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직위

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수상/명예

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활동

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[70] Dongeun Lee, **Jaesik Choi**[*], and Heonshik Shin, *Low-complexity compressive sensing with downsampling*, in IEICE Electronic Express, 11(3), 2014, 20130947.

[71] Tianfang Xu, Albert J. Valocchi[**], **Jaesik Choi**, and Eyal Amir, *Application of Machine Learning Methods to Reduce Predictive Bias of Groundwater Models*, in Groundwater, 52(3), 2014, 448-460. [SCI, IF 1.9]

[72] **Jaesik Choi**, Ziyu Wang, Sang-Chul Lee*, and Won J. Jeon*, *A Spatio-Temporal Pyramid Matching for Video Retrieval*, in Computer Vision and Image Understanding **(CVIU)**, 117(6), 2013, 660-669. [SCI, IF 2.391]

[73] Woojin Chung[*], Seokgyu Kim, Minki Choi, **Jaesik Choi**, Hoyeon Kim, Chang-bae Moon, and Jae-Bok Song[*], *Safe Navigation of a Mobile Robot Considering Visibility of Environment*, IEEE Transactions on Industrial Electronics **(TIE)**, Vol 56(10), pp. 3941–3950, 2009. [SCI, IF 7.050]

Book Chapters

[74] **Jaesik Choi**, Kristian Kersting and Yuqiao Chen, *Lifted Inference for Hybrid Relational Models*, in An Introduction to Lifted Probabilistic Inference, MIT Press, August 2021.

[75] Wannes Meert, **Jaesik Choi**, Jacek Kisynski, Hung Bui, Guy Van den Broeck, Adnan Darwiche, Rodrigo de Salvo Braz and David Poole, *Lifted Aggregation and Skolemization for Directed Models*, in An Introduction to Lifted Probabilistic Inference, MIT Press, August 2021.

International Patents

[76] Giyoung Jeon, Haedong Jeong, and **Jaesik Choi**, *Methods and Apparatus for Extracting Data in Deep Neural Networks*, **U.S. Patent Application 16/642,579**, 2020.

[77] **Jaesik Choi**, and Alex Sim, *Data reduction methods, systems and devices*, **U.S. Patent US10,366,078B2**, 2019.

[78] **Jaesik Choi**, Ke Wei, and Vishwanth Tumkur Ramarao, *Filter For Blocking Image-Based Spam*, **U.S. Patent 8055078**, 2011.

[79] **Jaesik Choi**, Jay Pujara, Vishwanth Tumkur Ramarao, and Ke Wei, *Identifying IP Addresses For Spammers*, **U.S. Patent 7849146**, 2010.

Workshop Proceedings and Technical Reports

[80] Subin Yi and **Jaesik Choi****, *Learning Group Structure of Deep Neural Networks with an Expectation Maximization Method*, in the Deep Learning and Clustering Workshop, collocated with International Conference on Data Mining (ICDM), 2019.

[81] Subin Yi, Janghoon Ju, Man-Ki Yoon, and **Jaesik Choi****, *Grouped Convolutional Neural Networks for Multivariate Time Series*, in arXiv 1703.09938, 2018.

[82] Anh Tong and **Jaesik Choi****, *Discovering Explainable Latent Covariance Structure for Multiple Time Series*, in Statistical Relational AI Workshop, collocated with International Joint Conference on Artificial Intelligence (IJCAI), 2018.

[83] Wonjun Yoon, Sol-A Kim, **Jaesik Choi****, *An End-to-End Robot Architecture to Manipulate Non-Physical State Changes of Objects*, in the International Workshop on Cognitive Robotics (CogRob), 2016.

[84] Anh Tong, **Jaesik Choi****, *Automatic Generation of Probabilistic Programming from Time Series Data*, in the International Workshop on Statistical Relational AI (StarAI), 2016.

[85] William Gu, **Jaesik Choi**, Ming Gu, Horst Simon and Kesheng Wu, *Fast Change Point Detection for Electricity Market Analysis*, in IEEE Big Data Workshop on Scalable Machine Learning: Theory and Applications, 2013.

[86] Wen Pu, **Jaesik Choi** and Eyal Amir, *Lifted Inference On Transitive Relation*, in International Workshop on Statistical Relational AI (StaRAI), 2013.

