Saitama University 埼玉大学

NEWS LETTER

Energy System Information Technology Innovation

Saitama University
Graduate School of Science & Engineering

Vol. 5
June 2026

Energy System – Information Technology Innovation
International Professional Program

Greetings from ESITI International Professional Program!
The academic year 2026 has begun, and we are excited to start this new chapter together. We look forward to a year filled with learning, growth, and new opportunities.
As in the previous academic year, ESITI Program has welcomed outstanding new students from various countries in the field of Electrical & Electronics Engineering, Computer Science, and Mechanical Engineering.
In this edition of our newsletter, we are pleased to introduce some of these students and offer you a glimpse into our recent activities.

News & Events

Prefectural Institution 'SAITEC' Visit

On 30th January 2026, 10 International students of ESITI Program visited SAITEC (Saitama Industrial Technology Center) accompanied by Professor Shimamura, the Head of the program.

SAITEC is a public research organization for industries administrated by Saitama Prefecture which was established in 2003 to promote the development of small and medium sized enterprises (SMEs) through industrial technology and contribute the quality of life in Saitama.

After the lecture by the staff members of SAITEC, we have visited some facilities such as 3D Printer & Scanner, Large X-ray CT system, Climate Testing Chamber and Anechoic Chamber. The students were very interested and actively asked questions to the staff.
It was also a greater honor to have had the opportunity to greet Professor Emeritus Hajime Shirai, the founder of ESITI Program and now is continuing his research at SAITEC.

Saitama Industrial Technology Center (SAITEC)
3-12-18 Kami-aoki, Kawaguchi, Saitama
https://www.pref.saitama.lg.jp/saitec/

New Leadership of Saitama University

We're pleased to share the appointment of our new university leadership, beginning in the 2026 academic year.

Professor Takafumi SHIGEHARA has been appointed as President of the University, and **Professor Makoto TASHIRO** has been appointed as Dean of the Graduate School of Science and Engineering.

Their leadership brings great promise for the future growth of our university.

MESSAGE from Alumni

Dr. Sherjeel Mahmood Baig (Pakistan)

Graduated: Hydrogen Production Laboratory, NIMS Tsukuba
(Supervisor: Professor Hideki Abe) in 2025

Thesis Title: "*Materializing quasi-2D thin films via nano-phase separation for electronic applications*"

Current Position: Post-doctoral researcher at Institute of Science Tokyo

Research Summary:

My research focused on the fabrication of electrically interconnected platinum nanonetworks for electronic applications. During my Ph.D., I developed ultra-fine metallic nanostructures with sub-50 nm precision for use in sensors and flexible electronic devices.

I conducted my Ph.D. research at National Institute for Materials Science in collaboration with Saitama University. The professors, researchers, and staff members at both institutions were extremely supportive, cooperative, and encouraging throughout my research journey. Their guidance and the advanced research environment greatly helped me strengthen my skills in nanotechnology, materials science, and flexible electronics while collaborating with international researchers.

Impression of SU and Japan:

Studying and conducting research in Japan has been one of the most meaningful experiences of my life. I feel truly fortunate to have completed my Ph.D. research at National Institute for Materials Science in collaboration with Saitama University. The research environment in Japan is highly professional, innovative, and supportive. My supervisors, professors, and laboratory colleagues were always encouraging and helpful throughout my academic journey. Japan is an incredibly safe, clean, and well-organized country. One of the things I admire most is the discipline of society and the kindness and respect shown by people in daily life. The peaceful environment and excellent public facilities make it a very comfortable place for international students and researchers. Living in Japan also allowed me to experience its rich culture, beautiful seasons, advanced technology, and traditional values. One of my happiest memories was that my family also had the opportunity to stay in Japan during my Ph.D. journey. They truly enjoyed their stay and were deeply impressed by the safety, cleanliness, hospitality, and warm behavior of Japanese people. Their positive experience made my time in Japan even more memorable and special. My experience in Japan not only strengthened my academic career but also broadened my cultural understanding and personal growth. I will always remain grateful for the opportunities and memories I gained during my stay in Japan.

Advice for Juniors and Future students:

Be confident, work hard, and make full use of the excellent research opportunities available at Saitama University and in Japan. Do not hesitate to communicate with your professors and laboratory members, as they are very supportive and cooperative. Along with academics, enjoy Japanese culture, traditions, and daily life. Your time in Japan will not only strengthen your career but also become one of the most memorable experiences of your life.

