

S U M M E R 2 0 1 5

Korean-American Women in Science and Engineering

# KWiSE Newsletter

Volume 4, Issue 4

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[www.kwise.org](http://www.kwise.org)

## Message from the President

Dear Fellow KWiSE Members,

It has been an honor and privilege to serve as the 4th President of KWiSE for the past year. Please join me in congratulating Dr. Jane Oh (JPL) on the inauguration of the 5th administration, which starts on July 1, 2015. She will be assisted by VP East, Dr. Hee-Yong Kim (NIH), and VP West Dr. Minhee Ko (UCLA). I would like to thank Prof. Youngkee Kim, University of Chicago, for serving as the Chair of the election committee.



I am happy to report that our Annual Spring Conferences were held

### Save the Date!

#### UKC2015

July 29-August 1, 2015

Atlanta, GA

<http://ukc.ksea.org/UKC2015>

#### KWiSE-KOFWST Women's Forum

7/31/2015 1:15-3:15pm

#### KWiSE BT Forum

7/31/2015 3:45-5:45pm

#### KWiSE Networking dinner

7/31/2015 6:30-8:30pm

successfully at the University of Maryland and Caltech, respectively for the East Coast Conference and the West Coast Conference. A keynote speech “Strong Objectivity: Gendered Science” by Prof. Seungkyung Kim, Chair of the Women's Studies Department & Director of the Center for East Asian Studies, was notable. Interdisciplinary research generated a lot of interests. Particularly, interactive and engaging panel discussions gave a great opportunity to foster further peer networking and mentoring among the attendees. I would like to thank Dr. Eun Ju Cheong (USDA), Greater DC Chapter President, and Dr. Suejung Huh (Ohhh! Inc.), Los Angeles Chapter President, for organizing the Spring Conferences.

Please join me in congratulating Dr. Kyungwha Park (Virginia Tech) for the 2015 KWISE Woman Scientist Award and Prof. Hey-Kyoung Lee, Dr. Eun Ju Cheong, and Ms. Jayoung Wu for KWISE Service Awards. Seven female winners of the National Math and Science Competition also received KWISE Awards this year.

I would like to thank the officers and committee members, who shared our vision to carry out our activities with passion, and made all of our accomplishments possible during my term. We were fortunate to have Drs. Hae Young Ahn (Food and Drug Administration) and Jane Oh (NASA JPL) as Vice Presidents, Dr. Eun-Ju Cheong (United States Department of Agriculture) as the Executive Director, Dr. Seongeun Julia Cho (Food and Drug Administration) as the Project Director, Dr. Hey-Kyoung Lee (Johns Hopkins University) as the Publication Director, Jay Wu (University of Maryland) as the Treasurer, and Ji Hye Han (University of Maryland) as the Web Master. I would like to thank former Presidents, Dr. Haejung An (Food and Drug Administration), Dr. Gye Won Han (Scripps Institute), and Dr. Sanghee Yoo for their valuable advice. I hope the next administration led by Dr. Oh will continue a strong relationship with our partners and sponsoring organizations, in order to develop productive programs that benefit the broader community.

While my term as President is coming to a close,

my dedication to our community will continue, in particular as Vice President of Korean-American Scientists and Engineers Association (KSEA). Let me close my statement by inviting you to the upcoming US-Korea Conference on Science, Technology, and Entrepreneurship (UKC 2015) to be held in Atlanta, GA, July 29 – August 1 (<http://ukc.ksea.org/UKC2015>). Mark your calendars especially for the following events:

KWiSE-KOFWST Women's Forum, Friday 7/31, 1:15 - 3:15 pm

KWiSE BT Forum, Friday 7/31, 3:45 - 5:45 pm

KWiSE Networking Dinner, Friday 7/31, 6:30 - 8:30 pm

I hope to see many of you at the UKC.

