GYEONG-MOON PARK

Assistant Professor
Visual & General Intelligence (VGI) Lab.
Department of Artificial Intelligence, Korea University (KU)
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EXPERIENCE

Korea University Mar. 2025 - Present
Assistant Professor, Department of Artificial Intelligence *Seoul, Republic of Korea*

Kyung Hee University Mar. 2021 - Feb. 2025
Assistant Professor, School of Computing *Suwon, Republic of Korea*

Klleon Mar. 2022 - Present
Research Advisor, R&D Center (page: klleon.io) *Seoul, Republic of Korea*

ETRI Mar. 2020 - Feb. 2021
Full-Time Researcher, Artificial Information Research Laboratory *Daejeon, Republic of Korea*

KAIST Sep. 2019 - Feb. 2020
Postdoctoral Fellow, Information and Electronics Research Institute *Daejeon, Republic of Korea*

EDUCATION

KAIST Mar. 2016 - Aug. 2019
Ph.D. in School of Electrical Engineering *Daejeon, Republic of Korea*

- Thesis: "Memory-based Continual Learning for Autonomous Intelligent Agent"
- Advisor: Prof. Jong-Hwan Kim

KAIST Mar. 2014 - Feb. 2016
M.S. in School of Electrical Engineering *Daejeon, Republic of Korea*

- Thesis: "Deep ART Memory Based Cognitive Architecture for Robots"
- Advisor: Prof. Jong-Hwan Kim

Sungkyunkwan University Mar. 2008 - Feb. 2014
B.S. in Electronic and Electrical Engineering *Suwon, Republic of Korea*

- Thesis: "The Enhancement of Light Extraction Efficiency of Blue-LED by Using Double Layer Photonic Crystals"
- Advisor: Prof. Bong-Shik Song

RESEARCH KEYWORDS

Adaptive Learning for Artificial General Intelligence (AGI)
Continual (Lifelong) Learning, Few-Shot Learning, Online Learning, Domain Adaptation, and Machine Unlearning.

Generative AI
High-Fidelity Image/Video Generation and Editing, 3D Reconstruction, and Audio-driven Talking Head Generation.

Multi-Modal AI
Multi-Modality Fusion and Alignment, Multi-Modal Chatbot System, and Multi-Modal Content Generation.

PUBLICATIONS

International Conference Papers (*: Co-First, †: Co-Corresponding)

[27] T.-Y. Lee*, Sundong Park*, Minwoo Jeon*, Hyoseok Hwang†, and **G.-M. Park**†
"ESC: Erasing Space Concept for Knowledge Deletion"
Computer Vision and Pattern Recognition (**CVPR**), Nashville, U.S.A, Jun. **2025**.

[26] S.-A. Choe, K.-H. Park, Jinwoo Choi, and **G.-M. Park**†
"Universal Domain Adaptation for Semantic Segmentation"
Computer Vision and Pattern Recognition (**CVPR**), Nashville, U.S.A, Jun. **2025**.

[25] Unki Park, Seongmoon Jeong, Youngchan Jang, **G.-M. Park**†, and Jong Hwan Ko†
"Test-Time Fine-Tuning of Image Compression Models for Multi-Task Adaptability"
Computer Vision and Pattern Recognition (**CVPR**), Nashville, U.S.A, Jun. **2025**.

[24] Chan Lee*, Seungho Shin*, **G.-M. Park**†, and Jung Uk Kim†
"Multispectral Pedestrian Detection with Sparsely Annotated Label"
AAAI Conference on Artificial Intelligence (**AAAI**), Philadelphia, U.S.A, Feb. **2025**.

[23] Seung-Jun Moon*, Chaewon Kim*, and **G.-M. Park**
"WINE: Wavelet-Guided GAN Inversion and Editing for High-Fidelity Refinement"
Winter Conference on Applications of Computer Vision (**WACV**), Arizona, U.S.A, Jan. **2025**.

