 전통적인 조각이라고는 이야기하지 않을 수도 있겠다. 서예와 그림을 결합한 이 새로운 형태를 "Emography" (감성 + 서예 화풍)이라고 하며, 이는 글쓰기와 그림/회화의 현대적 구분의 경계를 초월한다. 무산은 작품의 표면을 텍스트와 그림요소로 보완하여 "저(低) 부조"라고볼수 있는 종이를 작품을 제작한다. 그는 한국의 전통 '한지'를 사용하여 이를 작은 형태로 꼬는데 이 위에는 붓글씨를 세필로 아주 작은 글자들이 쓰여져 있다. 한지는 뽕나무 껍질로 만 들고 얇고 반투명하며 종이가 완전히 마르지 않았을 때 쉽게 누르거나 녹말을 칠하거나 접을 수 있는 종이를 말한다. 한지는 창조력을 자유스럽게 발휘할 수 있는 힘을 준다. 무산은 그의 작업과정을 다음과 같이 설명 하고 있다.

먼저 주제에 관련된 많은 단어와 문장을 작은 종이에 쓴 다음, 스티로폼을 기준을 정하여 4 개의 조각으로 나누어 개별적으로 붓글씨로 쓴 종이를 붙이고 난 다음 이들을 하나

씩 하나씩 캔버스에 붙입니다. 이 과정은 나에게 우주를 만드는 과정처럼 보입니다. 수많은 아주 작은 무의미한 조각들이 서로 통합되어 꽃으로 피어납니다. 이러한 섬세한 수작업은 제가 사람들과 원활한 의사 소통을 위한 감정코드를 심고 있는 것입니다.

특정 사회-민족 문화계층에 몰입하여 형성된 모든 예술가는 사회의 문화적 상징과 표현에 중점을 둔 특정 시청자에 대한 자신의 사회적공간 경험을 바탕으로 작품을 만든다. 무산의 예술과 작가의 견해를 이해하려면 그의 작품을 역사적 맥락에 두어야 한다. 한국인의 마음을 바꾸는 데 있어서 중요한 이정표는 1987 년으로, 활발한 저항운동을 보여 주었고, 그 결과 대한민국 시민들은 마침내 민주주의를 수립할 수 있었다. 민족 예술의 경우 이는 다원주의, 포스트모던 경향, 국제예술을 발견할 수 있는 기회의 확산과 동시에 자기 문화의 독창성을 유지하는 것을 의미했다. 이러한 사회적 경향은 순수한 추상화에 대한 욕구와 같은 새로운 기능이나 강조된 표현성에 반영되며, 유럽, 특히 art informel (앙포르멜)로 알려진 프랑스에서의 유사한 움직임에서 영감을 얻은 것이다. 미국 예술, 특히 액션페인팅의 영향은 의심할 여지없이 잭슨 폴락 (Jackson Pollock) 장르의 가장 유명한 유산에 기반을 두고 있다. 한국에서 학술적인 예술에 대한 저항은 1960 년 말에 시작되었다. 이들은 앙포르멜운동의 대표자들에 의해 주도 되었다. 예를 들어, 아방가르드의 거리전시는 경복궁의 외벽에서 이루어졌고 국립미술전 대안전시회가 근처에서 열렸다. 앙포르멜예술가의 아이디어에 따르면, 예술작품의 정서성과 자발성은 합리성보다 더 중요하다고 한다.

1970 년대 한국미술에서 가장 큰 실험운동은 단색화 였는데 단색과 평평함이 그 특징이라고 할 수 있다. 언뜻 보기에 스타일은 Mark Rothko 또는 Clyfford Still 의 컬러필드페인팅과 유사하다. 한국과 미국의 예술가들은 어떤 특정한 색들이 아니라 단색의 컬러필드를 묘사한다. 단색화를 면밀히 검토해보면 반복적인 얼룩 만들기와 없애기를 포함한 수많은 텍스처로 구성된 표면을 볼 수 있다. 대표적인 단색화는 연필선을 반복하여 캔버스에서 흙을 제거하거나 그림의 일부를 긁어 다시 쓰고 설명함으로써 고대 동양의 철학계, 특히 불교의 아이디어를 사용하여 불교승려의 길고도 고통스러운 명상기술과 비교될 만하다. 1970 년대 한국 실험예술의 역사에서 우리는 Avant-garde Group (AG) 또는 The Fourth Group 과 같은 협회를 언급해야 할 것이다. 그들은 평평한 그림이나 받침대의 조각과 같은 제한된 형식에서 예술을 자유롭게 함으로써 예술과 일상생활의 경

계를 흐리게 하고 새로운 창의적 표현방법에 특별한 관심을 기울이고 있었다. 아방가르드 그룹과 보수예술가의 대결은 1980 년대에 민중예술과 같은 보수적 그룹의 승리로 끝났다. 그러나 아방가르드운동은 의심할 여지없이 한국미술사에서 흔적을 남겼으며, 이는 다른 형태의 형상을 발견하려고 시도한 새로운 보수적 경향의 대표자들에게서조차도 새로운 실험을 이끌어 냈다. 아마도 새로운 방향의 초현실성은 서양예술의 팝아트와 비교 될 수 있다. 그러나 한국예술가들은 주관적인 감정과 상징주의에 더 관심이 많았다. 서양화는 현대사회에 대한 숭배의 개념을 전승하는 데 열중했지만, 한국화는 주로 서구에서 자신의 존재에 집착하는 예술가를 양성하는 대신에 사람들의 존재를 은유적으로 나타내기를 원하는 것처럼 인간의 부족함을 자연으로 바꾸어 표현하고자 하였다. 1990 년대 에는 한국 현대미술의 세계화시대가 시작되었다. 예술가들은 해외여행을 더 자주 다니기 시작했으며 때로는 외국에서 수학하기도 하였다.