Eun-Suk Seo  
President of KWiSE



# Conference Reports

## The 10<sup>th</sup> Annual East Coast Conference

Hosted by the KWiSE Greater Washington DC Chapter



On May 2, the 10<sup>th</sup> Annual East Coast Conference was held at the University of Maryland, College Park. The members showed up from 9:30 am for registration and introduced each other over breakfast. With the welcome message from the chapter president (Dr. Eun Ju Cheong, USDA-ARS), the conference was started. Dr. Seo Eun-Suk (Professor of UMD), President of KWiSE, gave a short talk to introduce the goals and mission of KWiSE. Dr. Hey-Kyoung Lee moderated the keynote session and two keynote speakers gave interesting talks. Dr. Kyunghwa Park of Virginia Tech spoke about the nanoscale magnetic molecular transistors and Dr. Seungkyung Kim of UMD explained the history and concept of Feminism, and relations of the science and gender.

In the afternoon session, we had very diverse topics covering cell biology (Dr. Kyong-rim Kieffer-Kwon, NIH), drug regulation (Dr. Tao Bai, FDA), meteorology (Dr. Hyelim Yoo, NOAA), computer science (Dr. Hyun Jeong Moon, NIST) and neuroscience (Dr. Heekyung Lee, Johns Hopkins Univ.) from research agencies and academia, which was moderated by Dr. Hae Won Sohn (NIH).

During the last session of the conference, four panelists gave advice to the young scientists and engineers for their career and discussed the role of KWiSE to build better networking among women scientists in our chapter. Attendees comprised of diverse group of people in terms of ages and positions regardless of major. Senior level scientists and professors, post doctoral researchers and graduate and under graduate students participated in the Q and A session to share their experiences to each other and listen to recommendations from the members.

At the end of the conference, Dr. Seo awarded Dr. Kyunghwa Park, Dr. Hey-Kyoung Lee and Dr. Eun Ju Cheong for their outstanding contribution to KWiSE.

The 2015 Annual East Coast conference was a success and provided career advice and networking opportunities to not only women scientists in DC area but also young generations.

Written by Dr. Eun Ju Cheong,  
Greater Washington DC Chapter President

## The 9<sup>th</sup> Annual West Coast Conference

Hosted by the KWise Los Angeles Chapter



The 9<sup>th</sup> Annual KWise West Coast Conference was held at California Institute of technology (Caltech), Beckman Institute Auditorium, Pasadena, California on Saturday, May 16, 2015 from 9 am to 4 pm. With the title of “ Meeting of Art and Science, Reaching out to the Younger Generation and Networking”, approximately 56 participants attended the conference including members from San Diego Chapter and members of Young Generation members.

The researchers who have been actively performing cutting edge researches in greater Los Angeles Area gave talks on their interdisciplinary researches applying science and technology in medicine, art, education, and other areas.

The conference began with KWise overview by Dr. Haejung An, briefly introducing the past activities of KWise and envisioning future direction of KWise and the role of women scientists and engineers. As always, it was very pleasant and engaging moment with her great speech. Congratulatory Remark was provided by the president of USA Korean Film Council, who

encompassed the magic of bridging the art and science.

The keynote speaker of this conference, Dr. David W. Gjertson (Professor, UCLA, Biostatistics and Pathology), gave a talk on “Prognostic Factors in Organ”. His research focuses on applying statistical analysis in identifying matching donor and recipient for organ transplantation, which will significantly facilitate successful donor recipient matching process and also decrease rejection rate upon surgery. The audience was all impressed that statistical analysis and its application can be used as a key tool to significantly improve the quality of surgery and patient care.

The morning session was lined up with interesting talks given by two young women scientists; Dr. Hyowon Ban (Assistant Professor, Cal State Long Beach, Geography) gave a talk on “Representation of Spatial Information in Geographic Information Science”, in which she demonstrated how geographic tool could be used to monitor dancing movement. Dr. Ning Wang (Research Scientist,

USC ICT, Computer science) gave a talk on “From Virtual Humans to Robots: Developing Socially Intelligent Technology for Learning and Communication” and introduced new virtual tool and robots that will be widely used as pedagogical tools.

During the lunch break, the participants enjoyed wonderful Korean box lunch at the Beckman courtyard. Fun networking activity led by Dr. Minhee Ko (UCLA) and Dr. Hyunsook Park (Cal State LA) encouraged all the participants to introduce themselves and to connect with other peer scientists and potential mentors. The participants were divided into five groups, in which consist of 89 people and introduce them to the group members. Afterward, the participants were given fun quizzes linking the members in each group and the quiz winners received prizes. The participants also took brief moment to be connected with potential mentors. It was a great opportunity, in particular for young generations, who seek for guidance how to pursue for their future career.

