

Research Labs for 2025 Summer DGIST Graduate School Research Internship for International Students

No.	Department	Lab	P.I.	Research Area	Web	AGIS
1	Physics and Chemistry	Semiconductor Quantum Photonics Lab	Chang-Hee Cho	<ul style="list-style-type: none"> Semiconductor Optics - Physics of Excitons and Polaritons - 2D/Perovskite Semiconductors Quantum Information Devices - Polaritonic Devices for Quantum Information Processing 	https://sites.google.com/view/dgistfsnlab/	O
2	Physics and Chemistry	Sustainable Chemistry Lab	SeongKyun Kim	<ul style="list-style-type: none"> Catalytic Chemistry - Biomass, Waste Polymer Conversion Catalysts Energy & Environmental Materials - Solar Desalination Materials - Atmospheric Water Harvesting Materials - Sustainable Materials from Biomass Conversion 	https://sites.google.com/view/suschemlabdgist/	O
3	Physics and Chemistry	Quantum Many-Body Theory Group	Aaram J Kim	<ul style="list-style-type: none"> Developing computational algorithms for strongly-correlated systems - Diagrammatic Monte Carlo method Dynamical mean-field Theory Emergent phenomena of strongly correlated systems - Model study of experimentally measurable response functions - Symmetry-breaking including superconductivity, magnetism, and so on 	https://sites.google.com/view/ajkdgist	O
4	Physics and Chemistry	Emerging materials science and multifunctional device Lab	CheolGi Kim	<ul style="list-style-type: none"> Spintronics Devices/Bio-NEMS & MEMS/Sensors Novel spintronics devices Innovative 3D field sensors Bio-NEMS/MEMS Bio-initiative magnetic devic 	https://nbest.dgist.ac.kr/	O
6	Electrical Engineering and Computer Science	Medical Acoustic Fusion Innovation Lab.	Jin Ho Chang	Medical Ultrasound Signal Processing and Systems Ultrasound-based Wireless Power Charging Deep learning for Medical Imaging	https://mafi.dgist.ac.kr/	O
7	Electrical Engineering and Computer Science	Multimodal Biomedical Imaging and System(MBIS) Lab	Jae Youn Hwang	Ultrasound Imaging, AI for Ultrasound Image Analysis, AI for Remote Sensing,	https://mbis.dgist.ac.kr/	O
8	Electrical Engineering and Computer Science	Quantum and Biomedical Optics Lab	Kijoon Lee	Biomedical Optics, focused on Diffuse Optics (Non-invasive blood flow measurement)	https://sites.google.com/view/qbolab	O
9	Electrical Engineering and Computer Science	Privacy and Applied Cryptography Lab.	Young-Sik Kim	Privacy-Preserving Machine Learning Post-Quantum Cryptography Quantum Information and Security Vehicular Security	https://sites.google.com/view/pacl/	O
10	Electrical Engineering and Computer Science	High Assurance Software Systems Lab	BaekGyu Kim	Autonomous Driving Software, Software Testing, Digital Twin, Cloud/Edge Computing	https://hass.dgist.ac.kr/	O
12	Robotics and Mechatronics Engineering	Nano Materials & Devices Lab	Hoe Joon Kim	<ul style="list-style-type: none"> Robotic Sensors & Systems Smart Manufacturing (3D Printing) Semiconductor Devices 	https://joonkim.dgist.ac.kr/	O
13	Robotics and Mechatronics Engineering	IBOM Lab	Cheol Song	<ul style="list-style-type: none"> Robotics Artificail Intelligence Biomedical Engineering 	https://sites.google.com/view/dgist-ibom/	O
14	Robotics and Mechatronics Engineering	Motion Control Lab	Sehoon Oh	Human Robot Interaction Control, Manipulator Control, Quadruped Robot Control, Novel Mechanism for Future Vehicle, Vehicle Control, Data-driven Control Design	https://sites.google.com/view/motion-control-lab/	O
15	Energy Science and Engineering	Advanced Energy Materials Lab	Sangaraju Shanmugam	Electrocatalysts for Green e-fuels (Hydrogen and Ammonia) ; Polymer membranes for Redox flow batteries; "PEM Fuel Cells	https://sangarajus.wixsit.e.com/shanmugam	O