허회태는 1957 년 한국 미술계에 대한 저항이 시작되었을 때 태어났다. 아마도 그는 예술보다는 서예를 연구함으로써 더 안전한 길을 선택했을 것이다. 작가자신에 따르면 그는 서예에 너무 몰두했다. 단지 태어난지 5 년 만에 그 자신의 첫 작품을 만들었던 것이다. 신동으로 알려진 그는 15 세에 서예대회에서 첫 대상을 받았다. 첫 개인전은 그가 고등학교에 다니는 동안 열렸다. 현대 한국미술의 세계화가 국제적으로 등장하고 현지 예술계가 다원주의적 의견과 실험의 기쁨을 위해 문을 열었을 때, 무산은 30 대 후반의 나이였다. 1990 년대 중반까지 그는 서예에서 알려진 모든 서체에 정통하게 되었다. 그로서는 마침내 새로운 것을 만들고 싶은 때가 찾아온 것이다:

**그 당시 나는 조선시대의 전설적인 서예가 김정희의 추사체를 생각하고 있었습니다. 나는 그를 얼마나 잘 모방하더라도 기존서체로 그를 능가 할 방법이 없다고 생각했습니다. 나는 내 시대에 요구되는 새로운 것을 시작 해야 겠다 고 생각했습니다. 나는 대부분의 문자가 특정국가에서 사용 된 문자에 지나지 않는다는 사실에 중점을 두었습니다. 그러한 문자들은 전 세계적으로 의사 소통을 할 수 없었습니다. 그래서 나는 전 세계로 통할 수 있는 문자로 이미지를 표현하려고 했습니다.**

그의 새로운 형태의 예술은 서예, 회화 및 조각의 혼합이다. 그의 예술은 인간뿐만 아니라 자연에서도 똑같이 영향을 받았다. 그는 감성과 직관에 관여하여 사람들의 보편적



본능, 생각과 느낌을 바탕으로 한 형태의 인간 커뮤니케이션 도구, 즉 언어를 채택했다. 그는 존재에 대한 인간의 욕구에 뿌리를 둔 에로티시즘을 발견하고 존재하게 만든다. 그는 아이디어, 생각 또는 윤리가 지배하지 않는 유혹과 자연을 찾는다. 그의 말에서 우리는 외음부의 아이콘이 보편적인 삶과 창조, 욕망, 고통과 즐거움의 원천임을 느끼게 된다. 그의 초기작업은 대부분 흑백이다. 이러한 선택은 그가 서예에서 영향을 받은 것 같다. 그러나 1970년대와 1980년대 초 한국의 많은 예술작품에는 색상의 제약이 내재되어 있었다. 그들과 마찬가지로 무산은 또한 동양철학과 불교에서 영감을 얻어 환생과 이주의 개념인 출생과 환생의 순환을 탐구했다. 때로는 스타일의 유사성은 직접적인 영향을 받지 않아도 만들어지기 때문에 작가의 견해는 Zeitgeist(時代精神)에 의해 형성되었다.

나는 한국으로의 세 번째 여행을 통하여 무산의 스튜디오를 처음 방문했다. 서울의 강남에 위치한 아늑한 공간은 붓과 종이, 책, 두터운 도록, 그래픽 작품 및 그림, 조각 및 이모티콘 조각으로 온통 채워져 있었으나 모든 것이 순서대로 조화롭고 단순했다. 무산은 새로운 전시회를 위한 작품을 선택하고 숙고하며 열심히 준비하고 있었다.

우선 하나의 캔버스가 먼저 필자의 관심을 끌었다. 표면은 파란색, 빨간색 및 노란색의 색상으로 덮인 세 개의 동일한 부분으로 나뉘어져 있었다 (무산에 따르면 노란색은 믿음, 빨간색은 열정, 파란색은 평화와 안정성을 나타낸다). 그것은 자신의 현실 속에서 살아있는 추상적인 개념이다. 그것은 고도로 정제된 형태의 아름다움으로 미니멀리스트 예술세계를 떠오르게 하였다. 좀더 가까이 접근하면 표면이 소용돌이처럼 움직이고 소용돌이 치는 것처럼 가장자리를 향해 색상이 흐려지는 것을 볼 수 있었다. 그 소용돌이의 중심은 때때로 오른쪽, 때로는 아래쪽으로 이동하여 공간, 선 및 질량의 율동감 있는 소용돌이를 만든다. 면밀히 살펴보면 캔버스의 일부가 작가가 손으로 쓴 자그마한 것들로 구성되어 있음을 갑자기 알 수 있었다. 수공예 보석과 같은 아주 조그만 것들로 구성된 제작과정에서의 고통이 느껴지는 이 작품은 수많은 구호 활동이 거대한 네트워크를 만들고 있다. 그럼에도 불구하고 그들의 다층과 의미론적 다양성에서 그들은 절대적인 조화를 만들어 내고 있었다. 여기에서 객체는 여전히 추상적으로 보이지만 더 개념적으로 보인다. 필자는 “생명의 꽃” (헤아림의 꽃길) 시리즈의 제목을 무산에게서 들었다. 그 이름은 그 자체의 예술적인 이야기이다. 이제 이 추상적인 형태로 나는 꽃이나 다양한