The afternoon session continued with interesting research talks by two women scientists; Dr. Julia Campbell (Project Director, USC ICT, Education

and Cognitive Psychology) gave a talk on “Virtually Speaking: The Science and Art of Developing Virtual Human Training Platforms”. Her presentation highlighted virtual agents that have been developed and tested in various areas including army training and counseling. Dr. Grace Hyun Kim gave a talk on “Quantitative Lung Fibrosis Score in Interstitial Lung Disease”. She also emphasized the role of statistical approach in analyzing and diagnosing lung diseases from CT scanned image. Lastly, Mr. Brian Lee (AMERITS financial solutions) provided information on “Tax free Retirement for Professionals”.

The meeting closure was made by the KWISE Los Angeles Chapter President Dr. Suejung Huh with her appreciation to all participants, including the speakers, organizing committee, support and participation of KWiSE San Diego Chapter, and volunteers. This conference was kindly supported by KUSCO and private donations from Dr. Kyewon Han, Dr. Sunmin Park, and Fitness M, and Amerits.

Written by Dr. Suejung Huh,  
Los Angeles Chapter President

## Awards

### 2015 KWiSE Outstanding Woman Scientist Award

Dr. Kyungwha Park (Virginia Tech)



### KWiSE Service Award

Left: Dr. Hey-Kyoung Lee (Johns Hopkins Univ)

Right: Dr. Eun Ju Cheong (USDA)



## News

### KWiSE co-organized Virginia Washington Metro Regional Conference



KWiSE collaborated with KSEA chapters (Washington Metro, Central Virginia and Southern Virginia Chapters, and South East Virginia Branch) and KASBP-DC to organize a Regional Conference, at KSEA HQ in Vienna, VA, April 4 - 5, 2015. The conference started with welcoming remarks by Conference Co-Chair, Prof. Eun-Suk Seo, followed by congratulatory remarks by Dr. Sun Hak Cho, Science Attaché from the Korean Embassy. Dr. Edward Bashaw, Director, Food and Drug Administration, and Prof. Louis Goodman, Dean, American University delivered keynote talks. The Biomedical Sessions and the Science and Technology Sessions were organized in parallel. Over 30 papers were presented in a broad range of science and engineering. The audience ranged from undergraduate students to experts. This conference provided a great opportunity for professional networking, interdisciplinary collaborations, and for building a stronger local community. Mina Choi received a Service Award as well as a Poster Award.



Top: Professor Seo, KWiSE President, giving welcoming remarks

Middle left: Dr. Hae Young Ahn, KWiSE Vice President and Prof. Hey-Kyoung Lee, KWiSE Publication Director, chaired technical sessions.

Middle right: Prof. Sunmin Lee giving an invited talk

Bottom: Mina Choi being awarded

# Announcements



**KWiSE-KOFWST Women's Forum**

When: Friday July 31, 1:15 - 3:15 pm  
Where: TBD

Chair: Eun-Suk Seo, KWiSE President, University of Maryland, USA  
Co-Chair: Hee Young Paik, KOFWST President, Seoul National University, Korea

**"Women's Leadership"**  
Korean-American Women in Science and Engineering (KWISE) and Korean Federation of Women's Science & Technology (KOFWST) invite you (regardless of gender) to the Women's Forum entitled "Women's Leadership." It is organized with UKC2015's theme of Pursuing Excellence with a Servant's Heart to promote a spirit of service in pursuing technical excellence. The goal is to harness the untapped leadership potential of female scientists and engineers to empower a future generation of women leaders in science and engineering. It will be an interactive and engaging event to further foster peer networking and mentoring among the attendees. KWISE and KOFWST provide a platform for current and future leaders to meet in an environment where meaningful partnerships and friendships can form and grow. It should be a great opportunity to exchange ideas, learn and inspire, and promote better leadership for a changing world.