[87] **Jaesik Choi** and Eyal Amir, *Nonparametric Relational Hybrid Models*, in AAAI Workshop on Statistical Relational AI (StaRAI), 2012.

[88] **Jaesik Choi** and Eyal Amir, *Combining Planning and Motion Planning: An Extended Abstract*, in ICAPS Workshop on Combining Action and Motion Planning (CAMP), 2010. **(Invited paper)**

[89] **Jaesik Choi** and Eyal Amir, *Combining Planning and Motion Planning with an Action Formalism*, in Symposium on the Logical Formalizations of Commonsense Reasoning (Commonsense 2009), 2009.

[90] **Jaesik Choi** and Eyal Amir, *Factored Planning for Controlling a Robotic Arm: Theory*, in International Cognitive Robotics Workshop (CogRob), 2006.

[91] Yong Liu, David Hill, Tarek Abdelzaher, Jin Heo, **Jaesik Choi**, Barbara Minsker, and David Fazio, *Virtual Sensor-Powered Spatiotemporal Aggregation and Transformation: A Case Study Analyzing Near-Real-Time NEXRAD and Precipitation Gage Data in a Digital Watershed*, in Environmental Information Management, 2008.

[92] Woojin Chung, Seokgyu Kim, and **Jaesik Choi**, *High speed navigation of a mobile robot based on experiences*, in JSME Annual Conference on Robotics and Mechatronics, 2006.

지도학생

Postdocs

- **Boseon Yoo**, Postdoc Researcher, UNIST/KAIST, December 2017 - August 2021.
  Currently at: **Director of Engineering, INEEJI**
- **Kallol Roy**, Postdoc Researcher, UNIST, August 2015 - December 2017.
  Currently at: **University of Tartu, Estonia**
- **Dongeun Lee**, Postdoc Researcher, UNIST, March 2014 - March 2016.
  Currently at: **Assistant Professor at Texas A&M University - Commerce**

PhDs

- **Giyoung Jeon**, PhD in Computer Engineering, UNIST, 2023 February.
  Thesis title: *Measuring the Contribution of the Input to the Prediction of the Deep Neural Network by Exploring the Input Space*.
  First job: **Research Scientist at LG AI Research**
- **Haedong Jeong**, PhD in Computer Engineering, UNIST, 2022 August.
  Thesis title: *Example-based Methods to Explain the Internal Generative Mechanism of Deep Generative Neural Networks*.
  First job: **Research Scientist at SAIT**
- **Qin Xie**, PhD in Computer Engineering, UNIST, 2022 August.
  Thesis title: *Anomaly Detection With High-Dimensional Complex Data*.
  First job: **Research Scientist at Chinese Academy of Science**
- **Anh Tong**, PhD in Computer Engineering, UNIST, 2021 March.
  Thesis title: *Probabilistic Model Discovery Relational Learning and Scalable Inference*.
  First position: **Postdoc at KAIST**
  Currently at: **Assistant Professor at Korea University from March 2024**

Master student

- **Hyeha Im**, M.S. in Artificial Intelligence, KAIST, 2024 February.
  Thesis title: *Case Study for the Development of an Acute Kidney Injury Prediction Model for Clinical Use*.
- **Bumjin Park**, M.S. in Artificial Intelligence, KAIST, 2023 August.
  Thesis title: *Partitioned Channel Gradient for Reliable Saliency Map in Image Classification*.
  First position: **PhD student at KAIST**
- **Inyoung Paik**, M.S. in Artificial Intelligence, KAIST, 2023 August.
  Thesis title: *The Disharmony between BN and ReLU Causes Gradient Explosion, but is Offset by the Correlation between Activations*.
  First position: **DeepBio**
- **Jihyeon Seong**, M.S. in Artificial Intelligence, KAIST, 2023 August.
  Thesis title: *Towards Diverse Perspective Learning with Select over Multiple Temporal Poolings*.
  First position: **PhD student at KAIST**
- **Sekwang Oh**, M.S. in Artificial Intelligence, KAIST, 2023 August.
  Thesis title: *Dynamic Time Series Trend Filtering through Structural Breaks Detection with Reinforcement Learning*.
  First position: **Researcher, POSCO**

