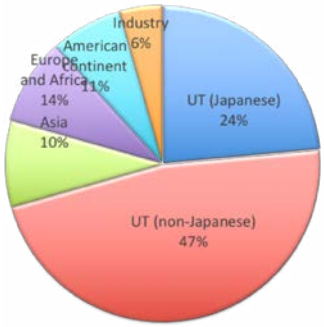
2018 Summer Camp

July 27-30, 2018
The University of Tokyo
LAFORET Shuzenji

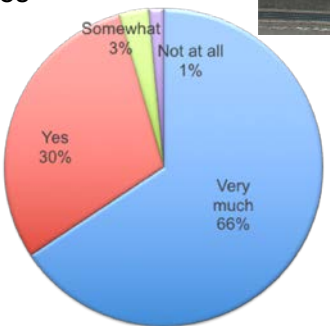
Graduate Program for Mechanical Systems Innovation
Global Leader Program for Social Design and Management
World-leading Innovative Graduate Study Program innovations for Future Society
The University of Tokyo

- UTokyo and world-leading universities Ph.D students discuss and exchange ideas
- propose international research project of innovative device for the Japanese society
- 68 Participants from 18 universities of 13 countries & 3 companies

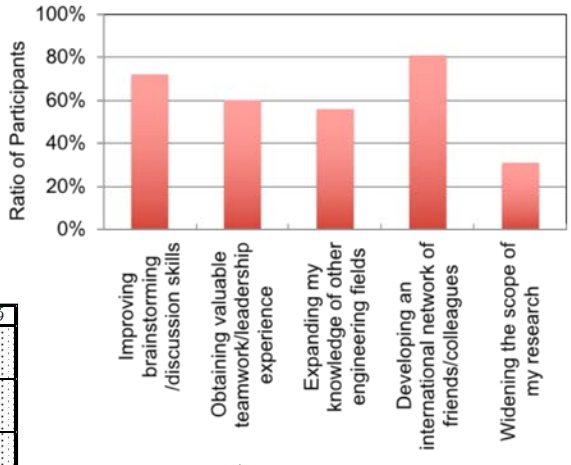
2018 Venue: UTokyo and LAFORET Shuzenji



▲ Participants



▲ Satisfaction



▲ Which areas beneficial

	7 am	8	9	10	11	12	1 pm	2	3	4	5	6	7	8	9
Fri. July 27			Reg.	Opening/ Lectures		Lunch	UTokyo lab tour		Travel to Camp			Checkin	Self-introduction	Dinner	
Sat. July 28	Break fast		Technical Session		Team Meeting	Lunch		Excursion				Dinner			
Sun. July 29	Break fast		Team Meeting			Lunch	Team Meeting						Dinner		
Mon. July 30	Break fast	Checkout	Final Presentation		Photo	Lunch	Award Ceremony & Closing	Return to Tokyo							

◀ Schedule of Summer Camp

Details of Participants

Affiliation	Major	No.
Stanford University	Mechanical Engineering	1
University of California, Berkeley	Mechanical Engineering	1
Columbia University	Mechanical Engineering	1
MIT (Massachusetts Institute of Technology)	Materials Science	1
University of Toronto	Materials Science & Engineering	1
University of São Paulo	Mechatronic Engineering	1
Technical University of Munich	Mechanical Engineering	1
KTH (Royal Institute of Technology)	Mechanical Engineering - Fluid Mechanics	1
Aalto University	Engineering Physics	1
University of Oxford	Materials Science	1
University of Cambridge	Mechanics, Materials and Design	1
University of Abomey-Calavi	Biochemistry, Microbiology and Pharmacology of Naturals Substances	1
Tsinghua University	Optical Engineering	1
KAIST (Korea Advanced Institute of Science and Technology)	Electrical Engineering & Information Technology	1
Seoul National University	Material Science	1
Indian Institute of Technology Delhi	Materials Science & Engineering	1
Nanyang Technological University	Physics	1
The University of Tokyo	Advanced Interdisciplinary Studies	2
	Aeronautics and Astronautics	3
	Chemical Systems Engineering	2
	Civil Engineering	3
	Electrical Electronics and Information systems	2
	Fisheries Sciences	1
	Materials Engineering	1
	Mechanical Engineering	24
	Nuclear Engineering and Management	1
	Precision Engineering	4
	Systems Innovation	5
Hitachi, Ltd.,	Research & Development Group	1
EBARA Co., Ltd.	Fluid Machinery & Systems Company	1
Toshiba Corporation	Corporate R&D Center	1