[22] Hah Min Lew*, Sahngmin Yoo*, Hyunwoo Kang*, and **G.-M. Park**
"Chroma-HS: High-Fidelity Industrial Head Swapping with Chroma Keying"
Winter Conference on Applications of Computer Vision (**WACV**), Arizona, U.S.A, Jan. **2025**.

[21] Hakyung Lee, K.-H. Park, Hoyoon Byun, Jeyoon Yeom, Jihee Kim, **G.-M. Park**†, and Kyungwoo Song†
"CED: Comparing Embedding Differences for Detecting Out-of-Distribution and Hallucinated Text"
Empirical Methods in Natural Language Processing (**EMNLP**) **Findings**, Miami, U.S.A, Nov. **2024**.

[20] J.-Y. Moon, Jung Uk Kim†, and **G.-M. Park**†
"Towards Model-Agnostic Dataset Condensation by Heterogeneous Models"
European Conference on Computer Vision (**ECCV**), Milan, Italy, Sept. **2024** (**Oral Presentation**).

[19] K.-H. Park, Hakyung Lee, Kyungwoo Song†, and **G.-M. Park**†
"Online Continuous Generalized Category Discovery"
European Conference on Computer Vision (**ECCV**), Milan, Italy, Sept. **2024**.

[18] M.-Y. Park*, J.-H. Lee*, and **G.-M. Park**
"Versatile Incremental Learning: Towards Class and Domain-Agnostic Incremental Learning"
European Conference on Computer Vision (**ECCV**), Milan, Italy, Sept. **2024**.

[17] K.-H. Park, Kyungwoo Song†, and **G.-M. Park**†
"Pre-trained Vision and Language Transformers Are Few-Shot Incremental Learners"
Computer Vision and Pattern Recognition (**CVPR**), Seattle, U.S.A, Jun. **2024**.

[16] J. Seo*, S.-H. Lee*, T.-Y. Lee*, S.-J. Moon, and **G.-M. Park**
"Generative Unlearning for Any Identity"
Computer Vision and Pattern Recognition (**CVPR**), Seattle, U.S.A, Jun. **2024**.

[15] S.-A. Choe*, A.-H. Shin*, K.-H. Park, Jinwoo Choi†, and **G.-M. Park**†
"Open-Set Domain Adaptation for Semantic Segmentation"
Computer Vision and Pattern Recognition (**CVPR**), Seattle, U.S.A, Jun. **2024**.

[14] D.-Y. Lee*, C.-W. Kim*, S.-J. Yoo, Jaejun Yoo†, and **G.-M. Park**†
"RADIO: Reference-Agnostic Dubbing Video Synthesis"
Winter Conference on Applications of Computer Vision (**WACV**), Waikoloa, U.S.A, Jan. **2024**.

[13] H.-G. Lee*, K.-H. Bae*, Seong Jong Ha, Yumin Ko, **G.-M. Park**†, and Jinwoo Choi†
"GLAD: Global-Local View Alignment and Background Debiasing for Video Domain Adaptation"
Winter Conference on Applications of Computer Vision (**WACV**), Waikoloa, U.S.A, Jan. **2024**.

[12] J.-Y. Moon*, K.-H. Park*, Jung Uk Kim†, and **G.-M. Park**†
"Online Class Incremental Learning on Stochastic Blurry Task Boundary via Mask and Visual Prompt Tuning"
International Conference on Computer Vision (**ICCV**), Paris, France, Oct. **2023**.

[11] J. Seo*, J.-S. Kang*, and **G.-M. Park**
"LFS-GAN: Lifelong Few-Shot Image Generation"
International Conference on Computer Vision (**ICCV**), Paris, France, Oct. **2023**.

[10] Y.-H. Ahn, **G.-M. Park**†, and Seong Tae Kim†
"LINe: Out-of-Distribution Detection by Leveraging Important Neurons"
Computer Vision and Pattern Recognition (**CVPR**), Vancouver, Canada, Jun. **2023**.

