

# Jukrin Moon

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## Research Interests

- Team cognition and decision making in safety-critical domains, e.g., health care and emergency management
- Interactions among humans, technologies, and teams in complex adaptive systems

## Education

**Ph.D., Texas A&M University, 2014 – Present** College Station, TX, U.S.A.

Doctor of Philosophy in Industrial and Systems Engineering · Dissertation title: Investigating team cognition in incident management · Committee: Dr. Farzan Sasangohar (chair), Dr. S. Camille Peres (co-advisor), Dr. Jason B. Moats, and Dr. Mark Lawley

**M.S., Korea Advanced Institute of Science and Technology · KAIST, 2014** Daejeon, Korea

Master of Science in Industrial and Systems Engineering · Thesis title: Infrastructure interdependency modeling for cascading failure assessment · Committee: Dr. Taesik Lee (chair), Dr. Jaemyung Ahn (co-advisor), and Dr. Tae-Eog Lee

**B.S., Korea Advanced Institute of Science and Technology · KAIST, 2012** Daejeon, Korea

Bachelor of Science in Industrial and Systems Engineering

**Technical University of Munich · TUM, 2009** | Exchange Program

**University of California, Berkeley, 2007** | Summer Session

**Seoul Science High School, 2006** Seoul, Korea

Early graduation (2 years) from a school for gifted students in science

## Fellowships & Scholarships

- **NSF Research Assistantship** (full tuition & expenses, app. \$81,000), National Science Foundation EARly-concept Grant for Exploration Research (NSF EAGER #1724676, total amount \$239,830), 2017 – 2019
- **Texas A&M Graduate Teaching Fellowship** (college-wide competition; full tuition & expenses, app. \$17,000), Center for Teaching Excellence, Texas A&M University, 2018
- **Ph.D. Research & Teaching Assistantship** (full tuition & expenses, app. \$93,000), Department of Industrial and Systems Engineering, Texas A&M University, 2014 – 2016
- **M.S. Merit-based Scholarship** (full tuition & expenses, app. \$48,000), National Research Foundation of Korea, 2012 – 2013
- **B.S. Merit-based Scholarship** (full tuition & expenses, app. \$72,000), Government of South Korea, 2006 – 2011
- **TU Munich Exchange Program Scholarship** (full tuition & expenses, app. \$3,000), KAIST, 2009
- **UC Berkeley Summer Session Scholarship** (full tuition & expenses, app. \$2,500), KAIST, 2007

## Honors & Awards

- **Young Talent Award** (€1,000), Resilience Engineering Association, 2019
- **Best Student Poster Award** (\$100), Houston Human Factors & Ergonomics Society Chapter, 2019
- **Student Travel Award** (\$700), Human Factors & Ergonomics Society: Health Care Technical Group, 2018
- **Student Volunteer Award** (\$170), Human Factors & Ergonomics Society, 2018
- **Student Author Presentation Support Award** (\$500), Human Factors & Ergonomics Society: Council of Technical Groups, 2017
- **Student Volunteer Award** (\$170), Human Factors & Ergonomics Society, 2017
- **Human Factors Project of The Year Award**, Texas A&M University, 2017
- **Graduate Student Presentation Award** (\$500), Texas A&M University, 2016
- **Student Poster Presentation Award** (\$500), Health and Humanitarian Logistics Conference, 2013
- **Internship Competition** (1st place, \$300), KAIST, 2008
- **Student Research Competition** (2nd place, \$300), KAIST, 2008

## Research Experience

### Graduate Research Assistant | Texas A&M University, 2014 – Present

College Station, TX, U.S.A.

Applied Cognitive Ergonomics “ACE” Lab (Dr. Farzan Sasangohar: advisor) · Research on the Interfaces between Humans and Machines “RIHM” Lab (Dr. S. Camille Peres: co-advisor)

#### **Currently investigating system-level cognition in incident management teams**

- Topics: human systems engineering; human cognition and decision making; human information processing; computer-supported cooperative work; system safety; disaster response
- Methodologies: system modeling and analysis; naturalistic observation; subject matter experts survey and interview; network analysis of interactive behaviors; eye tracking
- Sponsors/Partners: National Science Foundation (NSF EAGER, #1724676); Texas A&M Emergency Operations Training Center (EOTC); Mary Kay O’Connor Process Safety Center (MKO PSC)
- Outcomes: published a journal article [J1]; submitted two journal articles [J4–5]; conference proceedings and presentations [C1–3, C5–10, C12–14, C17–19, C22–23]