- **Dahee Kwon**, M.S. in Artificial Intelligence, KAIST, 2022 August.
  Thesis title: *Finding relaxed decision region on an internal layer of deep neural networks*.
  First position: **PhD student at KAIST**
- **Seongjin Park**, M.S. in Artificial Intelligence, KAIST, 2022 August.
  Thesis title: *Empirical study of the relationship between decision region and robustness in deep neural networks*.
  First position: **Researcher, SAIT**
- **Hwanil Choi**, M.S. in Artificial Intelligence, KAIST, 2022 August.
  Thesis title: *Can we find neurons that cause unrealistic images in deep generative networks?*
  First position: **Researcher, LG AI Research**
- **Seongun Kim**, M.S. in Artificial Intelligence, KAIST, 2022 February.
  Thesis title: *Explaining the decisions of deep policy networks for robotic manipulations*
  First position: **PhD student at KAIST**
- **Deokjun Eom**, M.S. in Artificial Intelligence, KAIST, 2022 February.
  Thesis title: *Variational neural temporal point process*.
  First position: **Researcher, Samsung Research**
- **Wonjoon Chang**, M.S. in Artificial Intelligence, KAIST, 2021 August.
  Thesis title: *Prototype selection for interpreting decision-making of deep temporal neural networks*.
  First position: **PhD student at KAIST**
- **Wonjoon Chang**, M.S. in Artificial Intelligence, KAIST, 2021 August.
  Thesis title: *Prototype selection for interpreting decision-making of deep temporal neural networks*.
  First position: **PhD student at KAIST**
- **Wonjoon Chang**, M.S. in Artificial Intelligence, KAIST, 2021 August.
  Thesis title: *Prototype selection for interpreting decision-making of deep temporal neural networks*.
  First position: **PhD student at KAIST**
- **Wonjoon Chang**, M.S. in Artificial Intelligence, KAIST, 2021 August.
  Thesis title: *Prototype selection for interpreting decision-making of deep temporal neural networks*.
  First position: **PhD student at KAIST**
- **Cheong-Woong Kang**, M.S. in Computer Engineering, UNIST, 2021 March.
  Thesis title: *Why Do Masked Neural Language Models Still Need Semantic Knowledge in Question Answering?*
  First position: **PhD student at KAIST**
- **Nguyen Thanh Nguyen**, M.S. in Computer Engineering, UNIST, 2021 March.
  Thesis title: *Improving Abstractive Summarization by Understanding Hidden Representations and Guidance on Semantic Meaning*.
- **Youngjin Park**, M.S. in Computer Engineering, UNIST, 2021 March.
  Thesis title: *Improved Prediction of Deep Temporal Neural Networks with Trend Filtering*.
  First position: **PhD student at KAIST**
- **Alisher Abdulov**, M.S. in Computer Engineering, UNIST, 2020 August.
  Thesis title: *Deep Trajectory Prediction for Robotic Manipulation Under Unreliable Sensor Data*.
  First position: **Researcher, 42Dot**
- **Ji-Woo Lee**, M.S. in Computer Engineering, UNIST, 2020 August.
  Thesis title: *Learning Basis Functions of Deep Spatio-Temporal Neural Networks with Covariance Loss*.
  First position: **Researcher, Deepnoid**

