# List of TTI Laboratories Accepting Research Intern Students in Academic Year 2026 as of October 30

| | Laboratory | Supervisor(s) **Main supervisor in bold** | Intern Student's Academic Year at the start of internship *1 | | | Duration of Internship(days) | | | Internship Months (for academic year 2026) | | | | | | | | | | Research Overview: | Requirements for Intern Students : |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B4 | M | D | 30-60 | 61-90 | 91 or longer | Jun 2026 | Jul | Aug *2 | Sep | Oct | Nov | Dec *2 | Jan 2027 | Feb | Mar | | |
| A | **Laser Science** | **Prof. Takao FUJI** Assoc. Prof. Tetsuhiro KUDO | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ➢ Development of ultrafast lasers for infrared imaging and multi-photon microscopy<br>➢ Optical manipulation and trapping of nanoparticles and molecules by mid-infrared lasers | ➢ Basic knowledge of optics<br>➢ Basic knowledge of computer programming<br>➢ Basic knowledge of fundamental mathematics (calculus, algebra, etc.) |
| B | **Advanced Semiconductor Devices** | **Prof. Toshi NUMATA** | ● | ● | ● | ● | ● | N/A | ● | ● | ● | ● | ● | ● | ● | N/A | N/A | ● | ➢ provide hands-on technical support for the fabrication of electronic devices (e.g., MOS capacitors) in a cleanroom environment;<br>➢ conduct electrical characterization and process testing to evaluate device performance and quality.<br>➢ We welcome applications from students majoring in Electrical Engineering and Applied Physics or related fields. | ➢ A fundamental knowledge of quantum mechanics and solid-state physics is appreciated, but not necessary. |
| C | **Information and Communicatio-ns** | **Prof. Yojiro MORI** | N/A | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ➢ Optical communication system design (transmission, modulation/demodulation, coding)<br>➢ Digital signal processing for communication (filtering, equalization, error correction)<br>➢ Fundamentals of optical and electronic devices (lasers, modulators, detectors)<br>➢ Optical fiber transmission experiments | ➢ Basic knowledge of mathematics and physics<br>➢ Programming experience is desirable |
| D | **Intelligent Information Media** | **Prof. Norimichi UKITA** | N/A | ● | ● | N/A | N/A | ● *3 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ➢ Research topics: image processing, image synthesis, image recognition, computer vision, robotics (robot arm manipulation)<br>➢ Research discussion, coding, experiments, and research paper writing | ➢ Programming (Python) –Advanced level<br>➢ Advanced knowledge of machine learning |
| E | **Mechanical Material Engineering** | **Assoc. Prof. Takuma SHIGA** | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | N/A | N/A | N/A | ➢ We aim to develop advanced thermal management technologies through materials modeling and characterization from the perspective of mechanical engineering. The intern will be engaged in research activities focusing on computational modeling of nano- and micro-scale thermal transport using electronic and atomic simulations. Through this work, the student will gain both theoretical understanding and practical research experience in the field of thermal transport and materials science. | ➢ [Required] Fundamental knowledge of solid-state physics and related subjects (quantum mechanics, statistical physics, thermodynamics, etc).<br>➢ [Preferred] Prior experience or coursework in these fields. Basic programming skills (Python, C, MATLAB, etc) |
| F | **Surface Science** | **Prof. Masamichi YOSHIMURA** Dr. Kanishka De Silva | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ➢ Growth and characterization of 2D nanomaterials such as graphene and transition metal dichalcogenides (TMDs), and their heterostructures for device applications<br>➢ Fabrication of transparent conductive films using carbon nanomaterials such as graphene oxide (GO)<br>➢ Nanoscale observation of nanomaterials using scanning probe microscopy (SPM) techniques (STM and AFM)<br>➢ Reformation of cantilevers for Tip-enhanced Raman spectroscopy (TERS) by focused ion beam (FIB)<br>➢ Fabrication of polymer composite membranes of sulfonated PVDF, and evaluation of their performance and mechanical properties as polymer electrolyte membranes (PEM) in fuel cells<br>➢ Fabrication of porous graphene aerogels and graphene filtration membranes for water remediation applications<br>➢ Synthesis of carbon-based non-noble metal catalysts as electrocatalysts in ORR and HER applications | ➢ Fundamental knowledge of physics and chemistry |

*1 B4: Undergraduate students in their fourth (final) year, M: Master's students, D: Doctoral (PhD) students

*2 No research activities/supervision provided during 10-day summer holidays in August (2nd and 3rd weeks of August) - , and 2-week winter holidays (from the last week of December to 1st week of January). Starting internship right before the holidays is not recommended.

*3 An internship period of 180 days or more is preferable, while a shorter period can be accepted subject to an interview.
TTI scholarship applies for the first 90 days spent for internship activities at TTI. From the 91st day, the laboratory may provide the scholarship.
Applicants for the internship longer than 90 days are required to meet higher standards in the selection criteria.

TTI **Website**

TTI **Laboratories**