#### **Currently designing a veteran-centered post-traumatic stress disorder (PTSD) tool**

- A project to develop a non-clinical wearable monitor programmed to respond to its wearer’s PTSD-specific physical cues, help manage the onset of the episode, and contact assistance
- Topics: healthcare analytics; human systems engineering; human-centered design; persuasive design
- Methodologies: machine-learning based analysis of biometric data; usability and user experience testing; system modeling and analysis; subject matter experts survey and interview
- Sponsors/Partners: Texas A&M Engineering Experiment Station (TEES); Veterans Administration (VA); Project Hero’s HERO Trak Inc.
- Outcomes: conference proceedings and presentations [C4, C11, C15–16, C20–21]

### Graduate Research Assistant | KAIST, 2012 – 2014

Daejeon, Korea

Complex Systems Design “CSD” Lab (Dr. Taesik Lee: advisor) · Strategic Aerospace Initiative “SAI” Lab (Dr. Jaemyung Ahn: co-advisor) · Complex Stochastic and Service System Design “XS3D” Lab (Dr. James R. Morrison)

#### **Developed a structured group decision methodology to identify dependencies among elements of a large complex system in emergency response**

- A project to design a resilient emergency response system at a government level – with an initial effort to model, simulate, and predict how a failure in one infrastructure could progress as cascading failures due to dependencies
- Topics: emergency response; cascading failures; systems engineering; system modeling and analysis; knowledge elicitation
- Methodologies: group decision making techniques (e.g., delphi method, nominal group technique); modeling and simulation formalisms and techniques (e.g., agent-based, system dynamics, and discrete event systems)
- Sponsors/Partners: National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT, & Future Planning (2011–0029883); National Disaster Management Institute (NDMI) under the Ministry of Public Safety and Security in Korea
- Outcomes: published a journal article [J3]; conference proceedings and presentations [C24–25, C27–28]

#### **Redesigned an engineering course (IE101 Intro to OR) as a service by inserting Kano excitement needs identified from the Axiomatic Design process**

- Topics: engineering education; service systems design; emotional design
- Methodologies: Axiomatic Design process; survey; statistical analysis
- Sponsors/Partners: KAIST Undergraduate Research Program; KAIST Department of Industrial and Systems Engineering
- Outcomes: published a journal article [J2]; conference proceedings and presentations [C26]