- **Dong-Ju Shin**, M.S. in Computer Engineering, UNIST, 2020 August.
  Thesis title: *A Convolutional Neural Network based Policy Inspired by the Cerebellum*.
  First position: **Researcher, Deepnoid**
- **Ye Eun Chun**, M.S. in Computer Engineering, UNIST, 2020 August.
  Thesis title: *Learning to Explain Causal Rationale of Stock Price Changes in Financial Reports*.
  First position: **Researcher at Shinhan AI**
- **Se-Hyun Lee**, M.S. in Computer Engineering, UNIST, 2019 August.
  Thesis title: *A General Compositional Operation in Random Process*.
  First position: **PhD student at KAIST**
- **Sol A Kim**, M.S. in Computer Engineering, UNIST, 2019 August.
  Thesis title: *Deep Reinforcement Learning in Multi-End Games*.
  First position: **PhD student at KAIST**
- **Jiyeon Han**, M.S. in Computer Engineering, UNIST, 2019 August.
  Thesis title: *Determining Changes in the Covariance Structure of Gaussian Processes*.
  First position: **PhD student at KAIST**
- **Ginkyeng Lee**, M.S. in Computer Engineering, UNIST, 2020 February.
  Thesis title: *Monte-Carlo Dropout based Uncertainty Analysis in Input Attributions of Multivariate Temporal Neural Networks*.
  First position: **Start-up**
- **Janghoon Ju**, M.S. in Computer Engineering, UNIST, 2019 August.
  Thesis title: *Deep Neural Networks to Learn Basis Functions with a Temporal Covariance Loss*.
  Currently at: **AI Engineer at Krafton**
- **Ali Tousi**, M.S. in Computer Engineering, UNIST, 2019 February.
  Thesis title: *Deep Fully Residual Convolutional Neural Network for Semantic Image Segmentation*.
  First position: **Researcher at UNIST**
- **Subin Yi**, M.S. in Computer Engineering, UNIST, 2018 August.
  Thesis title: *An Expectation Maximization Method to Learn the Group Structure of Deep Neural Network*.
  First position: **Software Engineer at SK T-brain**
- **Thanh Tong Nguyen**, M.S. in Computer Engineering, UNIST, 2018 August.
  Thesis title: *Layer-wise Learning of Stochastic Neural Networks with Information Bottleneck*.
  First position: **PhD student at Deakin University**
- **Rafael de Lima**, M.S. in Computer Engineering, UNIST, 2017 February.
  Thesis title: *Automatic Decomposition of Self-Triggering Kernels of Hawkes Processes*.
- **Yunseong Hwang**, M.S. in Computer Engineering, UNIST, 2016 February.
  Thesis title: *The Automatic Statistician: a Relational Perspective*.
  First position: **Software Engineer at NAVER**

Undergraduate student

- **Taehoon Kim**, B.S. in Computer Engineering, UNIST, 2016.
  Guided **internship at Lawrence Berkeley National Laboratory**, Summer 2014.
  (Won the best paper award from IEEE DataCom 2015), First position: **OpenAI**.
- **Madi Khamitbekov**, B.S. in Computer Engineering, UNIST, 2017.
  Guided internship at **Google**, Mountain View, USA, Summer 2016.
  Guided internship at **Moloco**, Winter 2016.

- **Sanghun Kang**, B.S. in Computer Engineering, UNIST, 2016.
  Guided research, 'Deep Learning Based Fog Removal Algorithms', Korean Patent, UTP16013KR-00.
  Now at Hyundai Card Algorithm Team.

연구비

요약

정부 지원금

- PI, *Development of Plug-and-Play Explainable Artificial Intelligence Method*, **13,000M KRW**, April 2022 - December 2026, award from IITP, Ministry of Science and ICT.
- co-PI, *Development and Study of AI Technologies to Inexpensively Conform to Evolving Policy on Ethics*, **435M KRW** (my share), April 2022 - December 2023, award from IITP, Ministry of Science and ICT.
- PI, *Explainable Artificial Intelligence based Weather Forecasting Causality Detection*, **712M KRW**, May 2022 - December 2024, award from National Institute of Meteorological Sciences.
- PI, *Development of security (security check) response technology by building X-ray big data*, **50M KRW**, June 2023 - February 2024, award from DEEPNOID.
- Co-PI, *Clustered Unattended CPS Specialized Lab*, **250M KRW** (my share), June 2023 - February 2024, award from Agency for Defense Development.
- co-PI, *Development of Artificial Intelligence Robot Autonomous Navigation Technology for Agile Movement in Crowded Space*, **865M KRW** (my share), April 2019 - December 2022, award from KEIT, Ministry of Trade, Industry and Energy.
- PI, *A Machine Learning and Statistical Inference Framework for Explainable Artificial Intelligence*, **15,400M KRW**, July 2017 - December 2021, award from IITP, Ministry of Science and ICT.
- co-PI, *Development of Artificial Intelligence Curling Robot*, **300M KRW** (my share), April 2017 - December 2018, award from IITP.
- co-PI, *Research and Development of Digital Companion Framework*, **600M KRW** (my share), April 2017 - December 2020, award from IITP.
- PI, *Deep Reinforcement Learning for Robust Robotic Manipulation*, **90M KRW**, March 2017 - December 2019, award from Korea Atomic Energy Research Institute.
- PI, *Relational Automatic Statistician for Multivariate Time Series Analysis*, **145M KRW**, March 2017 - February 2020, award from Korean NRF (Early Career Award).
- co-PI, *Development of robot intelligence technology for mobility with learning capability toward robust and seamless indoor and outdoor navigation*, **280M KRW** (my share), May 2016 - April 2020, award from KEIT, Ministry of Trade, industry and Energy.
- PI, *Deep Learning based Relation Extraction for Factoid Question Answering*, **30M KRW**, April 2016 - November 2016, award from ETRI.
- PI, *Deep Learning based Surgical Image Semantic Segmentation*, **65M KRW**, July 2015 - November 2016, award from ETRI.
- co-PI, *A Robust Plant Monitoring System based on Multi-Dimensional Sound Source Localization and Particles Dehaze*, **190M KRW** (my share), January 2015 - December 2016, award from National IT Industry Promotion Agency, together with Daedo Tech and Ulsan Economic Promotion Agency.
- PI, *Development of Fault-Diagnosis Algorithms for Current and Next-Generation Nuclear Systems*,