Day1: Lectures & UT Lab tour

Address:
Prof. Watanabe

Prof. Maruyama

Introduction:
Prof. Yokono

Lectures:
Prof. Nakasuka

Prof. Kato

Lectures:
Prof. Nakao

Guidance:
Prof. Harada

UT Lab tour

Course A: System mechanics-/Machining &Electric Energy
- Kaneko–Yamasaki Lab.
- Kunieda-Mimura Lab.

Course B: Medical Equipment and Robotics
- Mitsuishi Lab.
- Azuma Lab.

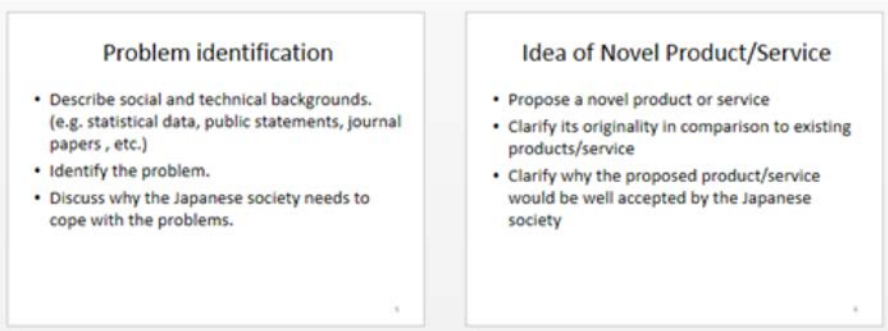
Course C: Nano Structures and Devices
- Maruyama-Chiashi Lab.
- Ikuhara Lab.

Team Meetings –task-

Task is to **propose** **an innovative device for the Japanese society** related to <Energy, Environment, Healthcare, Information Technology, Infrastructure>
and propose an international research project to demonstrate the proof of concept or to accelerate the innovation process.

Presentation template

- ✓ Survey
- ✓ Problem identification
- ✓ Proposal
- ✓ Organization
- ✓ Budget
- ✓ Potential impact



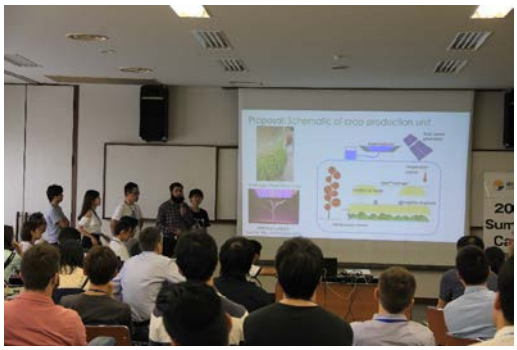
- 10 teams (6-7 participants/team) were organized in advance.
- Each of 2 teams had 1 researcher from industry.
- Proposal “for the Japanese society” so that shy Japanese students could be involved in the discussion.

Self Introduction

Team Meetings

Team Meetings

Final Presentations



Evaluation & Awards

Criteria	Points
innovation, and potential impact	/ 5 points
background survey, technical soundness, feasibility, and project management	/ 5 points
Teamwork & presentation	/ 5 points

Comments given to each team

Team 2 (Microneedles)

It was excellent that…
- Flow of the presentation was good.
- Details of the methods were described.
- Innovative and technological idea

Becomes better if you improve…
- ✓Discussion on ethical and regulatory issues (Approval for the clinical study can take more than one year and a lot of money.)
- ✓Clarification of the originality.

Best Presentation

Best Innovation

Best Proposal

Excursion

Visiting Georia, Shuzenji etc.

