



2022 Korean-American Engineers Association (KSEA) 30th South-Western Regional Conference (SWRC)



재미한인과학기술자협회

KSEA

Korean-American Scientists and Engineers Association

May 21, 2021, Saturday
8:00am-5:30pm

Claremont Mckenna College (CMC)
888 N Columbia Ave, Claremont, CA
91711

Conference RSVP!
Scan QR code!





CONFERENCE SCHEDULE

Time	Contents	Location
8:00 am	Registration / Reception	Freeberg Forum
9:00 am	Opening Remark SoCal Chapter President Prof. Jinsung Cho (president of KSEA-SoCal)	Freeberg Forum
9:10 am	Welcome Messages KSEA 50th President Dr. Brian Park Korean Consuls, Youngwan Kim KUSCO Director, Seok-Ho Kim KSEA 50th President Elec. Dr. Young-Kee Kim	Freeberg Forum
10:00 am	Keynote Speech Prof. Doris Sung	Freeberg Forum
10:40 am	Break	
10:50 am	Parallel Session <ul style="list-style-type: none">Academic TrackIndustry Track	Freeberg Forum Roberts North 15
11:50 pm	Group Photo	Freeberg Forum
12:00 pm	Lunch	Freeberg Forum
1:00 pm	Parallel Session <ul style="list-style-type: none">Academic TrackIndustry Track	Freeberg Forum Roberts North 15
3:30 pm	Break	
3:45 pm	Keynote Speech Prof. Ran Libeskind-Hadas	Freeberg Forum
4:30 pm	Award and Recognition	Freeberg Forum
4:50 pm	Raffle	Freeberg Forum
5:10 pm	KSEA 50TH History Books	Freeberg Forum
5:20 pm	Closing Remark	Freeberg Forum
5:30 pm	Dinner and social time!	



CONFERENCE SCHEDULE

Academic Track

Time	Contents	Location
10:50 am	Invited Speaker 1 (Chemistry/Energy) Dr. Jennifer Cho	Freeberg Forum
11:20 am	Invited Speaker 2 (Architecture/Civil) Dr. Joon-Ho Choi	
1:00 pm	Invited Speaker 3 (Sustainability) Dr. Youn Sim	Freeberg Forum
1:30 pm	Invited Speaker 4 (Computer Science) Dr. Jeho Park	
2:00 pm	Invited Speaker 5 (Aerospace) Aaron Choi	
2:30 pm	Invited Speaker 6 (Apparel & Merchandising) Dr. Claire Whang	
3:00 pm	Invited Speaker 7 (Water Resources) Dr. Helen Jung	

