北陸先端科学技術大学院大学研究室教育指針
Laboratory Education Guideline

研究室教育指針は、学則第３０条の３に基づき、研究指導の方法及び内容並びに修了までの研究指導の計画をあらかじめ明示するものです。
Based on the Article 30-3 of the general academic rules, the Laboratory Education Guideline is intended to clearly outline the methods and content of research guidance, as well as the plan for research guidance until completion.

氏名 / name： DO, Minh Canh　　役職 / official position： Senior Lecturer

1. 研究テーマ / Research Theme
Formal methods, quantum computing, formal specification, model checking, theorem proving, quantum computation, quantum information
2. 修得が期待される能力 / Competencies expected to be acquired 研究室教育は必修 A 科目（先端）又は研究支援科目（融合）の一部として単位化されており、この欄はそれら科目のシラバス上の達成目標の一部となります。 Laboratory Education is accredited as a part of the Required courses A (Division of Advanced Science and Technology) or Research Support Courses (Division of Transdisciplinary Sciences), and this section constitutes a part of the course goals stated in the syllabus for such subjects.
In our laboratory, students will learn how to formalize quantum systems as state machines; how to specify state machines in a formal specification language, such as Maude or CafeOBJ; and how to formally verify that state machines enjoy desired properties using model checking and/or theorem proving techniques. Through these research activities, students are expected to become independent researchers with a solid theoretical foundation, advanced practical skills, and a passion for advancing both conventional and quantum technologies in ways that benefit society.
3. 研究指導方針 / Research Guiding Principle
Our vision is to foster students into independent researchers with a solid theoretical foundation and advanced practical skills, enabling them to tackle challenging problems with societal impact. Initially, students are encouraged to strengthen their fundamentals through coursework. They are then guided to engage in research activities and contribute to research projects. We provide dedicated guidance in our areas of expertise, connect students with leading researchers, and hold weekly lab seminars.
4. 研究室活動の内容及び方法 / Content and Methods of Laboratory Activities
□日次活動 / Daily Activities： □週次活動 / Weekly Activities： Lab seminars or progress report meetings (once per week) □月次活動 / Monthly Activities： □不定期活動 / Occasional Activities： collaborative research, research presentations, interships
5. 年間スケジュール / Annual Schedule 本学の全学共通の年間スケジュールは「履修案内」の「学位取得に至るスケジュール」を参照してください。(本学HP 参照：ホーム＞教育＞履修関係＞履修案内) Please refer to the “Degree conferment schedule for the master’s program/doctoral program” in the “Degree Completion Guide” for university-wide common schedule (JAIST website: Home >Education>Taking Courses>Degree Completion Guide)

This schedule outlines the key academic and research activities expected of all graduate students in the laboratory.

1. Laboratory Orientation for New Students
   Held at the beginning of April and October for students enrolling in those respective months. The orientation provides an overview of laboratory policies, research directions, expectations, and available resources.
2. Laboratory Retreat
   A Spring BBQ is organized at Ishikawa Science Park in April. This event aims to strengthen collaboration and communication among laboratory members in an informal setting.
3. Research Presentation
   Requirement:
   - Master's students must present at least one conference paper before completing their program.

   Students are encouraged to submit and present their research at international conferences, such as: SEKE, APSEC, DSA, SFPVV, ICTAC, COMPSAC, FASSE, WRLA, ICFEM, FM, TACAS, and CAV.
4. Journal Paper Preparation
   Recommendation:
   - Master's students are strongly encouraged to prepare one journal paper before completion.

   Potential target journals include: IEEE Access, PeerJ Computer Science, The Computer Journal, JLAMP, JSS, IEEE TDSC, IEEE TSE, and ACM TOSEM.