[9] S.-J. Moon and **G.-M. Park**
"IntereStyle: Encoding an Interest Region for Robust StyleGAN Inversion"
European Conference on Computer Vision (**ECCV**), Tel-Aviv, Israel, Oct. **2022**.

[8] J. H. Kim, I. U. Yoon, **G.-M. Park**, and J.-H. Kim
"Non-Probabilistic Cosine Similarity Loss for Few-Shot Image Classification"
The British Machine Vision Conference (**BMVC**), Manchester, England, Sep. **2020**.

[7] J. H. Kim, **G.-M. Park**, and J.-H. Kim
"A Two-Phase Multi-Channel Classification Resonance Network"
International Conference on Robot Intelligence Technology and Applications (**RiTA**), Daejeon, Korea, Nov. 2019.

[6] D. Sigmund, **G.-M. Park**, and J.-H. Kim
"Context Preference-based Deep Adaptive Resonance Theory: Integrating User Preference into Episodic Memory Encoding and Retrieval"
IEEE International Joint Conference on Neural Networks (**IJCNN**), Alaska, USA, May. 2017.

[5] Y.-H. Yoo, D.-H. Kim, **G.-M. Park**, I.-B. Jeong, S.-H. Baek, S.-J. Ryu, and J.-H. Kim
"Memory-based Realization of Task Intelligence for Robots in Human Environment"
IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**) *Workshop*, Daejeon, Korea, Oct. 2016.

[4] **G.-M. Park**, S. H. Cho, and J.-H. Kim
"Biologically-Inspired Episodic Memory Model Considering the Context Information"
IEEE Conference on System, Man, and Cybernetics (**SMC**), Hungary, Budapest, Oct. 2016.

[3] **G.-M. Park** and J.-H. Kim
"Deep Adaptive Resonance Theory for Learning Biologically Inspired Episodic Memory"
IEEE International Joint Conference on Neural Networks (**IJCNN**), Vancouver, Canada, Jul. 2016.

[2] **G.-M. Park**, Y.-H. Yoo, and J.-H. Kim
"REM-ART: Reward-based Electromagnetic Adaptive Resonance Theory"
International Conference on Artificial Intelligence (**ICAI**), Las Vegas, U.S.A., Jul. 2015.

[1] **G.-M. Park**, S.-H. Baek, and J.-H. Kim
"Falling Prevention System from External Disturbances for Humanoid Robots"
International Conference on Robot Intelligence Technology and Applications (**RiTA**), Beijing, China, Nov. 2014.

International Journal Articles (*: Co-First, †: Co-Corresponding)

[10] Minwoo Jeon*, **G.-M. Park***, and Hyoseok Hwang
"Fisheye Object Detection with Visual Prompting-Aided Finetuning"
Remote Sensing, vol. 16, no. 12, 2054, Jun. **2024** (**JCR 13.2%, Q1**).

[9] A.-H. Shin*, J.-H. Lee*, Y.-H. Kim, and **G.-M. Park**
"Wav2NeRF: Audio-Driven Realistic Talking Head Generation via Wavelet-based NeRF"
Image and Vision Computing (**IMAVIS**), vol. 148, 105104, Aug. **2024** (**JCR 13.4%, Q1**).

[8] A.-H. Shin, Seong Tae Kim†, and **G.-M. Park**†
"Time Series Anomaly Detection using Transformer-based GAN with Two-Step Masking"
IEEE Access, vol. 11, no. 1, pp. 74035-74047, Jun. 2023 (JCR 35.5%, Q2).

[7] J.-W. Choi, **G.-M. Park**, and J.-H. Kim
"SR-EM: Episodic Memory Aware of Semantic Relations Based on Hierarchical Clustering Resonance Network"
IEEE Transactions on Cybernetics (**TCYB**), vol. 52, no. 10, pp. 10339-10351, Oct. **2022** (**JCR 1.56%, Rank 1**).