Industry Track

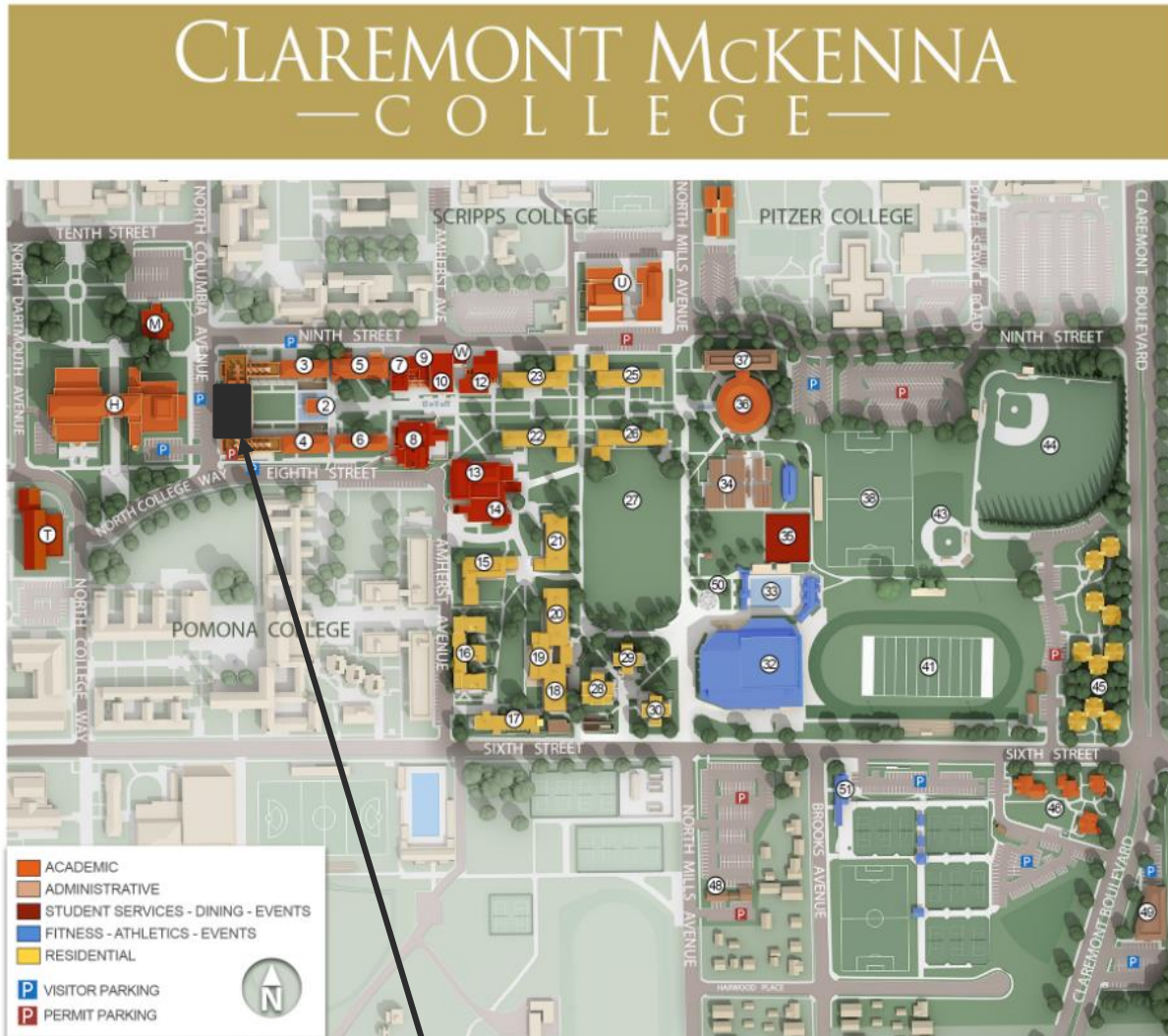
Time	Contents	Location
10:50 am	Industry presentation 1: NASA (JPL) Dr. Changrak Choi	Roberts North 15
11:20 am	Industry presentation 2: Kia America Inc. Steve Kosowski/Kimberly Lim	
1:00 pm	Industry presentation 3: NASA (JPL) Julim Lee	Roberts North 15
1:30 pm	Industry presentation 4: CJ Foods Jamie Choi	
2:00 pm	Industry presentation 5: Hanwha Q cell Evelia Lopez and Ellen Lee	
2:30 pm	Industry presentation 6: Balfour Beatty BongYoung Yoo	



CONFERENCE LOCATION

ALPHABETICAL INDEX

- 5 Adams Hall / Davidson Lecture Hall
- 49 Alumni & Parent Relations
- 1 Admission and Financial Aid
- 8 Marian Miner Cook Athenaeum
- 22 Appleby Hall
- 44 Arce Baseball Field
- 30 Auen Hall
- 33 Axelrod Aquatics Center
- 37 Bauer North / Founders Room
- 36 Bauer South / Pickford Auditorium
- 15 Beckett Hall
- 18 Benson Hall
- 20 Berger Hall
- 51 Biscantz Family Tennis Center
- 25 Boswell Hall
- 41 Burns Stadium
- 9 Career Services Center
- 34 Center Court
- 46 The Children's School
- 19 Claremont Hall
- 13 Collins Dining Hall
- 16 Crown Hall
- 49 Development Office
- 7 Emmett Student Center (The Hub)
- 29 Fawcett Hall
- 9 Frazee / Student Opportunity Center
- 12 Heggholde Center / Dean of Students
- 12 Honnold Library
- W International Place
- U Jack Science Center
- 1 Kravis Center
- 2 The Living Room
- 17 Marks Hall
- 50 "Meet Me In the Middle" Sculpture
- 48 Mills Ave Offices / Human Resources
- M McAllister Center / Chaplains
- 10 McKenna Auditorium
- 27 Parents Field
- 36 Pickford Auditorium
- 21 Phillips Hall
- 38 Pritzlaff Field
- 36 ROTC
- 3 Roberts Hall North
- 4 Roberts Hall South
- 32 Roberts Pavilion
- 6 Seaman Hall
- 43 Softball Field
- 28 Stark Hall
- 14 Story House
- 45 Student Apartments
- 35 Student Event Plaza
- T Tranquada / Student Health Services
- 23 Wohlford Hall
- 41 Zinda Field