자연적 요소를 추측 할 수 있다. 다른 모양과 표면을 묘사한 수많은 선이 3 차원을 형성하는 것 같다. 관람자는 이 끝없는 우주에 대해 지루해하지 않으며 같은 순간에 풀 수 있는 것처럼 보이는 수수께끼는 새로운 의미해석을 만드는 관점에서 즉시 사라진다. 한 조각에서 나는 다음에 방금 항해하는 보트에서 떠난 것처럼 얼룩이 있는 수면을 닮은 짙은 남빛이 보인다. 캔버스의 일부는 "심장의 울림, no 5"라는 제목의 캔버스와 같이 더 단색적이다. 피는 꽃 뿐만 아니고, 태양이나 인생의 굴레까지 빛나고 있음을 본다. 가장 작은 세밀한 부분까지 모든 것이 예술가의 손에 의해 만들어지기 때문에 이러한 작품을 나는 조각이라고 할 수 있겠다. 작가는 묘사 된 것을 다음과 같이 설명하고 있다:

**나는 중심을 향해 돌진하는 입자들에 주목하고 싶었습니다. 가운데에 보석이 표시되어 균일한 공간에 강한 빛이 반사되었습니다. 이 중심은 주인의 행동과 느낌을 반영하는 사람의 상징적인 마음이 됩니다. 그것은 공간에서 나와 자연과 나에 대한 생각을 담고 있습니다. 모든 작업의 시작은 사람들이 자신의 아이디어를 만들고, 욕망을 표현하고, 주고 받으며, 질문하고 대답하는 우주의 이야기입니다. 나는 에너지를 생동하게 하고 삶의 숨결을 느끼게 하는 조각을 만들고 싶었습니다.**

다가오는 전시회에 포함 된 일부 작품은 "비상, 비비상 (非常, 非非想)" 과 같이 그림으로만 볼 수 있었다. 서로 다른 여러 독립적인 형태는 인간의 형상을 상기시키고, 증가하고 끊임없이 증가하는 군중을 상기시킨다. 형태는 여성의 신체부위, 아기의 테두리 및 기존의 생명 생성과정과 같은 다양한 상징을 포함한 꽃과 같은 아름다운 모티브를 가지고 있다.

무산의 새로운 작품은 복합적 이다고 할 수 있다. 그것들은 몇 가지 스타일을 포함하고 있는데 그렇기 그들은 현대 한국예술과 서예술 모두에서 인식할 수 있다. 1970 년대 한국 아방가르드의 단색과 편평함의 전통은 액션페인팅의 경향 뿐만 아니라, 특히 붓과 잉크로 수많은 예술가들의 공연을 회상함으로써, 또는 전체 작품이 하나의 대상이 되는 개념예술에 의해 명확하게 유추되어 설명될 수 있다. 생각과 감정에 중점을 둔 '추상적 표현주의'의 유산이다. 예술은 이제 바야흐로 세계적인 현상이 되었다. 허회태의 다양한 예술과 그의 수많은 실험은 삶의 연구에 대한 그의 호기심과 지칠 줄 모르는 기쁨을 말해 준다. 아마도 역사가와 미술비평가는 예술을 설명하려는 욕구를 가지고 있다고 할

수 있다. 그들은 작품들을 조직화하여 예술작품의 정확한 분석을 하기 위해 노력 한다. 감정의 본질을 사용하여 예술을 감상할 수도 있기 때문에 보통의 관람객은 그들처럼 그렇게 할 필요가 없다. 이는 바로 무산이 희망하는 바이며 관람객으로 하여금 예기치 않게 무한한 상상력을 불러 일으키게 함으로써 사람들의 마음을 감동시킬 수 있다는 인식에 관련되어 있기 때문이다. \*\*\*

(원문 번역: 최영배, Regent University, USA)

참고 기사: The Nature of Emotions: Via Moosan, Huh Hwe-tae, Gwangju News, April 14, 2021. URL=<https://gwangjunewsgic.com/arts-culture/exhibitions/huh-hwe-tae/>

저자 소개: Tatiana Rosenstein 박사는 현대미술에 초점을 맞춘 미술사를 가르치고 있습니다. 1999 년부터 국제 영화제, 디자인 및 패션 행사, 독일어권 및 외국 언론을 대상으로 한 주요 예술행사를 보도해온 영화학자이며 비평가 심사 위원으로 활동하고 있습니다. 그녀의 대학원 연구지도교수는 Andy Warhol 을 발견하고 그의 첫 번째 작품집을 출판한 것으로 유명한 Rainer Crone 교수입니다. 그녀는 유럽과 러시아, 중국과 한국을 아우르는 다양한 출판물에 여러가지 언어로 기사를 쓰고 있습니다.

이메일 주소: [info@kino-kunst.de](mailto:info@kino-kunst.de)

**Tatiana Rosenstein: Journalist, Writer, Columnist:** <http://www.tatiana-rosenstein.com/>



작가 소개: 무산 회회태는 5 세부터 한학을 배운 후 중학교 때부터 전국의 각종 서예대회에서 수상. 상명대학교 대학원에서 한국화를 전공하고 1995 년 국전 서예부문 대상 수상 및 국전심사위원과 운영위원 역임. 현재 중국 연변대학교 미술대학 회화과 석좌교수. 서예를 회화적으로 표현하는 Emogrphy 라는 새로운 조형 체계 창안. 그의 새로운 조형 예술작품은 미국의 CNN channel, Great Big Story, ABC 와 Fox 에서도 방영되어 소개된 바 있다.