[6] **G.-M. Park** and J.-H. Kim
"Adaptive Developmental Resonance Network"
IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), vol. 32, no. 10, pp. 4347-4361, Oct. **2021** (**JCR 4.6%, Rank 3**).

[5] **G.-M. Park**, S.-M. Yoo, and J.-H. Kim
"Convolutional Neural Network with Developmental Memory for Continual Learning"
IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), vol. 32, no. 6, pp. 2691-2705, Jun. **2021** (**JCR 4.6%, Rank 3**).

[4] **G.-M. Park**, J.-W. Choi, and J.-H. Kim
"Developmental Resonance Network"
IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), vol. 30, no. 4, pp. 1278-1284, Apr. **2019** (**JCR 4.6%, Rank 3**).

[3] **G.-M. Park**, Y.-H. Yoo, D.-H. Kim, and J.-H. Kim
"Deep ART Neural Model for Biologically Inspired Episodic Memory and Its Application to Task Performance of Robots"
IEEE Transactions on Cybernetics (**TCYB**), vol. 48, no. 6, pp. 1786-1799, Jun. **2018** (**JCR 1.56%, Rank 1**).

[2] D.-H. Kim, **G.-M. Park**, Y.-H. Yoo, I.-B. Jeong, and J.-H. Kim
"Realization of Task Intelligence for Service Robots in an Unstructured Environment"
Annual Reviews in Control (**Annu. Rev. Control**), vol. 44, no. 1, pp. 9-18, Sep. **2017** (**JCR 6.9%, Rank 5**).

[1] I.-B. Jeong, W.-R. Ko, **G.-M. Park**, D.-H. Kim, Y.-H. Yoo, and J.-H. Kim
"Task Intelligence of Robots: Neural Model-based Mechanism of Thought and Online Motion Planning"
IEEE Trans. Emerg. Topics Comput. Intell. (**TETCI**), vol. 1, no. 1, pp. 41-50, Feb. 2017 (JCR 32.8%, Q2).

PATENTS

[21] Jung Uk Kim, **G.-M. Park**, Seung Ho Shin, and Chan Lee
"Object Detection Apparatus, Method, and Computer Program Utilizing Multi-Spectral Learning Features"
Korean Patent Application (10-2024-0170925), Nov. 26, 2024.

[20] **G.-M. Park**, Yoon Hyung Kim, and J.-H Lee
"Method and Apparatus for Training Lip-Sync Video Generation Model"
Korean Patent Application (10-2024-0164742), Nov. 19, 2024.

[19] **G.-M. Park** and K.-H Park
"Continuous Learning Method for Category Classification and Computing Device for Performing the Same"
Korean Patent Application (10-2024-0147851), Oct. 25, 2024.

[18] **G.-M. Park**, T.-Y Lee, and J.-W. Seo
"Method for Performing Unlearning of People in a Generative Model and Computing Device for Performing the Same"
US Patent Application (18/925,176), Oct. 24, 2024.

[17] Hyoseak Hwang, **G.-M. Park**, and Minwoo Jeon
"Learning apparatus and method for detecting object in fisheye lens image and apparatus and method for detecting object"
Korean Patent Application (10-2024-0118847), Sep. 2, 2024.

[16] **G.-M. Park**, T.-Y. Lee, Sungdong Park, Minwoo Jeon, and Hyoseak Hwang
"Method for feature-level unlearning in deep neural networks and computing device for executing the method"
Korean Patent Application (10-2024-0087740), Jul. 3, 2024.

[15] **G.-M. Park**, S.-A. Choe, and K.-H. Park
"Learning method for unsupervised domain adaptation of a semantic segmentation model and computing device for performing the same"
Korean Patent Application (10-2024-0067609), May. 24, 2024.

[14] **G.-M. Park**, T.-Y. Lee, and J.-W. Seo
"Method for performing unlearning of people in a generative model and computing device for performing the same"
Korean Patent Application (10-2024-0060152), May. 5, 2024.