MAIN CONFERENCE:

Claremont Mckenna College (CMC)

"Freeberg Forum"

888 N Columbia Ave, Claremont, CA 91711



CONGRATULATORY REMARKS FROM COMMUNITY LEADERS

2022 South West Regional Conference (SWRC)

On behalf of the Consulate General of Republic of Korea in Los Angeles, I am pleased to congratulate you all on the 30th South West Regional Conference. I would like to express my sincere gratitude to the KSEA scholars, industry experts, and future scientists and engineers for joining this conference. I am confident that today's event will be a meaningful opportunity that will significantly contribute to nurturing future talents.

The Korea-U.S. Free Trade Agreement marks its 10th year, bringing a win-win effect to both partners. In the meantime, Korea's trade balance with the U.S. has nearly doubled from US \$11.6 billion to US \$22.7 billion. It is considered to have contributed to enhancing the productivity of both economies. In the future, based on the solid alliance of 70 years, Korea and the U.S. will overcome the global supply chain crisis caused by the COVID-19 pandemic and strengthen their economic partnership. As you know, California is a crucial bridgehead region with 780,000 overseas Koreans and accounting for 24.3% of Korea-U.S. trade. I expect you to play a vital role in strengthening bilateral cooperation in various fields of future cooperation such as digital, labor, environment, etc.

For over 50 years, the KSEA has provided a valuable platform to promote communicating and sharing science and career with its dedicated staff and educational programs. Taking this opportunity, I would like to extend my deepest gratitude to the KSEA for bringing together Korean American scientists, engineers, and entrepreneurs. By hosting this excellent conference, you are genuinely encouraging and promoting the development of Korean American society as a whole.

Congratulations to your organization, and best wishes for an auspicious event. I look forward to working with the KSEA for many years to come.

Sincerely,

Youngwan Kim
Consul General of the Republic of Korea
in Los Angeles



KSEA-SC LADERSHIP



Professor Jinsung Cho

**Department of Civil Engineering
California State Polytechnic University - Pomona
President, KSEA-Southern California**

Dr. Jinsung Cho, an associate professor of Construction Engineering & Management program in Civil Engineering Department in California State Polytechnic University Pomona (Cal Poly Pomona). Dr. Cho received a Ph.D. degree of Construction Management in Arizona State University and specialized in Underground Infrastructure Management, Trenchless Technology, and 3D Construction Visualization for 25 years. Dr. Cho's research interests are underground pipeline design and system, and diverse construction tunneling technology. When Dr. Cho completed MS degree in Carnegie Mellon University, he was involved in construction management project (facility management) using 3-Dimensional Virtual Construction Design technology.



Professor Eun Jung Chae

**Department of Mechanical and Aerospace Engineering
California State University Long Beach (CSULB)
President-Elect, KSEA -SC Chapter**

Dr. Eun Jung Chae obtained her Ph.D. and M.S. in Naval Architecture and Marine Engineering from the University of Michigan, Ann Arbor in 2015. Prior to joining CSULB, she served as a Postdoctoral Research Fellow (2015-2017) in the Department of Aerospace Engineering as well as the Department of Naval Architecture and Marine Engineering at the University of Michigan. Dr. Chae's research focuses on the numerical, theoretical, and physical modeling in single/multiphase flows of smart/adaptive propulsions, unmanned aerial vehicles (UAV), morphing wings, and energy conversion systems. She has been involved with research activities in Computational Fluid Dynamics (CFD) and Fluid-Structure Interaction (FSI) simulations.