Emography URL=  
<https://www.youtube.com/watch?v=dYLrIFuUENI&feature=youtu.be>

Artist URL=<http://moosan.net>





**The Vibration of a Heart (심장의 울림), Huh Hwe-Tae(허회태), © 2021**

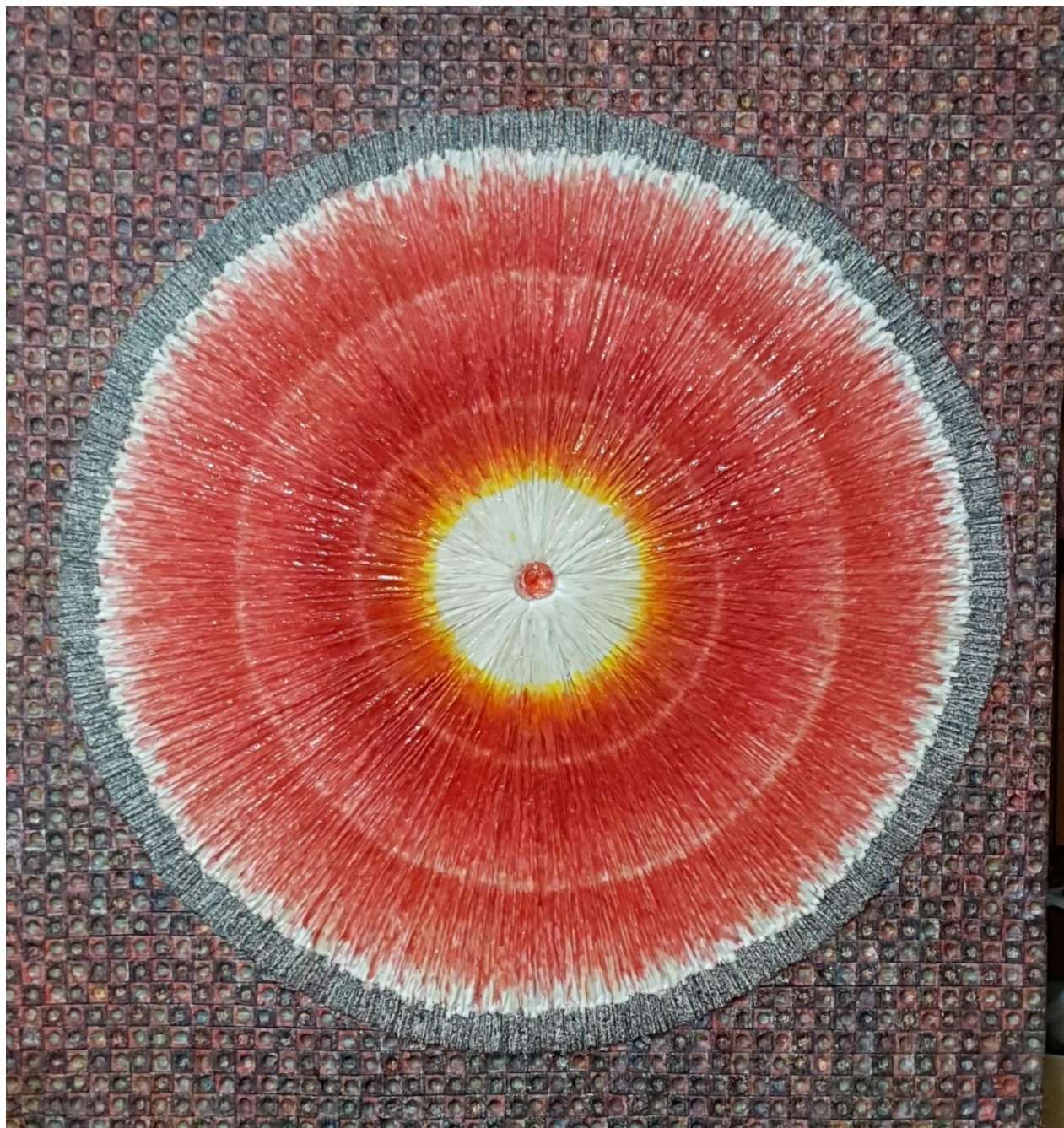
Korean Paper (“Hanji”) and Mixed Media, 65cm x 60cm



