

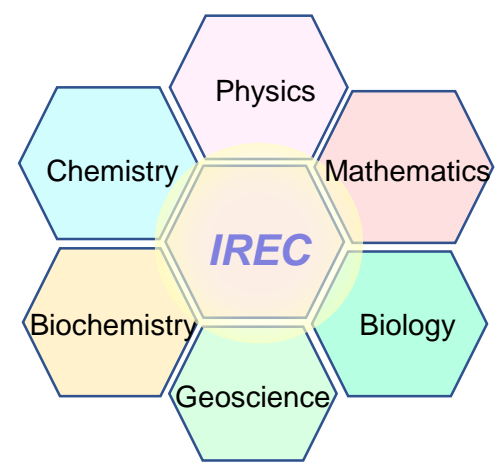
International Research and Education Center (*IREC*) Graduate School of Science OMU

The International Research and Education Center (*IREC*) of the Graduate School of Science at Osaka Metropolitan University was launched in April 2024. *IREC* aims to promote the internationalization of research and education in science.

IREC mainly consists of full-time faculty members and research visiting professors. *IREC* full-time faculty members conduct independent research as well as collaborative one with scientists from overseas and domestic institutions. Graduate and undergraduate students can conduct research under the guidance of *IREC* full-time faculty members. *IREC* research visiting professors collaborate with faculty members of the Graduate School of Science to further develop research and education in science at OMU. Members of *IREC* provide classes and seminars in English.

IREC steering committee oversees the following activities:

1. Projects related to the employment of full-time faculty members, aimed at the internationalization of research and education.
2. Projects related to the short-term invitation of Research Visiting Professors, aimed at the internationalization of research and education.
3. Projects related to the development of curricula aimed at internationalization.
4. Projects related to academic exchange, such as international conferences, lectures, and symposiums.
5. Other projects necessary to achieve the objectives stated in the previous articles.



International Research and Education Center (*IREC*)
Graduate School of Science
OMU

Full-time Faculty members

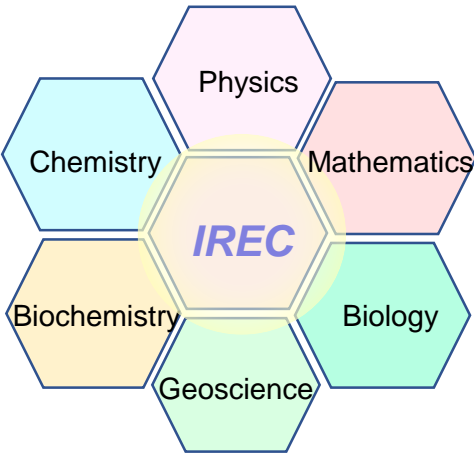
Currently International Open Recruitment

[About](#)

[Full-time faculty members](#)

[Research Visiting Professors](#)

[Management Board](#)

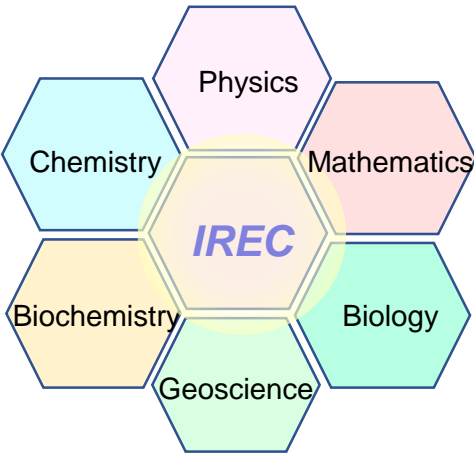


International Research and Education Center (*IREC*)
 Graduate School of Science
 OMU

Research Visiting Professors (2024)

List of Research Visiting Professors 2024

| Month | Name | Affiliation | Research Topic |
|-------|-----------------------------|---|--|
| April | Igor Alabugin | (Florida State University, USA) | Development of New Ways to Control Molecular Structure and Chemical Reactivity |
| | Francesco Toppan | (Centro Brasileiro de Pesquisas Físicas, Brazil) | Algebraic Structures in Field Theory |
| | Vinayaraj POLIYAPRAM | (Rakuten Group Inc, Japan) | GeoAI, Machine Learning |
| May | Jean-Pascal SUTTER | (CNRS, France) | Development of Multifunctional Molecular Magnets |
| | Narasimhan Gautam | (Washington University in St. Louis, USA) | Subcellular Optogenetics, Imaging of Cell Behavior and Intracellular Protein Movement |
| | Ai Shinobu | (Osaka University, Japan) | Protein-protein Interactions for Building a Refinement Scheme for Protein-protein Docking Using MD Simulations |
| | Nayuta-Yakushiji Kaminatsui | (RIKEN, Japan) | Epigenetic Gene Expression Regulation Mechanism during Development |
| | Jeremy C. Smith | (University of Tennessee/ Oak Ridge National Laboratory, USA) | Computational Science Field; Molecular Dynamics Simulation of Biomolecules |
| June | In-Jee Jeong | (Seoul) National University, Republic of Korea) | Fluid Dynamics |
| | Ganesan Mani | (Indian Institute of Technology Kharagpur, India) | Pyrrole-based pincer ligands supporting Iron carbonyl metal complexes for catalytic studies |
| | Tran Van Anh | (Ha Noi University of Mining and Geology, Viet Nam) | Remote Sensing, SAR Interferometry |