VOICES from ESITI Students

WAHYU HAYATULLAH （Indonesia）

Laboratory: Fluid Dynamics Lab, Mechanical Engineering Department
since October 2025

Supervisor: Dr. Kang Donghyuk, Dr. Akihito Kiyama

Research Summary:

My doctoral research focuses on a phenomenon called "bursting on the top", a small explosion that occurs when a bubble ruptures at a free surface and generates aerosols. This process is relevant to daily life, such as oil splashing during cooking, where fine droplets may become airborne and affect respiratory health. I investigate this using a controlled spark bubble system, where bubbles are generated via electrical discharge between submerged electrodes. I also incorporate acoustic analysis to characterize frequency signatures during bubble dynamics. High-speed imaging enables quantitative analysis of thin film rupture, surface deformation, and aerosol formation under controlled, repeatable conditions.

The impression of Saitama University and Japan:

My decision to pursue a doctoral degree at Saitama University stems from my strong interest in fluid dynamics, particularly flow visualization using high-speed cameras. Since my master's study, I have focused on fluid flow phenomena, despite limited access to such equipment. These constraints made me realize the importance of visualization in understanding fast and complex phenomena. Learning that Photron is based in Japan further strengthened my motivation. I then sought universities with strong research in experimental fluid dynamics, including two-phase flow and turbomachinery, and Saitama University proved to be the best fit. Moreover, the supportive supervisor and collaborative lab environment make it an ideal place for my academic growth.

THONN HOMSNIT (Thailand)
Laboratory: Dr. Tomohisa Kojima's Lab
Mechanical Engineering Department since October 2025

Research Summary:
My research field is Mechanical Engineering, focusing on the intersection of solid mechanics and applied artificial intelligence. Under the supervision of Professor Tomohisa Kojima, my work investigates the application of Physics-Informed Neural Networks (PINNs). Specifically, I focus on the diagnosis, stability, and robust formulations of PINNs for thin structural elements for high-performance metastructure design. My goal is to integrate machine learning with continuum mechanics to enhance computational analysis and engineering design.

The impression of Saitama University and Japan:
Saitama University provides a great atmosphere that makes it very easy to live and study. The cost of living is affordable, yet the campus remains conveniently close to Tokyo. This peaceful environment allows me to fully concentrate on my research. One of the standout advantages here is the exceptional, empathetic support system for international students. The staff and student tutor are incredibly helpful, especially with Japanese paperwork. Saitama University staff provides a clear, well-organized, step-by-step system. Moreover, living in Japan has been an amazing experience, highlighted by its beautiful culture and exceptionally safe community.

WEERASEKARA MUDIYANSELAGE CHIRANTHA JANANATH THIANKA KITHULWATTA (Sri Lanka)
Laboratory: Dr. Kohei Watabe's Lab
Computer Science Department since October 2025

Research Summary: Over the past decade, I have maintained a dual focus on academia and industry, orienting my research toward integrated solutions rather than traditional, isolated computing silos. For my PhD, I am merging Docker, Cloud Computing, Systems Administration, and Artificial Intelligence to develop blended, innovative frameworks that address complex challenges within both the computing domain and modern industry.

The impression of Saitama University and Japan:
Saitama University stands out as a premier institution for interdisciplinary research, particularly through the ComNet Lab, which fosters a unique synergy between advanced networking and intelligent systems. My decision was driven by the university's commitment to "Multicultural Co-learning" and its strategic location within the Greater Tokyo Area, providing a perfect bridge between rigorous academic inquiry and Japan's cutting-edge industrial landscape.
Japan offers an unparalleled environment for a researcher in System Administration and AI, balancing a deep respect for technological heritage with a relentless drive toward Society 5.0. The Japanese philosophy of precision and "Monozukuri" aligns with my goal of developing resilient, high-performance Docker environments. This cultural emphasis on harmony and innovation makes it the ideal setting to explore how LLMs can enhance complex human-machine infrastructures.

NIZAMI SULMAN (Pakistan)
Laboratory: Communication Network Lab
Computer Science Department since October 2025
Supervisor: Dr. Kohei Watabe

Research Summary: My research focuses on **Artificial Intelligence in Cybersecurity**, particularly on generating adversarial network traffic to evaluate and improve the robustness of Network Intrusion Detection Systems (NIDS). I am currently working on diffusion-based approaches for realistic traffic generation, aiming to simulate advanced cyber-attacks that can bypass traditional detection mechanisms. The objective of this research is to enhance the security and reliability of modern networks by developing intelligent testing frameworks. Through this research, I aim to contribute to the advancement of secure communication systems and provide practical solutions for real-world cybersecurity challenges.