- Journal Articles Published**
- J1. Son, C., Sasangohar, F., Peres, S. C., Neville, T. J., **Moon, J.**, & Mannan, M. S. (2018). Modeling an incident management team as a joint cognitive system. *Journal of Loss Prevention in the Process Industries*, 56, 231-241. <https://doi.org/10.1016/j.jlp.2018.07.021>
- J2. Bae, S. Y., **Moon, J.**, & Morrison, J. R. (2017). Design of engineering courses as a service: Emotions, senses, and implementation. *International Journal of Engineering Education*, 33(5), 1561-1574. ISSN: 0949-149X
- J3. **Moon, J.**, Lee, D., Lee, T., Ahn, J., Shin, J., Yoon, K., & Choi, D. (2015). Group decision procedure to model the dependency structure of complex systems: Framework and case study for critical infrastructures. *Systems Engineering*, 18(4), 323-338. <https://doi.org/10.1002/sys.21306>
- Journal Articles Submitted**
- J4. Son, C., Sasangohar, F., Peres, S. C., Neville, T. J., & **Moon, J.** Investigating resilience in emergency management: A systematic literature review. Submitted to *Applied Ergonomics*.
- J5. Son, C., Sasangohar, F., Peres, S. C., Neville, T. J., & **Moon, J.** Evaluation of work-as-done in information management of multidisciplinary incident management teams via interaction episode analysis. Submitted to *Applied Ergonomics*.
- Journal Articles in Final Editing**
- J6. **Moon, J.**, Rodriguez-Paras, C, Rao, A. H., & Sasangohar, F. A descriptive model of PTSD care pathways. In final editing for submission to *IEEE Transactions on Health Systems Engineering*.
- J7. **Moon, J.**, Sasangohar, F., Peres, S. C., & Son, C. Cognition in incident management teams: An integrative analysis of definitions. In final editing for submission to *Ergonomics*.
- J8. Son, C., Sasangohar, F., Peres, S. C., & **Moon, J.** Muddling through troubled water: elements of resilient performance of incident management teams during Hurricane Harvey. In final editing for submission to *Cognition, Technology, & Work*.
- Journal Articles in Preparation**
- J9. **Moon, J.**, Sasangohar, F., Peres, S. C., & Son, C. Identifying the key contributing roles to cognition in incident management teams: A social network analysis of observed interactions. In final editing for submission to *Ergonomics*.
- J10. **Moon, J.**, Sasangohar, F., Peres, S. C., & Son, C. Modeling cognition in incident management teams as coordinating interactions to achieve the system-level goals: perceiving, diagnosing, and adapting to knowledge. Manuscript in preparation.
- Conference Proceedings & Presentations**
- C1. **Moon, J.**, Sasangohar, F., Peres, S. C., Neville, T. J., & Son, C. (2019). Investigating incident management teams as cognitive systems of systems via live observation of naturalistic interactions. Accepted to *the 63rd Human Factors and Ergonomics Society (HFES) Annual Meeting (2019, October 28–November 01; Seattle, Washington)*.
- C2. Son, C., **Moon, J.**, Sasangohar, F., Peres, S. C., & Neville, T. J. (2019). Orchestrating through whirlwind: Resilience factors of incident management teams during Hurricane Harvey. Accepted to *the 63rd Human Factors and Ergonomics Society (HFES) Annual Meeting (2019, October 28–November 01; Seattle, Washington)*.
- C3. Son, C., Sasangohar, F., Peres, S. C., & **Moon, J.** (2019). Five functions that made an incident management team resilient during Hurricane Harvey. *Presented at the Resilience Rising Symposium (2019, September 05–06; College Station, TX)*.
- C4. Rodriguez-Paras, C., Alec, S., **Moon, J.**, Rao, A. H., & Sasangohar, F. (2019). Investigating triggers and daily challenges for post-traumatic stress disorder (PTSD). *Presented at the 15<sup>th</sup> Southwest Regional Human Factors and Ergonomics Society (HFES) Annual Symposium (2019, April 26; Houston, Texas)*.
- C5. **Moon, J.**, Sasangohar, F., Peres, S. C., Son, C., and Neville, T. J. (2019). System level investigation of cognition in incident management teams for adaptive coordination. *Presented at the 15<sup>th</sup> Southwest Regional Human Factors and Ergonomics Society (HFES) Annual Symposium (2019, April 26; Houston, Texas)*. **<< Won the Best Student Poster Award: Houston HFES Chapter >>**
- C6. Son, C., Sasangohar, F., Peres, S. C., **Moon, J.**, & Neville, T. J. (2019). Resilience factors of incident management teams during Hurricane Harvey. *Presented at the 15<sup>th</sup> Southwest Regional Human Factors and Ergonomics*