523M KRW, December 2014 - November 2017, award from Korean NRF.

- PI, *Efficient Feature Extraction Methods for Exascale Computing*, **40M KRW**, August 2013 - February 2015, award from UNIST.
- PI, *Learning and Inference with Probabilistic Relational Models for Intelligent Software Assistant*, **153M KRW**, May 2014 - April 2017, award from Korean NRF (Early Career Award).

산학연구 지원금

- PI, *Research on advancing explainable AI algorithms in finance*, **90M KRW**, November 2023 - June 2024, award from Kakao Bank.
- PI, *Developing a methodology to maintain descriptiveness while compressing AI models*, **85M KRW**, October 2023 - October 2024, award from Hyundai Motors.
- PI, *Developing algorithms to characterize and improve synthesized sounds in explainable AI-based models*, **100M KRW**, September 2023 - August 2024, award from Samsung Electronics.
- PI, *Research to automatically find and isolate some of the characteristics of objects trained on a text-to-image model to enable diverse and creative generation.*, **120M KRW**, July 2023 - June 2024, award from NAVER.
- PI, *Discovering the Limitations of Text-to-Image Generative Models and Developing the Generations of Out-of-Distribution Samples*, **120M KRW**, July 2023 - June 2024, award from NAVER.
- PI, *Error Source Analysis of Natural Language/Speech Neural Networks*, **100M KRW**, August 2022 - July 2023, award from Samsung Electronics.
- PI, *Explainable Artificial Intelligence for Energy Prediction Models*, **102M KRW**, May 2022 - April 2023, award from Hyundai Motors.
- PI, *Learning Explainable Disentangled Features*, **200M KRW**, December 2021 - June 2023, award from Samsung Electronics.
- PI, *Developing of algorithms to generative creative contents and explaining the decision making process of Transformer-based AI models*, **M KRW**, July 2021 - June 2022, award from NAVER.
- PI, *Explainable Speech Recognition AI development*, **100M KRW**, June 2021 - June 2022, award from Samsung Electronics.
- PI, *Explainable AI for ventilation controling the ventilation of Gwangyang 1 blast furnace*, **95M KRW**, April 2021 - March 2022, award from POSCO.
- PI, *Developing a model to calculate optimal operating conditions based on blast furnace metrics prediction*, **128M KRW**, April 2021 - March 2022, award from POSCO.
- PI, *Estimating and monitoring sources of semiconductor contamination and building an artificial intelligence analytics platform to advance predictive maintenance*, **200M KRW**, January 2021 - December 2022, award from Samsung Electronics.
- PI, *Explainable Artificial Intelligence based visualization for XGBoost-based corporate loan delinquency prediction*, **79M KRW**, December 2019 - December 2021, award from KEB Hana Bank.
- PI, *Based on HiEMS data AI Service Feasibility Review*, **30M KRW**, December 2019 - December 2021, award from HD Korea Shipbuilding & Offshore Engineering..
- PI, *Deep Reinforcement Learning for Optimizing and Automating Semiconductor Circuit Design*, **300M KRW**, December 2019 - March 2022, award from Samsung Electronics.
- PI, *Deep Learning based Fault Diagnosis of Equipments in Coal Fired Boilers*, **750M KRW**, October 2017 - September 2019, award from Korea East-West Power Co.