Professor Jin Gi Hong

**Department of Civil Engineering and Construction Engineering
Management
California State University Long Beach (CSULB)
Secretary, KSEA -SC Chapter**

Dr. Jin Gi Hong joined the CSULB Department of Civil Engineering and Construction Engineering Management in Fall 2015. He holds a PhD in Environmental Engineering from Georgia Institute of Technology, a MS in Environmental Engineering from Cornell University, and a BS in Civil Engineering from Hong-Ik University, South Korea. His research interests include membrane-based technology for water and wastewater treatment, reverse electrodialysis for salinity gradient energy generation, sustainable waste-to-energy systems, and application of nanomaterials for membrane development.

CONFERENCE SUPPORTERS



Professor Byungkyu Brian Park
50th KSEA President

Brian Park is a Professor of Engineering Systems and Environment Department at the University of Virginia. Prior to joining the University of Virginia, he was a Research Fellow at the National Institute of Statistical Sciences and a Post-Doctoral Research Associate at North Carolina State University. Dr. Park received the B.S. and the M.S. from the Hanyang University, Seoul, Korea, and the Ph.D. from the Texas A&M University. He is an Editor in Chief of the International Journal of Transportation, an Associate Editor of the American Society of Civil Engineers Journal of Transportation Engineering. He is currently the 50th-KSEA (Korean-American Scientists Engineers Association) president.



Professor Young-Kee Kim
50th KSEA President-Elect

Young-Kee Kim is Louis Block Distinguished Service Professor of Physics, Chair of the Department of Physics, and Senior Advisor to the Provost on Global Scientific Initiatives at the University of Chicago. She earned BS and MS from Korea University, and Ph.D. from University of Rochester. After postdoctoral research at Lawrence Berkeley National Laboratory, she became Professor of Physics at University of California, Berkeley. In 2003, she moved to the University of Chicago. She is a Fellow of the National Academy of Sciences, the American Academy of Arts and Sciences, the American Physical Society, the American Association for the Advancement of Science, and the Sloan Foundation. She will serve as President of the American Physical Society in 2024. She is currently the 50th President-elect of Korean-American Scientists Engineers Association (KSEA).



Managing Director of KUSCO: Seok-Ho Kim

Mr. Seok-Ho Kim is currently a liaison officer of National Research Foundation (NRF) of Korea, and a managing director of Korea-U.S. Science Cooperation Center (KUSCO). NRF is one of the biggest funding agencies in Korea, supporting all fields of research. KUSCO, located in Vienna, VA, has been supporting Korean-American scientists and engineers in the U.S since 1997.

OPENING KEYNOTE

Professor Doris Sung

**Director of Undergraduate Programs
University of Southern California**

With the belief that buildings can be sensitive to the changing environment, Doris Sung seeks ways to make building skins dynamic and responsive. Through grant-funded research, she has designed projects with smart thermo bimetal to self-ventilate, self-shade, self-structure, self-assemble and self-propel with zero-energy and no controls. More recently, she is rethinking the façade as a part of a city's infrastructure and designing innovative building products to improve public health for pedestrians.

As the founder of DOSU Studio Architecture and TBM Designs, Doris publishes, lectures and exhibits, internationally while bringing her patented inventions to market. She has been named a fellow of Google's R+D for the Built Environment, the U.S. Artist, the Rockefeller Foundation at Bellagio and the Headlands Center for the Arts. Her TED talk has now surpassed 1.27 million views and her list of awards include the Cooper Hewitt National Design Award for Climate Action, the Good Green Design Award, the Falling Walls Science Breakthroughs of the Year Award in Art and Science, the Architectural Record Best Product Award, a National AIA Small Projects Award, several ACSA Design Awards, two 'Architect Magazine' R+D awards, the World Technology Award and the [next idea] award from ARS Electronica.