**Bed of Roses in Enumeration (헤아림의 꽃길), Huh Hwe-Tae(허회태), © 2021**

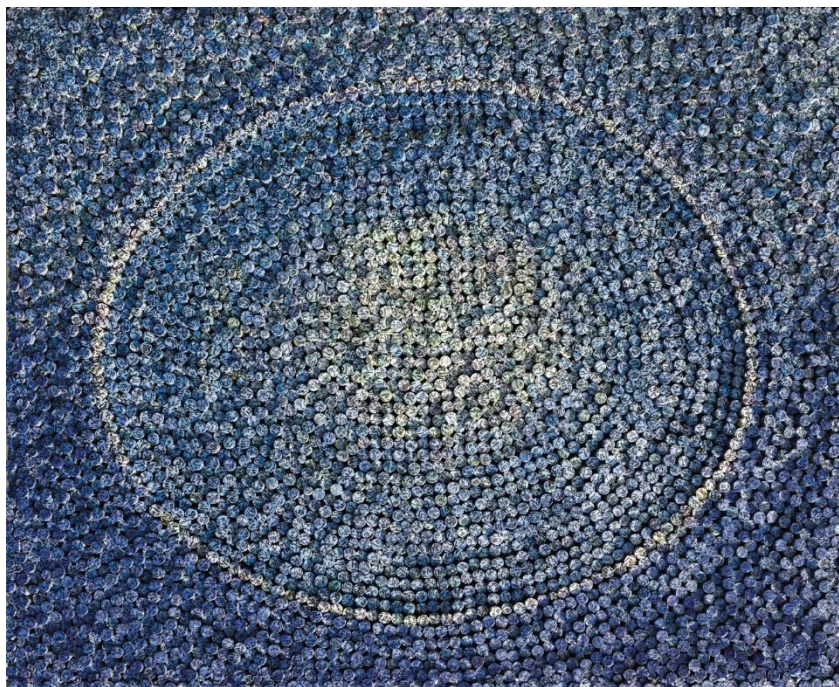
Korean Paper (“Hanji”) and Mixed Media, 95cm x 53cm





**The Vibration of a Heart (심장의 울림), Huh Hwe-Tae(허회태), © 2021**  
Korean Paper ("Hanji"), Jewelry, and Mixed Media, 130cm x 120cm



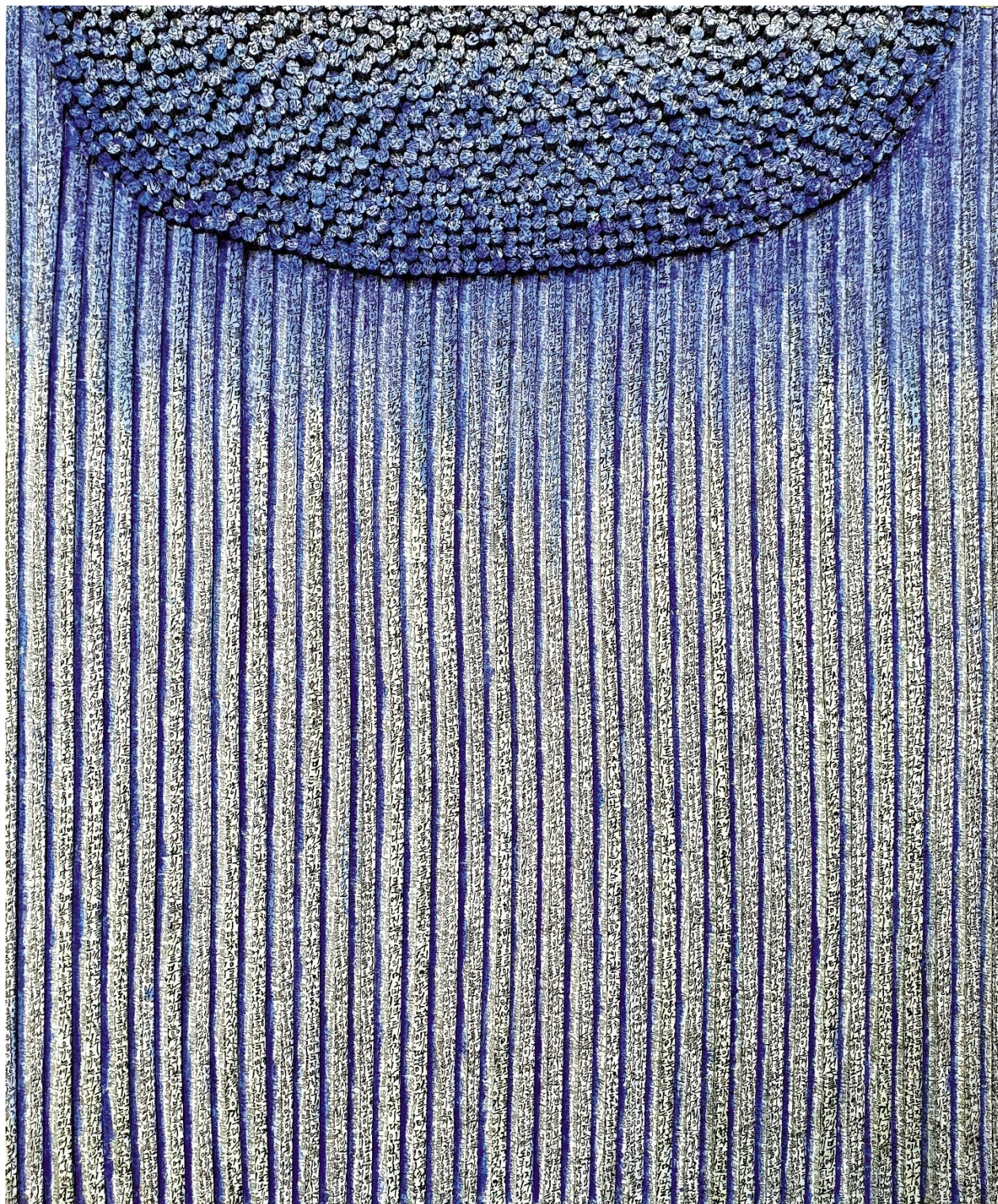


**The Vibration of a Heart (심장의 울림), Huh Hwe-Tae(허회태), © 2019**  
Korean Paper (“Hanji”) and Mixed Media, 65cm x 60cm



**Bed of Roses in Enumeration (헤아림의 꽃길), Huh Hwe-Tae(허회태), © 2020**  
Korean Paper (“Hanji”) and Mixed Media, 65cm x 60cm