The impression of Saitama University and Japan:
I chose Saitama University because of its strong reputation in research and its focus on innovation in communication networks and Artificial Intelligence. The Communication Networks Laboratory (ComNets Lab.) particularly attracted me due to its interdisciplinary research approach, combining network technology, security, and generative AI to address real-world challenges. Under the supervision of Professor Kohei Watabe, I have the opportunity to explore advanced research topics and develop practical solutions.
Living in Japan has been a valuable experience. Its discipline, safety, and technological advancement provide an ideal environment for study and personal growth. I believe this experience will shape my future career in cybersecurity and research.

Special Feature *-Snapshots of International Student Life-*

Life At the Japan under the MEXT Scholarship with the ESITI Program in the Saitama University.

by W.M.C.J.T. Kithulwatta, Computer Science Department

As a native Sri Lankan with international experience in the IT industry and the university academia in Sweden, United Kingdom and Sri Lanka: I got the opportunity to be in the Japan for pursuing my Doctoral Studies in Computer Science attached to the Saitama University. To enter the Saitama University: I was fully funded by the Japanese Government via the MEXT (Ministry of Education, Culture, Sports, Science and Technology) Scholarship program attached to the International Graduate Program on Energy System - Information Technology Innovation, Graduate School of Science and Engineering, Saitama University.

In my life in Japan, so far, I have got exponential experience over the education, science and general lifestyle. Japan maintains a resilient and globally influential economy that serves as a cornerstone of international trade and industrial stability. The nation continues to lead the world in scientific research, consistently producing breakthroughs that address complex global challenges. Furthermore, its cutting-edge technological sector remains a global powerhouse, pioneering innovations in robotics and high-tech manufacturing that define the modern era. I was blessed to be at the Saitama: The Saitama Prefecture is a distinct administrative region north of Tokyo Metropolis, it is a core part of the world's most populous metropolitan area.

Blood Donation Stepping into a Japan Red Cross mobile donation center took only a small amount of time but had a meaningful impact. Amid the busy city, I joined others committed to supporting healthcare. The smooth process, from screening to donating 400mL of blood, reminded me that this simple act can provide a vital lifeline when someone is in need.

Visit to the TEPCO Decommissioning Archive Center Visiting the TEPCO Decommissioning Archive Center in Tomioka is a sobering but essential way to understand the 2011 nuclear accident. Once a museum celebrating nuclear energy, it now serves as a place of reflection and education. Immersive exhibits detail the disaster and the challenges faced by workers, while also presenting the long-term decommissioning roadmap and advanced technologies guiding Fukushima's recovery and the future of the Hamadori region.

Visit to Great East Japan Earthquake and Nuclear Disaster Memorial Museum Located in Futaba, the Great East Japan Earthquake and Nuclear Disaster Memorial Museum acts as a living archive connecting the tragedies of March 2011 with a resilient future. Through a six-phase narrative, it traces life before the disaster, the evacuation, and ongoing recovery efforts. Powerful oral histories from local residents add a human perspective, while the exhibits confront difficult questions about preparedness and long-term evacuation, turning Fukushima's experience into a global lesson in perseverance.

The Kadokawa Musashino Museum Rising from the Saitama landscape, the Kadokawa Musashino Museum, designed by Kengo Kuma, blends striking architecture with cultural innovation. Its granite exterior shelters a labyrinthine hub where art, literature, and pop culture meet. Highlights include the Bookshelf Theater, where towering shelves and projection mapping animate 30,000 books, and Edit Town, a reimagined library space that invites exploration, celebrating curiosity and imagination.

Trying to YUKATA Slipping into a yukata is more than a costume change—it is an entry into Japanese summer culture. Made of lightweight fabric, it is designed for festivals and onsen towns, with dressing itself becoming a meaningful ritual. Wearing a yukata with geta slows your pace and connects past and present, offering a sensory way to participate in a living tradition that celebrates seasonality and shared joy.

The ESITI Program is an English-medium, three-year doctoral program at the Graduate School of Science and Engineering, Saitama University, offering advanced study in Computer Science, Electrical and Electronic Systems, and Mechanical Engineering. The program is supported by the MEXT Japanese Government Scholarship (University Recommendation).

Application Deadlines for 2027 intake

- under MEXT Scholarship (University Recommendation)

  November 30, 2026

- Privately-funded students

  April 2027 intake - **October 31, 2026**

  October 2027 intake – **April 15, 2027**

Please check our website for details.
https://park.saitama-u.ac.jp/~rese/

CONTACT ADDRESS:
ESITI-FSO Office
Graduate School of Science & Engineering
Saitama University
255 Shimo-Okubo, Saitama-city
Saitama, Japan 338-8570
Email: rese@gr.saitama-u.ac.jp