Professor Sung received her B.A. from Princeton University, M.Arch. from Columbia University and is a licensed architect. She has taught at USC since 2005 where she is currently the Director of Undergraduate Programs.



Talk title: Multi-, Trans-, Poly- and Cross-

ENDING KEYNOTE



Dr. Ran Libeskind-Hadas

**Founding Chair, Department of Integrated Sciences
Claremont McKenna College**

Ran "RON" Libeskind-Hadas received the bachelor's degree in applied mathematics from Harvard and the M.S. and Ph.D. in computer science from the University of Illinois at Urbana-Champaign. He was a member of the Department of Computer Science at Harvey Mudd College for 28 years where he served as department chair and Associate Dean of Faculty. In recent years, he has also taught as a visitor at MIT and Caltech. In July 2022, he joined Claremont McKenna College as the Founding Chair of the Kravis Department of Integrated Sciences.

His research interests are in the area of computational biology and, specifically, the development of efficient algorithms for problems that arise in evolutionary biology. His results have been used by biologists studying the relationships between hosts and parasites, including the evolution of coronaviruses in their mammalian hosts.

Dr. Libeskind-Hadas is a member of the executive board of the Computing Research Association, a member of the advisory council for the National Science Foundation's Computing and Information Science and Engineering Directorate, and the author of several textbooks and over 60 peer-reviewed publications.

Talk title : Charles Darwin meets Computer Science: How Computational Methods are Providing New Insights in the Life Sciences

INVITED SPEAKERS



Dr. Jennifer Cho

Head of Business Development at Millibatt, Inc.

Jennifer Cho, PhD, is Head of Business Development at Millibatt, an innovative battery company based in Los Angeles. Previously, Jennifer served in many business roles at tech startups: Vice President of Marketing at Encored Technologies, Business Director at MILabs, and Director of Business Development at Sofie Biosciences. Her roles included product development, branding, marketing, go-to-market strategies, sales, managing customer relations, arranging global distribution and collaboration with partner companies, giving presentations and training sessions.

An excellent communicator, analyst, and strategist, Jennifer has deep business experience in tech startups for the past 12 years. Jennifer received her Ph.D. in Biomedical Physics from the University of California, Los Angeles.



Professor Joon-Ho Choi

Associate Dean for Research & Creative Work at University Southern California (USC)

Dr. Choi, Joon-Ho, is the Associate Dean for Research & Creative Work and an Associate Professor of Building Science in the School of Architecture at the University of Southern California. Prior to taking the position, he worked as an assistant professor in the Dept. of Civil, Architectural, and Environmental Engineering at Missouri University of Science and Technology. He earned his Ph.D. degree in Building Performance and Diagnostics at Carnegie Mellon University. Dr. Choi's primary research interests are in the areas of advanced controls for high performance buildings, bio-sensing controls in the built environment, smart building enclosure, passive building strategies, human-centered building environmental control, and building systems integration.



Dr. Youn Sim

Principal Engineer, Los Angeles County Public Works

As a 24-year veteran at Los Angeles County Public Works, the largest public works agency in the US, Dr. Youn Sim is currently serving as a Principal Engineer/Assistant Head of Design Division. For years, he has been playing a leadership role in a wide variety of infrastructure initiatives in water, transportation, solid waste, land development, green buildings, climate resilience, and most recently, renewable energy sectors. In 2012, he created Public Works Sustainability Council. From 2014 to 2016, he led a thinktank, Innovation Laboratory. In 2016, he was appointed to lead Strategic Planning & Sustainability Office and managed the Office until 2021.

