

Division of Mechanical Science and Engineering	Research field	Strength Design	Lab. ID
			MS11
Laboratory web site	<a href="http://ads.w3.kanazawa-u.ac.jp/index.html">http://ads.w3.kanazawa-u.ac.jp/index.html</a>		
Research subjects			
<p>We are researching, developing, and designing materials and structures having adequate function for various aims from viewpoints of linkages of material mechanics and materials engineering by experimental, theoretical and numerical analyses. Currently, we are developing; novel impact absorbers based on the time or strain dependency on mechanical properties of polymer materials, CFRP (carbon fiber reinforced plastics) having high impact resistance or high damping, etc.. By collaboration with Prof. Tachiya and Dr. Kozuka in Advanced Design Research Group, we are conducting research for practical use of those materials in the field of not only mechanical industry but also sports and medical welfare.</p>			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
<p>In our laboratory, research activities are carried out by groups composing of graduate and undergraduate students. We let graduate students make their research plans and lead the undergraduate students to gain an ability as a group leader. Students in our group can learn solid mechanics (mechanics of materials, impact engineering and viscoelasticity, etc.) and usage of 3D CAD or FEM software for mastering basic skills and knowledge as a researcher or engineer. Students must give a presentation in our laboratory every six months and attend seminar in each research group every week.</p>			
Daily life in the laboratory, etc.			
<p>Our laboratory is constituted by advanced design research group and strength design research group. All students must lead a well-regulated life, proceeding research activities according to own plan. On the other hand, we have a lot of recreation such as spring welcome party, year-end party or summer camp to deepen the friendship between students and staff. In addition, next to the student room, there is a refresh room for students, students can take a meal and break.</p>			
Message or comments by the laboratory faculty staffs			
<p>For students in engineering, daily life in laboratory is very important. The daily activity in laboratory, including daily life as well as various events (banquet and summer camping, etc.), will build a good friendship between laboratory members (undergraduate and graduate students and staff).</p>			
Recent Master theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.3	Evaluation of strain rate and temperature effects on compressive property of soft epoxy foam		
2017.3	Development of flexible sports protector by controlling crosslink density of epoxy resin		
2016.3	Development of flexible sports protector using soft epoxy resin		
2016.3	Evaluation of vibration characteristics of unit room subjected to ground motion		
2016.3	Evaluation on mechanical properties of CFRP with soft epoxy matrix		
2015.3	Evaluation on mechanical properties of soft epoxy resins for flexible protectors		
Recent Doctoral theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
Laboratory mail address	Masahiro Higuchi <higuchi-m *at* se.kanazawa-u.ac.jp>		