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RESEARCH INTERESTS	Machine Learning: Long-Term Memory, Unsupervised Learning (Clustering), Incremental Learning, Continual Learning, Transfer Learning, Computer Vision, Deep Reinforcement Learning Robotics: Autonomous Intelligent Agent, Humanoid and its Gait Mechanism, Task Intelligence, Robot Hand Grasping
EDUCATION	KAIST , Daejeon, Republic of Korea 03/2016 – 08/2019 Ph.D. in School of Electrical Engineering Thesis: “Memory-based Continual Learning for Autonomous Intelligent Agent” Advisor: Prof. Jong-Hwan Kim KAIST , Daejeon, Republic of Korea 03/2014 – 02/2016 M.S. in School of Electrical Engineering Thesis: “Deep ART Memory Based Cognitive Architecture for Robots” Advisor: Prof. Jong-Hwan Kim Sungkyunkwan University , Suwon, Republic of Korea 03/2008 – 02/2014 B.S. in Electronic and Electrical Engineering Thesis: “The Enhancement of Light Extraction Efficiency of Blue-LED by Using Double Layer Photonic Crystals” Advisor: Prof. Bong-Shik Song

POSITIONS	KAIST , Daejeon, Republic of Korea Postdoctoral Fellow, Information & Electronics Research Institute	03/2019 – Present
TEACHING EXPERIENCE	Teaching assistant at School of Electrical Engineering, KAIST <ul style="list-style-type: none"> • EE212: “Electronics Design and Practice” (3-credits) • EE381: “Control System Engineering” (3-credits) • EE490: “B.S. Thesis Research” (3-credits) • EE495: “Individual Study” (3-credits) 	2014 – 2016
RESEARCH PROJECTS	<p>[1] Development of Robot Hand Manipulation Intelligence to Learn Methods and Procedures for Handling Various Objects with Tactile Robot Hands Supervision: National IT Industry Promotion Agency (NIPA) Role: Sub-team leader (2018-2019) & Development of knowledge transfer learning technology for Deep RL, applicable to other task environments and objects of new domain</p> <p>[2] Research on Adaptive Machine Learning Technology Development for Intelligent Autonomous Digital Companion Supervision: Institute of Information & Communications Technology Planning & Evaluation (IITP) Role: Sub-team leader (2016-2019) & Memory-based developmental learning and continual learning for deep neural networks</p> <p>[3] Long-Term Memory Module based intelligent Operating Architecture Design Technology for Implementing Artificial Intelligence Supervision: Samsung Device Solutions (DS) Role: Project leader (2016-2018) & Design of long-term memory module for intelligent Operating Architecture (iOA)</p> <p>[4] Development of Robot Task Intelligence Technology that can Perform Task more than 80% in Inexperience Situation through Autonomous Knowledge Acquisition and Knowledge Application Supervision: Korea Evaluation Institute of Industrial Technology (KEIT) Role: Project leader (2017-2018) & Design of long-term memory which can do adaptive knowledge acquisition for task intelligence of the robot & General Manager of real robot experiments</p> <p>[5] Development of Container Carrier Shape Measurement System</p>	<p>2018 – 2019</p> <p>2016 – 2019</p> <p>2015 – 2019</p> <p>2014 – 2018</p> <p>2014</p>

- [6] Robust Unified Navigation Technology of Humanoid Robot 2014
Using Gaze Control, Posture Learning and Footstep Planning
Supervision: National Research Foundation of Korea (NRF)
Role: Sub-team leader (2014) & Development of the kid-sized humanoid robot (HanSaRam) & Design of the robust posture controller

JOURNAL
PAPERS

- [1] **G.-M. Park** and J.-H. Kim
“Adaptive Developmental Resonance Network”
IEEE Transactions on Neural Networks and Learning Systems (TNNLS),
Jul. 2019, under review. [SCI, IF 11.683]
- [2] **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),
May 2019, under review. [SCI, IF 11.683]
- [3] **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. 40, pp. 1278-1284, Apr. 2019. [SCI, IF 11.683]
- [4] **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. [SCI, IF 10.387]
- [5] 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 (IFAC), vol. 44, no. 1, pp. 9-18, Sep. 2017.
[SCI-E, IF 4.759]
- [6] 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.

CONFERENCE
PAPERS

- [1] Joonhyuk 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.

- [2] Dick 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.
- [3] 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**, Sanghyun 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.
- [5] **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.
- [6] **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.
- [7] **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.

ACADEMIC
SERVICES

Journal Reviewer

2016 – 2019

- IEEE Trans. on Industrial Electronics (IEEE TIE)
- IEEE Trans. on Cybernetics (TCYB)

HONORS & AWARDS	Excellence Award, KAIST 2018 Research Performance Evaluation System for Doctoral Student	2018
PATENTS	Korean Patent Registration (10-1529817) A light emitting diode containing a double-layered photonic crystal structure	06/2015
SKILLS	Languages Korean (native) English Programming Skills C, C++, Python (PyTorch, TensorFlow), MATLAB ROS, Webots, OrCAD, (PCB Solutions), Solidworks, Solid Edge (CAD)	
EXTRA ACTIVITIES	[Workshop] Developing Robots for Social Acceptance (DRSA) Role: Research presentations & Discussion of the research collaboration between KAIST and Aalborg Univ. in Denmark	11/2019
	[Reviewer] KAIST IP-CEO Program Role: Advisor & Reviewer to the presentations of explainable AI and cooperating robots.	07/2019
	[Presenter] Pangyo Future Forum “4 th Industrial Revolution and AI Korea” Role: Presenter in the poster session (topic: Convolutional Neural Network with Developmental Memory)	02/2019
	[Consultant] The Busan National Science Museum Role: Advisory committee & Comments to the inquiries about the installation of the intelligent receptionist robots in the BNSM lobby	04/2018
	[Media] EBS Docuprime “Educational Huge Revolution in the era of 4 th Industrial Revolution” Role: Interview as the KAIST robotics engineer & Demonstration of robot experiment Site: http://home.ebs.co.kr/docuprime/newReleaseView/345?c.page=1	09/2017
	Student Representative Robot Intelligence Technology Laboratory in KAIST	2017