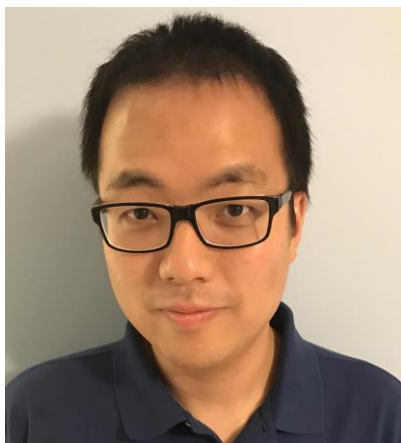
INVITED SPEAKERS



Dr. Jeho Park

Founding Director of the Murty Sunak Quantitative and Computing Lab (QCL) at Claremont McKenna College

Dr. Jeho Park is the Founding Director of the Murty Sunak Quantitative and Computing Lab (QCL) and the Data Science Capstone Program at Claremont McKenna College. After receiving his Ph.D. in Applied Mathematics/Computer Science from Claremont Graduate University in 2009, he started his career at Harvey Mudd College where he established research computing services and became the Associate Director of the Academic and Research Computing division. As the Founding Director of the QCL, he oversees Claremont McKenna's student support services offering individual and group tutoring sessions and co-curricular workshops on quantitative and computing subjects.



Dr. Changrak Choi

Robotics Technologist, NASA Jet Propulsion Lab

Dr. Changrak Choi is a Robotics Technologist at NASA Jet Propulsion Lab (JPL). At JPL, he is an active member of Mars Science Laboratory mission and rover planner for Mars Curiosity that is currently exploring the red planet. Prior to joining NASA JPL, Dr. Choi received Ph.D. and M.S. from MIT and B.S. from Seoul National University in Mechanical Engineering. He has been recipient of Korean Government and Kwanjeong Scholarship during M.S. and Ph.D. respectively.



Researcher Julim Lee

Interplanetary Navigation Engineer, NASA Jet Propulsion Lab

Julim Lee joined the Mission Concept Systems Development team as a summer intern at Jet Propulsion Laboratory. This team provides technical leadership in developing advanced planetary mission concepts at the lab. Upon completion of her graduate school, she joined the Mission Design and Navigation (MDNAV) group. As a navigation engineer within MDNAV, she has been supporting various missions which includes Odyssey Mars Orbiter, Kepler Space Telescope, MAVEN Mars Orbiter, InSight Mars Lander, and ASTERIA cubesat (exoplanet hunter). The main responsibility as a navigation engineer is to perform high-precision navigation including spacecraft dynamic modeling/trending, measurement modeling, filter configurations, event reconstructions, and trajectory determination/propagation.

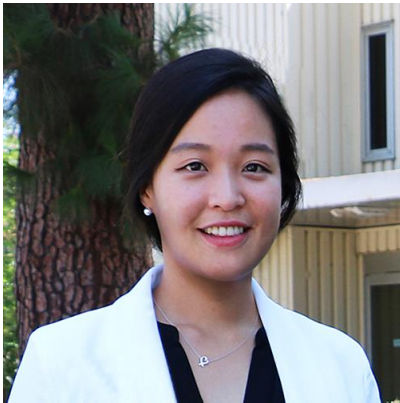
INVITED SPEAKERS



Professor Helen Jung

Civil Engineering and Construction Management, California Baptist University

Dr. Helen Jung received Ph.D in the Civil Engineering from UCLA and the former associate dean at California Baptist University (CBU). Currently she is the professor of Civil Engineering and Construction Management Department. Her research interests are Hydrology and Water Resources and her scholarly Interests are Catchment response to land-cover change (including wildfire) GIS analysis, watershed modeling, operational flood forecasting, and parameter estimation for hydrologic models.



Professor Claire Whang

Apparel Merchandising and Management, Cal Poly Pomona

Dr. Claire Whang holds a Ph.D. in the area of Retail Merchandising and Consumer Studies from the University of Minnesota. Her primary research interest lies in understanding "how the new technology influences the way consumers think, feel, and behave." Her research topic includes social media marketing, personalized advertising, and voice shopping.



Researcher Aaron Choi

**Mechanical Engineer, Raytheon Technologies
M.S. Mechanical and Aerospace Engineering, CSULB**

Currently a mechanical engineer working full time for Raytheon Technologies and a part time Masters Program student at CSULB. I am majoring in Aerospace Engineering and focusing in the study of Aerodynamics by analysis using Computational Fluid Dynamics (CFD). I have about 6 years of academic experience in Aerospace with about 3 years focused on CFD. Alongside, I have about 7 years working in the Aerospace industry.