**Presentations**

<p><b>Korean Women in Science and Engineering (KWISE)</b> Eun-Suk Seo University of Maryland, USA</p>	<p><b>Social Contributions of KOFWST</b> Hee Young Paik Seoul National University, Korea</p>
<p><b>Sacrifice Fly</b> Gija Jhon Ewha Womans University, Korea</p>	<p><b>Servant leadership in the IT field</b> Hai Kyung (Hia) Kim Educational Technology Consultant, USA</p>

**Discussion Panelists**

<p><b>Insook Park</b> National Assembly, Korea</p>	<p><b>Mi Kyung Sung</b> Sookmyung Women's Univ. Korea</p>
<p><b>Yoonju Song</b> Catholic Univ. Korea</p>	<p><b>Eileen Pollack</b> University of Michigan, USA</p>
<p><b>Kyoungsoo Lee</b> Purdue University, USA</p>	<p><b>Young-Kee Kim</b> University of Chicago, USA</p>

Networking Dinner 6:30 - 8:30 PM

<p><b>Gender Summit 6</b> Myung Ja Kim Chair of the Board, WISET</p>	<p><b>Women In Power</b> Jane Oh NASA/JPL</p>
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**KWiSE-Biotechnology (BT) Forum**

When: Friday July 31, 3:45 - 5:45 pm  
Where: TBD

Chair: Dr. Hae-Young Ahn, Food and Drug Administration  
Co-Chair: Dr. Haryoung Poo, Korea Research Institute of Bioscience and Biotechnology

Modern biotechnology provides breakthrough products and technologies to combat debilitating and rare diseases, reduce our environmental footprint, feed the hungry, and have safer, cleaner and more efficient industrial manufacturing processes. Currently, there are more than 250 biotechnology health care products and vaccines available to patients, many for previously untreatable diseases.

Biotechnology leverages our understanding of the natural sciences to create novel solutions for many of our problems and we use biotechnology to make medicines and vaccines to fight diseases. Biotechnology has recently expanded to include new and diverse sciences such as pharmaceutical drug discovery and production, pharmacogenomics, recombinant gene techniques, applied immunology, and diagnostic tests. Biotechnology has contributed to the discovery and manufacturing of traditional small molecule pharmaceutical drugs as well as drugs that are the product of biotechnology – therapeutic biologics. Biotechnology has also enabled emerging therapeutics like gene therapy. The application of biotechnology to basic science has also dramatically improved our understanding of biology and as our scientific knowledge of normal and disease biology has increased, our ability to develop new medicines to treat previously untreatable diseases has increased as well. Pharmacogenomics is the technology that analyzes how genetic makeup affects an individual's response to drugs. It deals with the influence of genetic variation on drug response in patients by correlating gene expression or single-nucleotide polymorphisms with a drug's efficacy or toxicity. Genetic testing allows the genetic diagnosis of vulnerabilities to inherited diseases.

In this session, we will have 6 speakers with different areas of expertise. Topics that will be covered in the session include (but not be limited) how pharmacogenomics and genetic testing can be utilized in different treatments, new technologies for quality assurance of domestic biotechnology industry, and current trends in therapeutics development.

**Presentations**

<p><b>Role of Neuro-inflammation in Neurodegenerative Diseases</b> Dr. Jae-Kyung Lee Emory University</p>	<p><b>Factors associated with added sugar intake among US adults</b> Dr. Sohyun Park United States Centers for Disease Control and Prevention (CDC)</p>
<p><b>Current Trends in Therapeutic Biologics Development and Approval</b> Dr. Hae-Young Ahn Food and Drug Administration</p>	<p><b>Development of Measurement Standards for Bio and Clinical Area</b> Dr. Sook-Kyung Kim Korea Research Institute of Standards and Science</p>
<p><b>Therapeutic Human Papillomavirus Vaccine for Cervical Cancer</b> Dr. Haryoung Poo Korea Research Institute of Bioscience and Biotechnology</p>	<p><b>NOX1 to NOX2 switch induces invasive phenotype in colon cancer cells through overexpression of MMP-7</b> Dr. Jung-Ae Kim College of Pharmacy, Yeungnam University</p>

## Sponsors



This KWiSE Newsletter is edited and published by the 4<sup>th</sup> KWiSE Administration (President Eun-Suk Seo) and the KWiSE Publication Committee led by Prof. Hey-Kyoung Lee (chair).