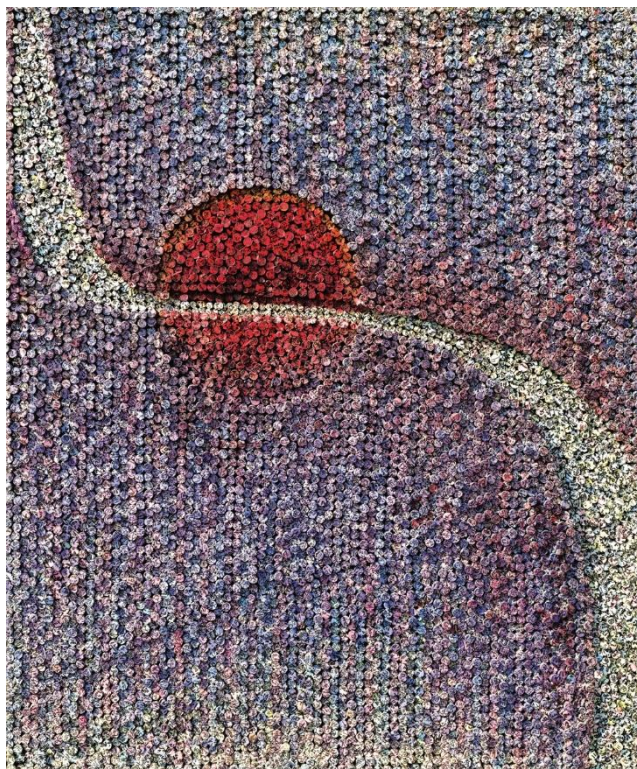




**Bed of Roses in Enumeration (헤아림의 꽃길), Huh Hwe-Tae(허회태), © 2020**

Korean Paper (“Hanji”) and Mixed Media, 91cm x 75cm



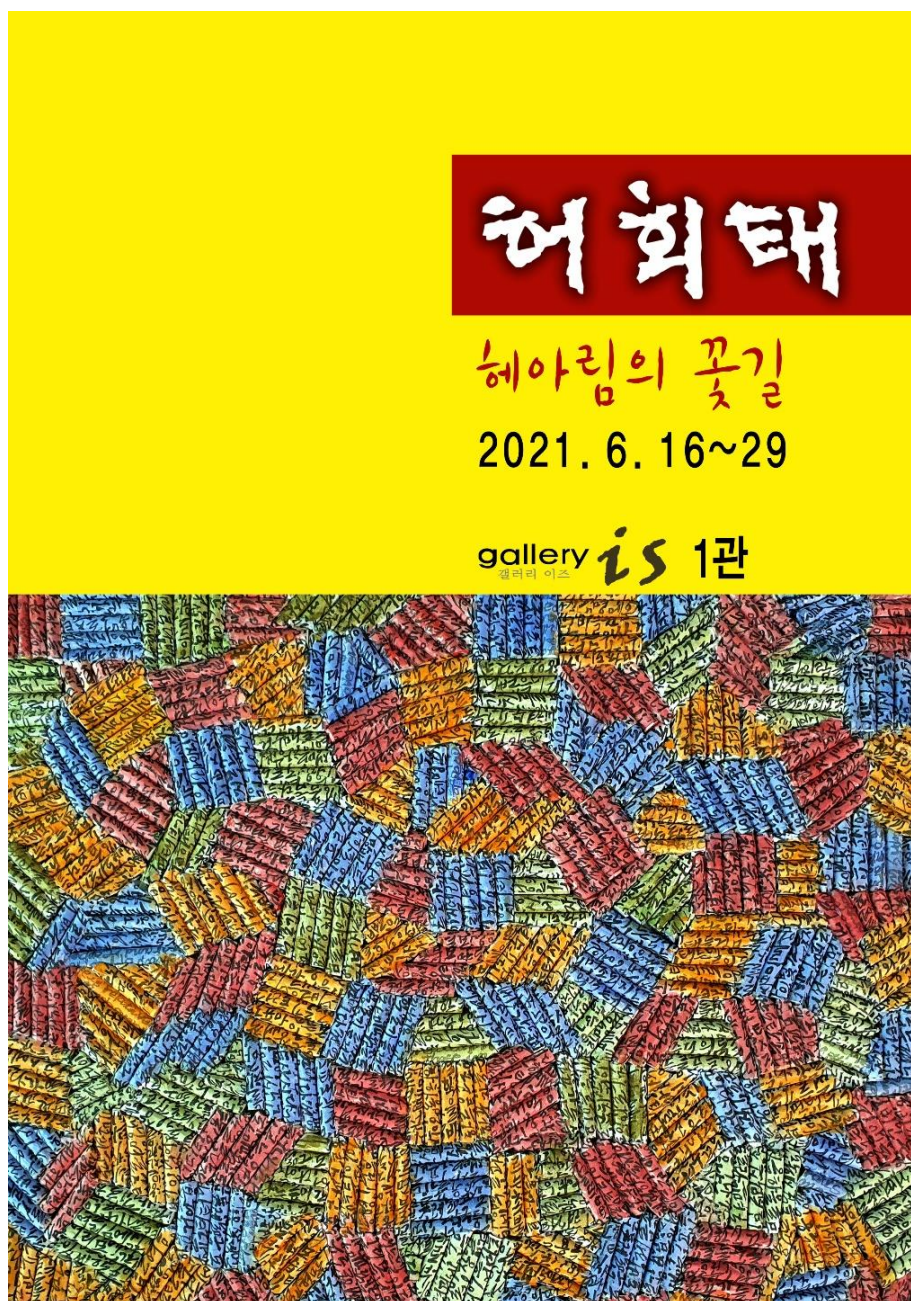


**Bed of Roses in Enumeration (헤아림의 꽃길), Huh Hwe-Tae(허회태), © 2020**  
Korean Paper (“Hanji”) and Mixed Media, 91cm x 76cm



**The Vibration of a Heart (심장의 울림), Huh Hwe-Tae(허회태), © 2021**  
Korean Paper (“Hanji”), Jewelry, and Mixed Media, 130cm x 120cm





URLs= <https://m.youtube.com/watch?v=IgVvexYDBRw&feature=youtu.be>  
<https://www.ktown1st.com/blog/VALover/16327>  
<https://www.ktown1st.com/blog/VALover/16328>

## XI. KAUPA Sponsors

### Mommy's POT

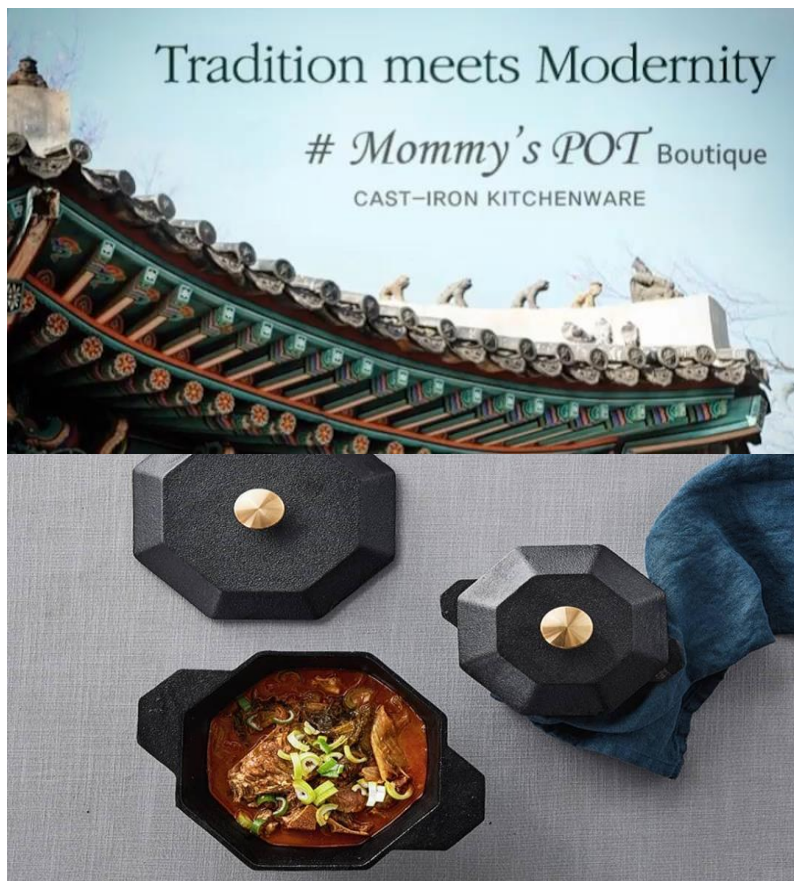
Inspired by traditional Korean Culinary of Cookware, Mommy's POT is Eco-Friendly Cast-Iron Skillet made by **Woman start up entrepreneur** in 2017. The entire process is hand-made by skilled Korean artisans at a small foundry in Korea. Mommy's POT is promoting the Zero-waste and Zero chemical from sourcing the pure iron ore to using recycle packaging without harmful chemicals.

Mommy's POT is sustainable design-oriented manufacture of cast iron cookware that believes Korean beauty can still be part of utility. Our designs are inspired by Korean historic sources but enabled by new technologies. Mommy's POT Cookware is both a Korean cooking lifestyle inspiration and tool, an investment you will never regret as it will last for generations.

USA Office: <https://mommypot.com/>

Instagram: [https://www.instagram.com/mommypot\\_official/](https://www.instagram.com/mommypot_official/)

