

Division of Frontier Engineering	Research field	Bio-Innovative Design	Lab. ID
			FE06
Laboratory web site	http://bios.w3.kanazawa-u.ac.jp/engineering/		
Research subjects			
Biomechanics of human body for medical treatment, welfare and health technology by using CAE (Computer Aided Engineering) are studied in this study group. Furthermore, biomechanics of animal and plant for considering mechanical adaptation of nature and "Bionic Design" (bio-inspired design) to apply engineering design are studied. We analyze mechanical stress and strain condition on the inside of human body to approach clinical problem involved biomechanics by using CAE such as finite-element method and simulation procedure of musculoskeletal system. We also analyze stress and deformation of animal and plant, which have special structure, tissue and function, to get inspiration for mechanical engineering design.			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
Graduate students have a seminar about biomechanics and bionic design by all the members as well as standard tuition. In the seminar, students give presentation about current results of own research subject, or review related papers, and have a free discussion with exchanging their ideas. All of the presentation, review and discussion is held by English.			
Daily life in the laboratory, etc.			
We study collaborating with the nursing laboratory and the orthopedic laboratory of medical science school, so students have chance to interchange with researchers of the different fields. There are unusual materials and equipment in the laboratory as the mechanical engineering, such as a hospital bed, dummy models of human body, skeletal preparations, etc.			
Message or comments by the laboratory faculty staffs			
We think "learning by yourself" is a basis for graduate student's research. Graduate students should work on their research subjects while deepening the understanding by their pace. A different field exchange can make new idea and technology, therefore discussion between the students who work on a different subject is important to rise their knowledge and capacity.			
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