*Society (HFES) Annual Symposium (2019, April 26; Houston, Texas).*

- C7. Son, C., Sasangohar, F., Peres, S. C., Neville, T. J., **Moon, J.**, Larsen, E. (2019). A comparison between government and hospital incident management teams during Hurricane Harvey. *Presented at the 15<sup>th</sup> Southwest Regional Human Factors and Ergonomics Society (HFES) Annual Symposium (2019, April 26; Houston, Texas).*
- C8. Son, C., Sasangohar, F., Peres, S. C., Neville, T. J., **Moon, J.**, Larsen, E. (2019). Same disaster, different response: A comparison between government and hospital incident management teams during Hurricane Harvey. *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care (2019, March 24-27; Chicago, Illinois).*
- C9. **Moon, J.**, Son, C., Sasangohar, F., Peres, S. C., & Neville, T. J. (2018). Team cognition for coordinated decision-making during Hurricane Harvey: A case study from interviews with responding commanders. *Presented at the Mary Kay O'Connor Process Safety Center (MKOPSC) International Symposium in association with IChemE (2018, October 23-25; College Station, Texas).*
- C10. **Moon, J.**, Sasangohar, F., Peres, S. C., Neville, T. J., & Son, C. (2018). Modeling team cognition in emergency response via naturalistic observation of team interactions. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting (2018, September 30–October 05; Philadelphia, Pennsylvania)*, 62(1), 1801–1802. <https://doi.org/10.1177/1541931218621408>
- C11. **Moon, J.**, Williams, J. P. C., Sasangohar, F., Khanade, K., & Rodriguez-Paras, C. (2018). Veteran-centered design of a post-traumatic stress disorder (PTSD) tool: Qualitative analysis of interviews with veterans. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting (2018, September 30–October 05; Philadelphia, Pennsylvania)*, 62(1), 548–549. <https://doi.org/10.1177/1541931218621124> << **Won the Student Travel Award: HFES Health Care Technical Group** >>
- C12. Son, C., **Moon, J.**, Peres, S. C., & Sasangohar, F. (2018). An episode as a trace of resilient performance in multi-agency incident management systems. *Proceedings of the 15<sup>th</sup> International Conference on Information Systems for Crisis Response and Management (ISCRAM; 2018, May 20-23; Rochester, New York)*, 942–948. ISSN: 2411-3387.
- C13. **Moon, J.**, Son, C., Sasangohar, F., Peres, S. C., & Neville, T. J. (2018). Modeling team cognition for coordinated decision-making in emergency response via naturalistic observation of interactions. *Presented at the 14<sup>th</sup> Southwest Regional Human Factors and Ergonomics Society (HFES) Annual Symposium (2018, April 20; Houston, Texas).*
- C14. Son, C., **Moon, J.**, Sasangohar, F., Peres, S. C., & Neville, T. J. (2018). Representing work-as-done (WAD) of communication and information flow in an incident management team. *Presented at the 14<sup>th</sup> Southwest Regional Human Factors and Ergonomics Society (HFES) Annual Symposium (2018, April 20; Houston, Texas).*
- C15. **Moon, J.**, Rodriguez-Paras, C., Sasangohar, F., Benzer, J. K., & Kum, H-C. (2018). Modeling patient-centered pathways of the current PTSD care system. *Presented at the Healthcare Systems Process Improvement (HSPI) Conference of the Institute of Industrial and Systems Engineering (IISE; 2018, February 21-23; Atlanta, Georgia).*
- C16. **Moon, J.**, Sasangohar, F., Benzer, J. K., Kum, H-C., Khanade, K., & Rodriguez-Paras, C. (2017). Identifying opportunities for improving the PTSD care with treatment-supportive technologies. *Presented at the 33<sup>rd</sup> International Society for Traumatic Stress Studies (ISTSS) Annual Meeting (2017, November 09-11; Chicago, Illinois).*
- C17. **Moon, J.**, Peres, S. C., Sasangohar, F., & Mannan, M. S. (2017). An analysis of emergency response issues associated with major incidents from cognitive systems engineering perspective. *Presented at the Mary Kay O'Connor Process Safety Center (MKOPSC) International Symposium in association with IChemE (2017, October 24-26; College Station, Texas).*
- C18. **Moon, J.**, Peres, S. C., & Sasangohar, F. (2017). Defining team cognition in emergency response: A scoping literature review. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting (2017, October 09-13; Austin, Texas)*, 61(1), 894–895. <https://doi.org/10.1177/1541931213601702> << **Won the Student Author Presentation Support Award: HFES Council of Technical Groups** >>
- C19. **Moon, J.**, Peres, S. C., & Sasangohar, F. (2017). Defining and measuring team cognition in emergency response: A scoping literature review. *Presented at the 13<sup>th</sup> Southwest Regional Human Factors and Ergonomics Society (HFES) Annual Symposium (2017, June 09; San Antonio, Texas).*
- C20. **Moon, J.**, Smith, A., Sasangohar, F., Benzer, J. K., & Kum, H-C. (2017). A Descriptive model of the current PTSD care system: Identifying opportunities for improvement. *Presented at the 13<sup>th</sup> Southwest Regional Human*

*Factors and Ergonomics Society (HFES) Annual Symposium (2017, June 09; San Antonio, Texas).*

