

Division of Frontier Engineering	Research field	Nanoscale Measurement Technologies	Lab. ID FE15
Laboratory web site	http://fukuma.w3.kanazawa-u.ac.jp/		
Research subjects			
We are working on the instrumentation of atomic force microscopy (AFM) and its application to various academic and industrial studies. In AFM, a sharp probe is scanned over a surface to image atomic-scale or nanoscale surface structures and properties of materials. In 2005, Prof. Fukuma enabled the operation of frequency modulation AFM (FM-AFM) in liquid with true atomic resolution for the first time in the world. Based on this achievement, we are working on the instrumentation and applications of the world-leading scanning probe microscopy techniques.			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
Through research activities, students are expected to learn interesting and exciting aspects of research as well as to acquire the ability to solve unexperienced problems by themselves. To this end, we provide opportunities to have discussions with your supervisor. All the students have a 5-10 min meeting with your supervisor twice per week in the morning. We also have a weekly meeting for each subgroup consisting of 3-5 members. In addition, we have a monthly meeting, where all the students give a research progress report or a presentation on a research article.			
Daily life in the laboratory, etc.			
All the members are supposed to come to the lab. by 9:00 AM but they can freely decide when they go home. This is for helping students to have a healthy life cycle and for facilitating communication among the members. Beside the research meetings described above, we have an individual monthly meeting to discuss personal issues (Professor). In our lab., there are many researchers and students from different fields and countries, which helps us to improve our global communication skills, and active collaborations with private companies provide valuable opportunities to directly communicate with researchers in those companies (M1). Each student will not only be provided with a desk and a high performance PC separated by partitions, but also have access to meeting rooms and a stylish lounge in the newly constructed building, where they can concentrate on their research activities			
Message or comments by the laboratory faculty staffs			
After obtaining a master's degree, one student per 1-2 years goes to a doctoral course. The students typically find a job in a company related to electrics, computer science, chemistry and mechanics. Nanoscale measurement technology is an interdisciplinary research area and hence related to almost all academic fields including physics, engineering, chemistry and biology. Thus, the professional career of the students has a significant diversity. In our lab., we collaborate with many industrial companies. Thus, some students find a job in one of these companies.			
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