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16	Energy Science and Engineering	Biophysics and Soft Matter Lab (BioSM)	Seungho Choe	1) Cell-Penetrating Peptides(CPPs) and Drug Delivery 2) Electrolytes for Li-ion Transport and Material Design	https://seunghochoe.netlify.app/	O
17	Energy Science and Engineering	Polymer and Organic Energy Materials Lab.	Chiyoung Park	Polymer recycling, Sustainable soft electronic materials, Polymer membranes for desalination, pollutant removal, Bioenergy for Nitrogen fixation & Hydrogen evolution, Bioadhesives	https://cplab2019.wixsite.com/cplab	O
19	Brain Sciences	Laboratory of Structural Learning and Neuromodulation	Jung Ho Hyun	- Demystifying cognitive flexibility at single cell resolution - Neuromodulatory role in structural learning using in vivo imaging and computational approach - Neural correlates of inference in rodents - Develop novel technology to label emotional state of the intact brain	http://hyunlab.org/	O
20	Brain Sciences	Neural Dynamics Lab	Kwang Lee	- Brain circuit - Brain modulation - Brain interface - Brain mapping - Brain mechatronics	https://kleelab.github.io/	O
21	New Biology	Lab of Cellular Precision and Plant Development	June M. Kwak	- Single-cell analysis - cell type-specific genetics -cell separation/signaling -Plant development	https://kwaklab.dgist.ac.kr/	O
22	New Biology	Brain-Immune Axis Lab	JaeHyung Koo	- Inflammation and Infection - Brain-Immune Crosstalk in AD/Cancer - Brain-Metabolic Control - Brain-Microbiota-Gut Interactions - Therapeutics via Metabolite/Receptor Interactions	https://jkoo001.dgist.ac.kr/	O
23	New Biology	Cellular stress response and Cancer genetics	Younghoon Kee	- DNA damage, repair, checkpoints - Cellular resistance to therapeutic drugs - Cellular response to oncogenic mutations	https://www.qiclaboratory.com/	O
24	New Biology	Laboratory for QBIO and Precision Medicine	Min-Sik Kim	- Clinical Proteogenomics and Precision Medicine - Mass spectrometry and Biomarker - PTM and Systems Biology	https://sites.google.com/view/bio-mass-spec/	O
25	New Biology	Molecular Epigenetics Lab	Yoori Kim	- Epigenetic protein purification and function - Genomic structure and human diseases - Single-molecule and cell imaging - Electric DNA chip biosensor	https://www.yk-laboratory.org/	O
26	New Biology	Ageing and immunity lab	Chang-Hoon Nam	- Research on immunological changes in the aging process - Research into the link between anti-ageing mechanisms, metabolic processes and Cellular rhythmicity - development of eco-friendly materials through bacteriophage modification - development of antimicrobial peptides	https://www.dgist.ac.kr/peopleProfsr/newbiology/sub02_01/view.do	O

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27	New Biology	Plant Molecular Communication Lab	Hye Ryun Woo	<ul style="list-style-type: none"> - Regulatory mechanisms of stress responses in plants - DNA damage repair-mediated plant senescence - Small peptide-mediated leaf senescence - Ferroptosis and plant senescence 	https://www.dgist.ac.kr/pro/peopleProfsr/newbiology/sub02_01/view.do	O
28	New Biology	Lab of Protein Homeostasis & Drug Discovery	Byung-Hoon Lee	<ul style="list-style-type: none"> - Ubiquitin-proteasome system (UPS) - PROTAC, Targeted protein degradation (TPD), Induced proteolysis for development of novel therapeutic strategies - Protein homeostasis for health - Discovery of novel drug targets in cancers, neurodegenerative diseases, aging, and proteopathies - Screening of deubiquitinase (DUB) inhibitors for drug discovery 	https://proteolysis.dgist.ac.kr/main/main.php	O
29	New Biology	Laboratory of Integrative Animal Ecology [Lab IAE]	Sang-im Lee	<ul style="list-style-type: none"> - Behavior and ecology of wild passerine birds - Functional ecology of coloration in birds and insects 	https://behecolpiotrsangim.org/	O
30	New Biology	Single-molecule Biophysics and Advanced Bioimaging Laboratory	Jong-Chan Lee	<ul style="list-style-type: none"> - Liquid-liquid phase separation - Single-molecule biophysics - Single-molecule RNA translation dynamics - Super-resolution optical microscopy 	https://sites.google.com/view/jcleelab/home	O
31	New Biology	Laboratory of Aging, Metabolism and Physiology	Jaemin Lee	<ul style="list-style-type: none"> - Investigation of cellular stresses and their associated molecular signaling - Identification of novel pathways modulating metabolism and metabolic disorders such as obesity and diabetes - Investigation of signaling events in key metabolic tissues such as the brain and pancreatic beta cells 	https://physiology.dgist.ac.kr/	O
32	New Biology	Biointerface Structure and Skin Laboratory	Chang-Hun Lee	<ul style="list-style-type: none"> - Structure & Function Relationship of Skin Proteins - Structure-Based Drug Design and Protein Engineering - Physiology of Skin Homeostasis and Diseases 	https://sites.google.com/view/dgistskinlab/	O
33	New Biology	Lab of Stem Cell Biology and Cancer Precision Medicine	Youngtae Jeong	<ul style="list-style-type: none"> - Stem cells and Regenerative Medicine - Organoids and Bioartificial Organ - Cancer Stem Cells - Targeted Therapy - Tumor Immunology 	https://www.stemcancerbio.com/	O
34	New Biology	Lab of stem cell engineering and therapy	Tae Wan, Kim	Stem Cells, Direct differentiation, Neurodevelopment and degeneration, Disease modeling, Cell replacment therapy	http://twkim.dgist.ac.kr	O