INDUSTRY SPEAKERS



Engineer, Bongyoung Yoo

BIM Engineer, Balfour Beatty

Bongyoung Yoo started his career as a BIM Engineer and is currently contributing to the U.S. transportation industry from the LAX Automated People Mover Project as a project engineer. He studied formwork's automation technology at Sungkyunkwan University and The University of Texas at Austin, and continues his interest and dreams of automated construction.



Director, Jamie Choi

Human Resources Director (Head of HR), CJ Foods

Director, Jamie Choi graduated from University of Illinois at Urbana-Champaign with BA in Economics and has 30+ years of experience working in Global Korean companies in the US, specializing in Human Resources. She has 20+ years of experience working at Asiana Airlines in Human Resources for the Regional Headquarters, Americas. She moved to CJ Korea Express (now CJ Logistics) in 2013 as Head of HR for almost 3 years and now is working in CJ Foods in December 2015 as Head of HR, almost 7 years.



Manager, Steve Kosowski

Manager, Long Range & Strategy & Planning at Kia North America

Steve brings 30+ years of automotive strategy experience. Steve's responsibilities are mainly focused on EV product planning and portfolio strategy, EV infrastructure, and pre-sale regulatory compliance, including ZEV (Zero Emissions Vehicles) compliance. He joined Kia from Nissan North America, but also worked for Honda and Mitsubishi Motors in product planning and market research departments. He earned his Bachelor of Business Administration at Northwood University in Midland, MI, and a Master of Business Administration from California State University, Long Beach.



Senior Manager, Kimberly Lim

Senior Product Manager, Product Strategy & Mobility at Kia North

Kimberly joined KNA in 2017 as a member of the Connected Car team. The team focuses on providing an enhanced vehicle ownership experience so customers can enjoy a smoother driving experience and stay connected with their vehicles when away from it. Kimberly focuses on building a seamless app-based experience, creating an easy way for customers to take care of their vehicle from anywhere.

Kimberly's 15+ years experience in the IT and telecommunication industries help her create a new digital experience for vehicle owners. Kimberly has a Bachelor of Arts from the University of California, Berkeley and a Master of Business Administration from the University of California, Irvine.



CONFERENCE COMMITTEES

Program Committee:

- Jinsung Cho(CPP)
- Eun Jung Chae(CSULB)
- Jingi Hong (CSULB)
- Joonho Choi (USC)
- Jeho Park (CMC)

Sponsoring Committee:

- Woochul Lee (Consul, Consulate General of the Republic of Korea)
- Hayoung Choi (Education Consul, Consulate General of the Republic of Korea)
- Haejung An (FDA)

YG Leader Committee:

- Eun Bin Go (Emerald Cloud Lab)

KSEA-SC EC Advisory Board:

- Joseph Kim (CSULB)
- Joon-Ho Choi (USC)
- Jeho Park (CMC)
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- Youn Sim (LA County)
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- Myong Ho Ro (LEE & RO, Inc.)
- Lee Joung Yoo (Seven Water Management and Consulting, Inc)
- John Lee (KSEA-SC NMSC Chair)
- Chan Seung Park (UC Riverside)
- Jayoung Kim (UCLA)
- Hyuna Lee (Biola University)

Student Recruit Committee:

- UCLA: Wonhee Lee and Julie Quan
- USC: Piljoo Jeon, Hayoung Kong, and Harry Park
- CPP: Karena Kress, Bryanna Bosler, and Paul Yoon
- Harvey Mudd: Paul Oh, Yoo-Jin Hwang, Hailey Kim
- UC San Diego: Won Yeong Choi and Chaewon Heo
- Claremont McKenna College: Ashley Park

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Consulate General of the Republic of Korea in Los Angeles



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KOREA - U.S. SCIENCE COOPERATION CENTER



Hanwha

KWiSE

Korean-American Women In Science Engineering



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CONFERENCE STUDENT CHAPTERS



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