Point of Contact: [mommypotinternational@gmail.com](mailto:mommypotinternational@gmail.com)







### Directory of the 14<sup>th</sup> KAUPA Administration Leaders (1 of 3)

| Position                  | Name            | Affiliation                                      | Point of Contact<br>(e-mail) |
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| <b>Vice President 2</b>   | Munsup Seoh     | Wright State University, OH (Emeritus Professor) | munsup.seoh@wright.edu       |
| <b>Secretary-General</b>  | Tae (Tom) Oh    | Rochester Institute of Technology, NY            | tom.oh@rit.edu               |
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| Southwest                 | Seong Nam Hwang | Southeast Missouri State University, MO          | shwang@semo.edu              |
| North Central             |                 |  |                              |
| South Central             |                 |  |                              |
| Northeast                 | Angie Y. Chung  | University at Albany, SUNY, NY                   | aychung@albany.edu           |
| Central East              | Jung-lim Lee    | Delaware State University, DE                    | jlee@desu.edu                |
| South East                | Bomi Kang       | Carolina State University, SC                    | bkang@coastal.edu            |
| Canada West               |                 |  |                              |
| Canada East               | Sohee Kang      | University of Toronto Scarborough                | sohee.kang@utoronto.ca       |
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### Directory of the 14<sup>th</sup> KAUPA Administration Leaders (2 of 3)