- C21. **Moon, J.**, Smith, A., Sasangohar, F., Benzer, J. K., & Kum, H.-C. (2017). A descriptive model of the current PTSD care system: Identifying opportunities for improvement. *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care (2017, March 05-08; New Orleans, Louisiana)*, 6(1), 251–251. <https://doi.org/10.1177/2327857917061055>
- C22. **Moon, J.**, & Avnet, M. (2016). Integrating perspectives on shared cognition in emergency response teams. *Presented at the 5<sup>th</sup> Council of Engineering Systems Universities (CESUN) Annual Symposium (2016, June 27-29; Washington, D.C.). << Won the Graduate Student Presentation Award: Texas A&M University >>*
- C23. **Moon, J.**, & Avnet, M. (2015). Developing inter-organizational trust for emergency response in different technology settings. *Presented at the 11<sup>th</sup> Southwest Regional Human Factors and Ergonomics Society (HFES) Annual Symposium (2015, May 29; Houston, Texas).*
- C24. **Moon, J.**, Lee, D., Lee, T., & Ahn, J. (2014). Dependency structure modeling framework using expert survey-based group decision. *Proceedings of the 16th International Conference on Dependency and Structure Modeling (DSM; 2014, July 04; École centrale Paris, France)*, 137–146. ISBN: 978-1-56990-491-6
- C25. **Moon, J.**, Lee, D., Lee, T., & Ahn, J. (2013). A framework to model the interdependencies among critical infrastructures using the nominal group technique (NGT). *Presented at the 7<sup>th</sup> Asia-Pacific Council on Systems Engineering Conference (APCOSEC; 2013, September 08-11; Yokohama, Japan).*
- C26. Bae, S. Y., Park, C., **Moon, J.**, & Morrison, J. R. (2013). Axiomatic design and implementation of service-oriented university classes: emotions and senses. *Proceedings of the 7<sup>th</sup> International Conference on Axiomatic Design (ICAD; 2013, June 26-28; Worcester, Massachusetts)*, 54–62. ISBN: 978-0-9894658-0-9
- C27. **Moon, J.**, & Lee, T. (2013). A framework to identify interdependencies among infrastructures: capability-driven and demand-driven dependency. *Presented at the 5th Conference on Health and Humanitarian Logistics (HHL) Conference, (2013, June 04-05; Kuala Lumpur, Malaysia). << Won the Student Poster Presentation Award: HHL Conference >>*
- C28. **Moon, J.**, & Lee, T. (2013). Identifying critical infrastructure interdependencies for healthcare operations during extreme events. *Proceedings of the 2<sup>nd</sup> International Conference on Complex Science (2012, December 05-07; Santa Fe, New Mexico)*, 126, 245–266. Springer, Cham. [https://doi.org/10.1007/978-3-319-03473-7\\_23](https://doi.org/10.1007/978-3-319-03473-7_23)

#### Professional Memberships & Services

##### Human Factors and Ergonomics Society · HFES

**Student Member**, HFES WOMAN (Women's networking group), 2019  
**Student Volunteer**, HFES Annual Meetings, 2017 – 2018  
**Session Co-Chair**, Student Career and Professional Development Day, HFES Annual Meeting, 2017  
**Secretary**, Texas A&M Student Chapter of HFES, 2017 – 2018  
**Student Member**, 2016 – Present

##### Resilience Engineering Association · REA

**Young Talent**, 2019 << *Won the Young Talent Award: REA* >>  
**Student Member**, 2019 – Present

##### Institute for Operations Research and Management Sciences · INFORMS

**Liaison for Women in OR/MS (WORMS)**, Texas A&M Student Chapter of INFORMS, 2017  
**Student Member**, 2017 – Present

##### Institute of Industrial and Systems Engineer · IISE

**Student Member**, 2017 – Present

##### Advancing Safety in Health Technology · AAMI

**Student Member**, 2019 – Present

**The Association for Computing Machinery · ACM**

**Student Member**, Special Interest Group on Computer Human Interaction (SIGCHI), 2018 – Present

**Reviewer Experience**

**Human Factors and Ergonomics Society · HFES**

**Student Reviewer**, HFES Annual Meetings, 2017 – 2019

Health Care, Training, Macroergonomics, Cognitive Engineering and Decision Making

**Teaching Certificate**

**A CIRTL Associate Fellow of the Academy of Future Faculty**, Center for Teaching Excellence & Office of Graduate and Professional Studies, Texas A&M University, 2018

· Teaching mentors: Dr. Farzan Sasangohar (advisor); Dr. Thomas Ferris

**Teaching Experience**

**Graduate Teaching Fellow | Texas A&M University, 2018**

College Station, TX, U.S.A.