[13] **G.-M. Park**, J.-H. Lee, and M.-Y. Park
"Versatile Incremental Learning Apparatus and Method using Cluster-based Adapter Shift Control and Incremental Classifier"
Korean Patent Application (10-2024-0026300), Feb. 23, 2024.

[12] **G.-M. Park** and A.-H. Shin
"Method for Detecting Anomaly in Time Series Data and Computing Device for Executing The Method"
US Patent Registration (11861454), Jan. 02, **2024**.

[11] **G.-M. Park**, J.-Y. Moon, and K.-H. Park
"Online Incremental Learning Method of Artificial Intelligence-based Classification Model and Computing Device for Performing the Same"
Korean Patent Application (10-2023-0145630), Oct. 27, 2023.

[10] **G.-M. Park**, A.-H. Shin, and M.-Y. Park
"Apparatus and Method for Detecting of Multivariate Time-Series Anomaly"
Korean Patent Application (10-2023-0145316), Oct. 27, 2023.

[9] **G.-M. Park** and K.-H. Kim
"Few Shot Continuous Learning Method and Computing Device for Executing the Same"
Korean Patent Application (10-2023-0145315), Oct. 27, 2023.

[8] H.-W. Kim, **G.-M. Park**, J.-G. Park, H.-J. Song, B.-H. Yoo, E.-S. Chung, and R. Han
"Method and Apparatus for Online Bayesian Few-Shot Learning"
Korean Patent Registration (10-2564285), Aug. 2, **2023**.

[7] **G.-M. Park** and A.-H. Shin
"Method for Detecting Outliers in Multivariate Time Series Data and Computing Device for Performing the Same"
Korean Patent Application (10-2023-0051450), Apr. 19, 2023.

[6] **G.-M. Park** and A.-H. Shin
"Method for Detecting Anomaly in Time Series Data and Computing Device for Executing the Method"
Korean Patent Application (10-2021-0175107), Aug. 1, 2022.

[5] J.-H. Kim, S.-M. Yoo, J.-H. Kim, and **G.-M. Park**
"Unsupervised Domain Adaptation System and Method"
Korean Patent Application (10-2021-0169536), Nov. 30, 2021.

[4] E.-S. Chung, H.-W. Kim, **G.-M. Park**, J.-G. Park, H.-J. Song, B.-H. Yoo, and R. Han
"System and Method for Adaptive Masking and Non-Directional Language Understanding and Generation"
Korean Patent Application (10-2020-0168645), Dec. 4, 2020.

[3] **G.-M. Park**, H.-W. Kim, J.-G. Park, H.-J. Song, B.-H. Yoo, E.-S. Chung, and R. Han
"Device and Method for Learning Natural Language Processing Comprising External Memory Network"
Korean Patent Application (10-2020-0141061), Oct. 28, 2020.

[2] H.-J. Song, H.-W. Kim, **G.-M. Park**, B.-H. Yoo, E.-S. Chung, and R. Han
"Method and Apparatus for Multi-level Verification Learning"
Korean Patent Application (10-2020-0104620), Aug. 20, 2020.

[1] B.-S. Song, G.-B. Park, and **G.-M. Park**
"A Light Emitting Diode Containing a Double-Layered Photonic Crystal Structure"
Korean Patent Registration (10-1529817), Jun. 11, **2015**.