| Position                 | Name           | Affiliation   | Point of Contact<br>(e-mail)     |
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| Agriculture              |                |   |                                  |
| Anthropology             |                |   |                                  |
| Arts                     | Taehee Kim     | Sam Houston State University, TX                        | thkim@shsu.edu                   |
| Business                 | Hyuna Park     | Brooklyn College of the City University of New York, NY | hyuna.park38@brooklyn.cuny.edu   |
| Dentistry                | Mary Kang      | New York University College of Dentistry, NY            | marykang@nyu.edu                 |
| Education                |                |   |                                  |
| Engineering              | Woo Hyung Lee  | University of Central Florida, FL                       | woohyoung.lee@ucf.edu            |
| Hospitality & Tourism    | Bomi Kang      | Carolina State University, SC                           | bkang@coastal.edu                |
| Human Ecology            | Jung-lim Lee   | Delaware State University, DE                           | jlee@desu.edu                    |
| Law & Politics           |                |   |                                  |
| Letters & Science        | Kyongseon Jeon | Columbus State University, GA                           | jeon_kyongseon@columbusstate.edu |
| Life Science             |                |   |                                  |
| Literature               | Sharon Kim     | Judson University, IL                                   | skim@judsonu.edu                 |
| Medicine                 |                |   |                                  |
| Music                    | Ryu-Kyung Kim  | University of Dayton, OH                                | rkim03@udayton.edu               |

|                        |                |  |                    |
|------------------------|----------------|--|--------------------|
| Nursing                | Chin S. Park   | New York University<br>Rory Meyers College of<br>Nursing | cp116@nyu.edu      |
| Pharmacy               |                |  |                    |
| Public Affairs         |                |  |                    |
| Public Health          |                |  |                    |
| Sociology              | Angie Y. Chung | University at Albany,<br>SUNY, NY                        | aychung@albany.edu |
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| Veterinary<br>Medicine |                |  |                    |

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|                                | Young B. Choi                | Regent University, VA                              | ychoi@regent.edu      |
|                                | Paul Chonkun Hong            | The University of Toledo, OH                       | Paul.Hong@utoledo.edu |
|                                | Helen Kim                    | The University of Alabama at Birmingham, AL (ret.) | helenkim@uab.edu      |
|                                | John Jae-Dong Kim (Invited.) | Rancho Palos Verdes, CA                            | drjohnkim33@gmail.com |
|                                | Youngsuck Kim                | Mansfield University of Pennsylvania, PA           | ykim@mansfield.edu    |
|                                | Gyonggu Shin (Invited.)      | Gwangju International Center, Korea                | ggshin@chonnam.ac.kr  |
|                                | Lisa Son                     | Barnard College of Columbia University, NY         | lson@barnard.edu      |
|                                | Jongwook Woo                 | California State University, Los Angeles, CA       | jwoo5@calstatela.edu  |



|  |             |                              |                     |
|--|-------------|------------------------------|---------------------|
|  | Yeomin Yoon | Seton Hall University,<br>NJ | yeomin.yoon@shu.edu |
|--|-------------|------------------------------|---------------------|

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*Alphabetical order according to last name*

| Name                 | Affiliation  | Major                                    |
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| In Dal Choi          | James Madison University, VA (ret.)                | Music (Voice)                            |
| Young B. Choi        | Regent University, VA                              | Computer Networking & Telecommunications |
| Angie Y. Chung       | University at Albany, SUNY, NY                     | Sociology & East Asian Studies           |
| CJ Chung             | Lawrence Technological University, MI              | Computer Science                         |
| Sam (Weon Sam) Chung | City University of Seattle, WA                     | Computer Science                         |
| Wookjae Heo          | South Dakota State University, SD                  | Consumer Sciences                        |
| Helen Kim            | The University of Alabama at Birmingham, AL (ret.) | Pharmacology & Toxicology                |
| Sylvia Kim           | Fresno Pacific University, CA                      | Accounting                               |
| Youngsuck Kim        | Mansfield University of Pennsylvania, PA           | Music (Voice)                            |
| Jaeju Ko             | Indiana University of Pennsylvania, PA             | Chemistry                                |
| Jay Kyoon Lee        | Syracuse University, NY                            | Computer Science                         |
| Kang-Won Wayne Lee   | University of Rhode Island, RI                     | Civil Engineering                        |
| Chul Park            | University of Toronto, ON, Canada                  | Mechanical Engineering                   |
| Hong Y. Park         | Saginaw Valley State University, MI                | Economics                                |
| Jae-Kwang Park       | University of Wisconsin-Madison, WI                | Civil Engineering                        |
| Moon-Sook Park       | University of Arkansas                             | Music (Voice)                            |
| Munsup Seoh          | Wright State University, OH (ret.)                 | Statistics                               |
| Seong-Moo (Sam) Yoo  | The University of Alabama in Huntsville, AL        | Electrical and Computer Engineering      |
| Yeomin Yoon          | Seton Hall University, NJ                          | Finance and International Business       |

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