· An *official instructor of record* assuming all the responsibility of a professor << **Won the Texas A&M Graduate Teaching Fellowship** >>

**ISEN 302 Economic Analysis of Engineering Projects, 2018 Fall**

· Designed and delivered a course to introduce the fundamental principles and techniques for economic decision analysis to 85 undergraduate engineers, with an emphasis on practical applications for comparing engineering design alternatives

· Teaching mentors: Dr. Farzan Sasangohar (advisor); Dr. Thomas Ferris; Dr. Yen-Jen Wang; Dr. Vikram Kinra (fellowship program director)

· Class evaluation score: **4.31/5.00** (ISEN 300-level average: **4.13/5.00**; ISEN overall average: **4.21/5.00**)

**Graduate Guest Lecturer | Texas A&M University, 2019**

College Station, TX, U.S.A.

**ISEN 330 Human Systems Interaction, 2019 Spring**

· Delivered two guest lectures on human cognition (e.g., information processing, working memory, decision making, heuristics, and biases) to 77 undergraduate engineers

· Teaching mentors: Dr. Farzan Sasangohar (advisor); Jose Vázquez

**Graduate Teaching Assistant | Texas A&M University, 2015 – 2019**

College Station, TX, U.S.A.

**ISEN 630 Human Operators in Complex Systems, 2019 Fall**

· Currently evaluating, guiding, and managing 48 graduate engineering students in covering various topics of human factors and ergonomics (HFE) including human information processing, physiological and biomechanical functioning, and implications for the design of human workplace.

· Teaching supervisors: Dr. Farzan Sasangohar (advisor); Dr. Arjun H. Rao

**ISEN 459/460 Capstone Senior Design, 2015 Fall, 2016 Spring, & 2016 Fall**

· Advised, evaluated, and guided senior undergraduate teams (app. 25 teams per semester) in weekly technical sessions for their progress in identifying/clarifying diversely ranging problems of their sponsors and collecting/analyzing data using industrial and systems engineering methods

· Teaching supervisors: Dr. Mark Lawley (dissertation committee member); Jose Vázquez

**Graduate Teaching Assistant | KAIST, 2012 – 2013**

Daejeon, Korea

**IE 577/MAE 565 System Design and Engineering, 2012 Fall, 2013 Fall**

· Facilitated delivering an interdisciplinary course to introduce systems engineering concepts and techniques to app. 50 undergraduate and graduate engineers, with an emphasis on the “V” model of

systems engineering process (Ref. NASA/INCOSE Systems Engineering Handbook)

· Teaching supervisors: Dr. Jaemyung Ahn (co-advisor); Dr. Taesik Lee (advisor)

**ID 100 Introduction to Design and Communication, 2013 Spring**

· Guided and advised app. 80 freshman undergraduates' designing practices of water leakage protection system in a systematic, interdisciplinary, and creative ways – with a focus on Axiomatic Design process, a systems design methodology to systematically analyzing the transformation of customer needs (CNs) into functional requirements (FRs), design parameters (DPs), and process variables (PVs)

· Teaching supervisors: Dr. Taesik Lee (advisor); Dr. George Furst

**KAIST Undergraduate Research Program, 2012 – 2013**

· Guided and advised two senior undergraduates to re-design an engineering course (IE 101 Intro to OR) as a service by inserting Kano excitement needs identified from the Axiomatic Design process, and as a result, achieved statistical improvement of the course.

· In Spring 2017, the redesigned course received the highest ever course evaluation score of 4.70/5.0 with 107 respondents (133 enrolled)

· Supervised students: Sang-Yoon Bae and Chan-Eon Park – *won the KAIST undergraduate research competition (3rd place), 2013*

· Teaching supervisor: Dr. James R. Morrison – *won the Teaching Excellence Award: Korean Society for Engineering Education (KSEE), 2018*

· Published a journal article [J2] and a peer-reviewed conference proceeding [C26]

**Mentoring Experience**

**Graduate Mentor | Texas A&M University, 2015 – Present**

College Station, TX, U.S.A.