TEACHING

Korea University Mar. 2025 - Present
Assistant Professor, Department of Artificial Intelligence *Seoul, Republic of Korea*

- XAI520: "Algorithm for AI" (Graduate)

Kyung Hee University Mar. 2021 - Feb. 2025
Assistant Professor, School of Computing *Suwon, Republic of Korea*

- AI1002: "AI Programming"
- AI3001: "Advanced Deep Learning" (Undergraduate)
- AI7005: "Advanced Deep Learning" (Graduate)
- CSE203: "Computer Architecture"
- CSE7521: "Advanced Probability and Statistics" (Graduate)
- CSE406: "Capstone Design"
- CSE495: "Independent Learning and Research"

RESEARCH PROJECTS

Human-Robot Shared Control-based Continual Intelligence Reinforcement RaaS 2024 - 2028
Participating Researcher, $4,500,000 *Supervision:* ***MOTIE***

A Study on Large Multimodal AI Models for Emergency Care (with New York University) 2024 - 2028
Participating Researcher, $7,440,000 ***(Global AI Frontier Lab with NYU)*** *Supervision:* ***IITP***

Open-World Object Detection with Machine Unlearning 2024 - 2026
Principal Investigator, $165,000 *Supervision:* ***HANCOM InSpace***

Cloud Continuum for Enabling Large Scale AI Services (ITRC) 2023 - 2031
Participating Researcher, $7,500,000 *Supervision:* ***IITP***

Developing Teacher Supporting AI Focusing on 2xAI (eXplainable & eXchangeable) 2023 - 2025
Participating Researcher, $450,000 *Supervision:* ***NRF***

Multi-Modal Back-Channel Prediction 2023 - 2025
Principal Investigator, $180,000 *Supervision:* ***ETRI***

Video and Audio-Driven Lip Sync Generation Models 2022 - 2025
Principal Investigator, $200,000 *Supervision:* ***ETRI***

Patient-Specific General Intelligence for Effective Early Diagnosis of Arrhythmia 2021 - 2023
Principal Investigator, $90,000 *Supervision:* ***NRF***

Research Proposal in the Field of Artificial General Intelligence 2021 - 2021
Principal Investigator, $80,000 *Supervision:* ***ETRI***

AWARD

Excellence Award, KAIST Apr. 2018
Research Performance Evaluation System for Doctoral Student *Daejeon, Republic of Korea*

ACADEMIC SERVICES

Conference Reviewer 2020 – Present

- Computer Vision and Pattern Recognition (CVPR)
- European Conference on Computer Vision (ECCV)
- International Conference on Computer Vision (ICCV)
- Winter Conference on Applications of Computer Vision (WACV)
- Neural Information Processing Systems (NeurIPS)
- International Conference on Machine Learning (ICML)
- International Conference on Learning Representations (ICLR)
- AAAI Conference on Artificial Intelligence (AAAI)
- Association for Computational Linguistics (ACL)
- Empirical Methods in Natural Language Processing (EMNLP)
- International Conference on Robotics and Automation (ICRA)

Journal Reviewer 2016 – Present

- IEEE Trans. on Cybernetics (TCYB)
- IEEE Trans. on Industrial Electronics (TIE)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- IEEE Robotics and Automation Letters (RA-L)
- Information Fusion
- IEEE Access

Organizing Committee 2023 – Present

- International Joint Conference on Artificial Intelligence (IJCAI) 2024, Industry Chair
- Korea Society of Artificial Intelligence in Medicine (KoSAIM) 2023 - 2026
- Korea Robotics Society (KRoS) 2023

REFERENCES

Jong-Hwan Kim, Ph.D. – KAIST Professor Emeritus (M.S. & Ph.D. Advisor, Major: **AI & Robotics**)
Professor Emeritus, School of Electrical Engineering
Korea Advanced Institute of Science & Technology (KAIST)
291 Daehak-ro, Yuseong-gu, Daejeon 34141
Republic of Korea
Tel: 82-42-350-3448
Email: johkim@rit.kaist.ac.kr
Homepage: Robot Intelligence Technology Lab. (rit.kaist.ac.kr)

Hyun Myung, Ph.D. – KAIST Professor (Major: **AI & Robotics**)
Professor, School of Electrical Engineering
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Tel: 82-42-350-7551
Email: hmyung@kaist.ac.kr
Homepage: Urban Robotics Lab. (urobot.kaist.ac.kr)

Junmo Kim, Ph.D. – KAIST Professor (Major: **AI**)
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