- PI, *Artificial Intelligence based Smart Blast Factory*, **450M KRW**, April 2018 - March 2021, award from POSCO.
- PI, *Research and Development of Automatic News Summarization System*, **135M KRW**, May 2017 - April 2018, award from NAVER.
- PI, *Development of Artificial Intelligence Methods to Diagnose Abnormal Conditions in Blast Furnace Operations*, **110M KRW**, May 2017 - February 2018, award from POSCO.
- co-PI, *Development of Learning based Diagnosis Algorithm from Rattle Sounds*, **95M KRW** (my share, 40M KRW), September 2016 - September 2017, award from Samsung Electronics.
- PI, *Artificial Intelligence Research of Time Series Data Analysis on Steel Making Procedure*, **125M KRW**, June 2016 - February 2017, award from POSCO.
- PI, *Deep Recurrent Neural Network Models for User Pattern Recognition in Sound Signals*, **30M KRW**, November 2015 - April 2016, award from Hyundai NGV.
- PI, *Confidential*, **20M KRW**, January 2015 - March 2015, award from Doosan Heavy Industry.

학술회원 및 봉사

- **Program co-Chair** for
  - 2023 IPAM Workshop on Explainable AI for the Sciences: Towards Novel Insights.
  - 2018 International Explainable Artificial Intelligence Symposium.
- **Tutorial Chair** for **ACML** Asian Conference on Machine Learning 2017.
- **Area Chair** for
  - **IJCAI** International Joint Conference on Artificial Intelligence (**2021, 2023, 2024**).
  - **UAI** Uncertainty in Artificial Intelligence (**2024**).
- **Associate Editor** for
  - Pattern Recognition Journal (2023–present).
- **Senior Program Committee** for
  - **AAAI** National Conference on Artificial Intelligence (**2021**).
  - **IJCAI-ECAI** International Joint Conference on Artificial Intelligence - European Conference on Artificial Intelligence (**2022**).
- **Program Committee** for
  - **AAAI** National Conference on Artificial Intelligence (**2012 - present**).
  - **ICML** International Conference on Machine Learning (**2013 - present**).
  - **IJCAI** International Joint Conference on Artificial Intelligence (**2011 - present**).
  - **NeurIPS** Conference on Neural Information Processing Systems (**2015 - present**).
  - **UAI** Uncertainty in Artificial Intelligence (**2015 - present**).
  - **KR** Conferences on Principles of Knowledge Representation and Reasoning (**2016**).
  - **ACML** Asian Conference on Machine Learning (**2015 and 2016**).
- **Reviewer** for Journals:
  - **AIJ** Artificial Intelligence Journal.
  - **JAIR** Journal of Artificial Intelligence Research.
  - Computational Intelligence.
  - Mechatronics.

- **Professional organizations:**
  - **IEEE** member: Institute of Electrical and Electronics Engineers.
  - **ACM** member: Association for Computing Machinery.
  - **AAAI** member: Association for the Advancement of Artificial Intelligence.
  - **KIISE** lifetime member: Korean Institute of Information Scientists and Engineers.

산학회원 및 자문

- 삼성전자 미래기술연구회, 2019년 1월 - 2021년 12월.
- 포스코 철강 전문교수, 2017년 8월 - 2020년 7월.
- 삼성전자 종합기술원, 자문교수, 2018년 10월 - 2019년 5월.
- LG전자 소재/생산기술원, 자문교수, 2017년 7월 - 2019년 2월.