**Onboarding and Offboarding Committee**, Applied Cognitive Ergonomics “ACE” Lab, 2018 – Present

**Research Mentor**, Applied Cognitive Ergonomics “ACE” Lab, 2016 – Present

Abin Joes · Abby Hutton · Alec Smith · Daniel Medrano · Jiahui Bian · Justin Wood · Katherine Renter · Margaret Fowler · Maria Camila Silva · Miranda Gonzalez · Nicolas George · Nitesh Woona · Trevor Hennington · Vu Hoang Le

**Teaching Mentor**, Department of Industrial and Systems Engineering, 2018

Sandesh Kumar A.

**Career Mentor**, Department of Industrial and Systems Engineering, 2015 – Present

Brian Cianciolo · Brian Sutton · Hyun-Gee Jei · Matthew Aguirre · Sheril Aini Loke

**Graduate Mentor | KAIST, 2012 – 2013**

Daejeon, Korea

**Research Mentor**, Complex Stochastic and Service System Design “XS3D” Lab, 2012 – 2014

Chan-Eon Park · Sang-Yoon Bae

**Career Mentor**, Department of Industrial and Systems Engineering, 2012 – Present

Cheol-Hee Hong · Seung-Yoon Lee · Tae-Hyun Kim

**Student Chapter Experience**

**Student Leadership | Texas A&M University, 2015 – 2018**

College Station, TX, U.S.A.

**Secretary**, Texas A&M Student Chapter of Human Factors and Ergonomics Society (HFES), 2017 – 2018

· Won Outstanding Student Chapter Awards – **Gold** (2017) and **Silver** (2018) status recognition

**Liaison for Women in OR/MS (WORMS)**, Texas A&M Student Chapter of Institute for Operations Research and the Management Sciences (INFORMS), 2017

· Launched *an interview series with female engineers* to share their insights for younger generations in OR/MS · “WORMS interview with Dr. Michelle M. Alvarado: Industrial engineering



assistant professor balancing an academic career and family”  
[https://www.flipsnack.com/9899CE5BDC9/informs-newsletter\\_fall2017-ftcsrsqfh.html](https://www.flipsnack.com/9899CE5BDC9/informs-newsletter_fall2017-ftcsrsqfh.html)

**President**, Texas A&M Industrial and Systems Engineering (ISEN) Korean Graduates, 2015 – 2016

**Student Leadership | KAIST, 2007 – 2013**

Daejeon, Korea

**President**, KAIST Industrial and Systems Engineering Graduates, 2012 – 2013

**Treasurer**, KAIST Industrial and Systems Engineering Undergraduates, 2007 – 2008

**Volunteer Experience**

**Volunteer | United Nations Global Compact (UNGC) Korea, 2011 – 2012**

Seoul, Korea

NGO for promoting corporate social responsibility (CSR) of Korean society

**Industry Experience**

**Intern | Procter & Gamble Korea, 2010**

Seoul, Korea

Market planning department, Supply network operations division

- **Received a full-time job offer as a market planner** after an impactful nine-week summer internship
- Investigated and systematized seven market planners’ customized demand forecasting methods so that the reasoning behind predicted sales numbers can be shared among themselves & the company’s executive management team

**Research Assistant | Bain & Company Korea, 2008 – 2009**

Seoul, Korea

CRM strategy development project for a leading cosmetics company

- Extracted meaningful segment-specific patterns in consumer behaviors using focus group interview and statistical analysis of purchase data
- Designed a consumer relationship management (CRM) system with product offer algorithm to align product price/placement with each customer segment’s biography and purchasing behaviors

**Intern | Accenture Korea, 2008**

Seoul, Korea

B2C CRM strategy development project for a leading electronics company

- **Won KAIST Internship competition, 1st place**, after an impactful nine-week summer internship
- Formulated globally standardized warranty violation rules based on the consumer behavioral patterns found from historical data

**Languages**

Fluently bilingual in **English** and **Korean**

Conversational level in **Japanese**

**References**

References are available on request

(Last updated: October 05, 2019)