International Research and Education Center (IREC) Graduate School of Science OMU

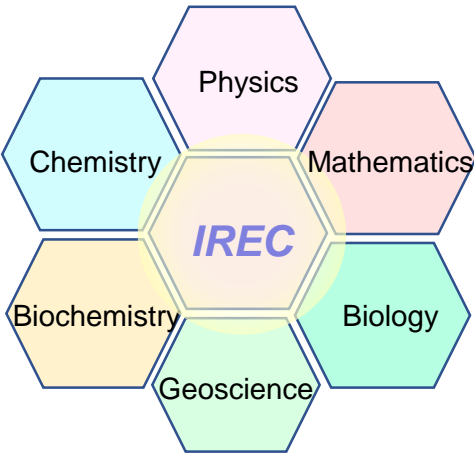
| | | | |
|--------------|-----------------------|---|---|
| July | Bo Zhou | (Fudan University, China) | Nuclear cluster structure, Bose-Einstein condensation in nuclear systems |
| | Onno Muller | (Forschungszentrum Jülich GmbH, Netherlands) | Research about environmental response of photosynthesis using field phenotyping |
| | Vago Riccardo | (University Vita-Salute San Raffaele/ Urological Research Institute, Italy) | Protein science: Toxic proteins; extracellular vesicles (Exomes); drug delivery system |
| | Christopher Switzer | (University of Leicester, UK) | Biological Activity of Supersulfur Molecules |
| | Ines Neundorf | (University of Cologne, Germany) | Peptide Science: Membrane Permeable Peptides and DDS, Antibacterial Peptides |
| | Sittichai Choosumrong | (Naresuan University, Thailand) | Spatial Database Management |
| October | Bernard Leclerc | (Université de Caen, France) | Representation Theory of Quantum Group |
| | Javier Campo | (University of Zaragoza/ Spanish National Research Council, Spain) | Neutron Scattering and Magnetic Structural Study |
| | Chih-Horng Kuo | (Academia Sinica, Taiwan) | Evolutionary and Functional Genomics of Symbiotic Bacteria |
| | Agung Harijoko | (Gadjah Mada University, Indonesia) | Volcanological Study for Geothermal Exploration, Eruption History for Hazard Mitigation |
| | Redouan Bshary | (University of Neuchâtel, Switzerland) | Evolutionary Ecology of Society, Behavior, and Cognition of Fish |
| November | Roberto Passante | (University of Palermo, Italy) | Theory of Casimir effect, Application to Optomechanical Technology |
| | Bernie Kraatz | (University of Toronto Scarborough, Canada) | Self-assembled Multifunctional and Smart Materials, and Aerogel Materials for Electrochemical CO ₂ Reduction |
| | Tian Xingjun | (Nanjing University, China) | Decomposition of Plant Litter and Pollutants, Ecological Restoration of Vegetation and Water Environments |
| December | Vitaly Moroz | (Swansea University, UK) | Partial Differential Equations in Mathematical Physics |
| January 2025 | Yohsuke Imagi | (ShanghaiTech University, China) | Symplectic Geometry, Geometric Analysis, Special Lagrangians |
| | Masaki Horie | (National Tsing Hua University, Taiwan) | Development of Supramolecular Nanomachines for Next-Generation Photothermal Energy Conversion Systems |

[About](#)

[Full-time faculty members](#)

[Research Visiting Professors](#)

[Management Board](#)



International Research and Education Center (*IREC*)
 Graduate School of Science
 OMU

Steering Committee

| | | |
|-----------------|--|----------------|
| Director | Hiroyuki Matsuzaka | (Chemistry) |
| Deputy Director | Masatoshi Kozaki | (Chemistry) |
| Members | Full-time faculty members (Seeking applicants) | |
| | Hyoue Miyachi | (Mathematics) |
| | Masato Okado | (Mathematics) |
| | Yoshiki Kubota | (Physics) |
| | Takayuki Suzuki | (Biology) |
| | Akira Ito | (Biology) |
| | Venkatesh Ragahavan | (Geoscience) |
| | Takaya Satoh | (Biochemistry) |