초청강연 및 발표

국제

- **IEEE BigComp 2024**, Tutorial, *Explainable Artificial Intelligence to Understand Internal Decision Mechanism of Deep Neural Networks*, February 2024.
- **Chinese Academy of Engineering**, The 1st China-Korea Development Forum on Engineering Sciences and Technology, *Explainable Artificial Intelligence Reserach in Korea*, July 2023.
- **Institute for Pure and Applied Mathematics**, *Explainable AI for the Sciences: Toward Novel Insights*, January 2023.
- **RIKEN AIP**, *Explainable Artificial Intelligence: Academic Research and Industrial Applications in Korea*, October 2022.
- **NAEK-EAJ**, Korea-Japan AI Forum, *Explainable Artificial Intelligence: Academic Research and Industrial Applications in Korea*, October 2022.
- **KMA-NOAA**, 1st KMA-NOAA AI Workshop on AI for Weather and Climate, *Explainable Artificial Intelligence for Precipitation Forecasting*, October 2022.
- **KAST-Leopoldina**, The 6th KAST-Leopoldina Bilateral Symposium, *Explainable Artificial Intelligence Reserach in Korea*, September 2022.
- **KAIST Center for Neuroscience-inspired Artificial Intelligence**, *Next-generation AI: towards human-level intelligence, AI and brain, AI x Human Symposium - Interpreting and Explaining Internal Nodes in Deep Neural Networks*, November 2020.
- **ACM SIGKDD**, Conference on Knowledge Discovery and Data Mining, *Interpreting and Explaining Deep Neural Networks: A Perspective on Time Series Data*, August 2020.
- **2020 IEEE**, International Conference Big Data and Smart Computing, *Explainable Artificial Intelligence (XAI) Tutorial*, February 2020.
- **International Conference on Robot Intelligence Technology and Applications**, *Explainable AI for Reinforcement Learning*, November 2019.
- **Times Higher Education**, Asia Universities Summits, *New technology advancing the field: AI and the health sector*, May 2019.
- **DARPA**, DARPA PI Meeting at University of California Berkeley, *Explainable Artificial Intelligence Research in Korea*, February 2019.

- **2018 International Explainable AI Symposium**, UNIST Explainable Artificial Intelligence Center, October 2018.
- **2018 ICCE-Asia 2018 IEEE/IEIE**, *Tutorial on Explainable Artificial Intelligence: Models and Applications*, June 2018.
- **Bloomberg**, Machine Learning Decoded 2018 Conference in Korea, *Explainable Artificial Intelligence for Financial Time Series*, March 2018.
- **2017 International Conference on Artificial Intelligence**, hosted by Ministry of Science and ICT, *Introduction to Explainable Artificial Intelligence Center*, December 2017.
- **2017 Korea-Canada Science & Technology Innovation Symposium**, hosted by Science and Technology Policy Institute (STEPI), *Explainable Artificial Intelligence: Models and Applications*, December 2017.
- **The Asian Conference on Machine Learning**, *Tutorial: Statistical Relational Artificial Intelligence*, November 2017.
- **The 5th The Korean Academy of Science and Technology (KAST) - Leopoldina Bilateral Symposium** on AI and Machine Learning Technology, Perspective and Applications, *Exploiting Relations among Multiple Time Series Toward Explainable Artificial Intelligence*, October 2017.
- 2017 **IEEE International Conference on Big Data and Smart Computing (BigComp)**, *Tutorial: Machine Learning with Time Series Data*, February 2017.
- **International Conference on Control, Automation and Systems**, Tutorial, *Machine Learning with Sequential Data*, October 2016. (with Prof. Moon Jun at UNIST)
- **Ho Chi Minh City University of Technology**, Faculty of Computer Science, *Learning and Inference with Large-Scale Gaussian Processes*, September 2013.
- **Ho Chi Minh City University of Science**, Faculty of Math and Computer Science, *Learning and Inference with Large-Scale Gaussian Processes*, September 2013.
- **University of California, Berkeley**, Stuart Russell's Research Group, *Learning and Inference for Relational Hybrid Models*, February 2013.
- **Honda Research Institute**, *Learning and Inference for Large-Scale Graphical Models*, October 2012.
- **Palo Alto Research Center (PARC)**, *Learning and Inference for Large-Scale Graphical Models*, October 2012.
- **Lawrence Berkeley National Laboratory**, *Learning and Inference for Large-Scale Graphical Models*, September 2012.
- **University of Illinois at Urbana-Champaign** on Artificial Intelligence and Information Systems (AIIS) Seminar, *Efficient Lifted Inference with Large-Scale Graphical Models*, March 2012.
- **IJCAI-11 Tutorial** on Lifted Inference in Probabilistic Logical Models, *Lifted Inference with Continuous Variables*, July 2011 (Presented by a coauthor).
- **SRI International**, *Lifted Inference for Relational Continuous Models*, June 2011.
- **ICAPS 2010 Workshop** on Combining Action and Motion Planning, *Combining Planning and Motion Planning*, May 2010 (Presented by a coauthor).