Questionnaire Summary (1)

	Did you enjoy the camp?	Lectures	Lab tour in UT	Grouping and Topic selection	Technical session	Team meeting	Final presentations	Excursion Company lab tour	Location	Meals	Accomodation	Organization
All (2018)	4.6	4.0	3.9	4.3	4.2	4.5	4.4	4.3	4.3	4.2	4.2	4.4
All (2017)	4.4	4.0	4.1	4.1	4.0	4.4	4.5	4.2	4.1	3.5	4.0	4.4
All (2016)	4.5	3.9	4.2		4.0		4.3	3.8	3.5	3.5	3.8	4.3
Invited from universities	4.7	4.3	4.2	4.0	4.4	4.6	4.6	4.3	4.6	4.5	4.6	4.5
UT (non-Japanese)	4.7	4.3	4.2	4.6	4.4	4.7	4.6	4.3	4.3	4.1	4.2	4.6
UT (Japanese)	4.3	3.3	3.0	3.9	3.8	4.0	3.9	4.2	4.0	4.2	4.1	4.1
Invited from companies	4.0	3.7	3.3	4.3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.7

- Basically, most of the participants enjoyed the camp very much.
- Scores vary depending on the affiliation.
- Japanese students are less pleased ?

Questionnaire Summary (2)

In which areas did you find the camp beneficial?

	Improving brainstorming/discussion skills	Obtaining valuable teamwork/leadership experience	**Expanding my knowledge of other engineering fields**	**Developing an international network of friends/colleagues**	**Widening the scope of my research**
N. (N=68)	49	41	38	55	21
Ratio	72%	**60%**	56%	81%	31%
2018	**61%**	61%	**47%**	**73%**	**21%**
2017					

- The camp surely enhanced the “competency” of the participants.
- International network shows best.

Comments from Participants

Invited Student

- In BBQ It would be nice to use scissors than knife and make smoke go out easily.
- I think almost idea in technical presentation were amazing (sounds good).
  Try to implement them if government approve. Thanks. It's life time experience for me.
- Meals were sometimes a bit too little (BBQ,…); Excursion bus was a bit-small;
  Team meeting time was too long.
- I really enjoyed my time here, thank you very much for the opportunity !
- Need wifi in the rooms as well. Thank you for everything !!
- Group teammates and roommates together. More traditional Japanese food please.
- It's a good experience I expanded my knowledge of another fields.
- The summer camp was a great experience. I really enjoyed working in a international team and to get to know Japan.
- The lecture regarding Tokyo Transportation was excellent, however the last lecture on safely in UT was not as good. Groupings would be benefited if there is a better balance between basic science researchers and applied engineering researchers.

Comments from Participants

UT (non-Japanese)

- Little bit shorten itinerary. 2 days.
- Maybe give some specific topic.
- It is nice to have this kind of summer camp, but if the room of members can be closer to conference room or even another facility (like hot spring), it would be better.
- I hope we can make up a little bit later.
- Basically, I enjoyed this summer camp a lot. Thank you for your preparation. Group work need more time though if one make more feasible results. If possible, if we know what kind of theme are treated before coming to summer camp, it make us think more about topic selection.
- 2 days for a 15 million project maybe is too short. Also I hope I can have more choice besides those 5 given topics.
- Just about this survey, I think names should be optional to keep the results anonymous ? Thank you very much for arrangements !
- Perhaps a short course on formal aspects of teamwork 1 leadership would have been useful to reinforce teamworking efficiency and learning outcomes.
- I recommended you to introduce more actvities like games or parties to make participations get more familiar with each other. It seems I only get more familiar with people from my team.

Comments from Participants

UT (Japanese)

- We want to use wifi in our room.
- I enjoyed so much. Thank you for the organization.
- The international team work was most important effect to me.
- There was cockroaches & spider in our accommodation. In Excursion, we need prevention of heat stroke such as rest with drinks.
- It was hard to buy water (especially, for the excursion). If I knew that there's only VGA connector, I would have brought it. First day's lunch wasn't very organized. Long lines & amount was not enough.
- You take this program, you'll find it boring. The scientific level is so low. Find another way to make us getting friends each other.