

Division of Mechanical Science and Engineering	Research field	Material Processing	Lab. ID MS18
Laboratory web site	http://zkks.w3.kanazawa-u.ac.jp/index.html		
Research subjects			
<p>Research field is divided into material processing and medical instrument. In the field of material processing, press forming of thermoplastic carbon fiber composite is current subject. Our purpose is to develop press forming technology using thermoplastic carbon fiber composite sheet and make clear its process mechanism. In the field of medical instrument, development of neurosurgery robot is one subject. Another subject is development of photo dynamic diagnose and photo dynamic therapy using confocal microscope.</p>			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
<p>Master course student is requested to achieve performance to plan research schedule, develop equipments, perform experiments, summaries and investigate the results. We have regular meeting to discuss how these things are proceeding. Doctor course student must achieve the performance to find research subject and elucidate the significance of the research result and write research paper.</p>			
Daily life in the laboratory, etc.			
<p>Communication among students is important as well as the communication with professor. Welcome party and various kind of party in the laboratory is important time for mutual understanding.</p>			
Message or comments by the laboratory faculty staffs			
<p>Please survey by yourself on the interested things, make an effort to create your original idea and investigate by yourself on the obtained experimental data. Please ask your surrounding students on anything what you don't know. Through these activities you can get many knowledge and skills for promoting the research.</p>			
Recent Master theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.3	Tumor discrimination using force feedback system in brain tumor removal manipulator		
2017.3	Development of force sensible silicon retractor for attachment to surgical suction pipes		
2016.3	Discrimination of brain tumor and investigation on micro fluorescence phenomenon using confocal microscope		
2016.3	Press Forming of CFRTP sheet		
2016.3	Development of bipolar coagulation forceps which has bending mechanism at tip		
2015.3	Distinction of brain tumor and observation of micro photo luminescence using confocal microscope		
2015.3	Joining of thermoplastic carbon fiber composites		
2015.3	Deformation and strength in the press forming of thermoplastic carbon fiber composites		
2014.3	Acceleration of cooling in injection molding using laser sintered metal sprue bush		
2014.3	Back pressure forging		
2014.3	Development of brain tumor removal manipulator with force sensor		
2013.9	Measurement of luminescence intensity and distinction of brain tumor using confocal microscope		
2013.3	Press forming using thermoplastic carbon fiber composites sheet		
2013.3	Research on the ski turn of the skiing robot		
2013.3	Development of surgery manipulator for removing brain tumor		
Recent Doctoral theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.3	Press forming for carbon fiber reinforced thermoplastics		
2015.3	Back pressure forging using mechanical servo press		
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