Press release
July 13, 2021

Institut Mines-Télécom rewards educational innovation

IMT organized its first-ever IMT Teaching Award for "commitment, teaching, education"

Developing new teaching methods is an important focus for Institut Mines-Télécom (IMT). At IMT, a community of research professors and educational professionals develops and tries out new student-centered approaches. In presenting this first IMT Teaching Award for "commitment, teaching, education" on July 6, IMT is recognizing their contributions and commitment. As the number one group of engineering and management schools in France, IMT must prepare professionals fully for the major ecological, digital and industrial transformations facing society. The challenge in education today is no longer only to acquire knowledge, but to develop skills in a cross-cutting multidisciplinary approach. With these goals in mind, research professors are also shifting their role and placing emphasis on the learning experience.

From knowledge to skills

Technologies, organizations and jobs are changing very quickly. Companies and students have new expectations when it comes to education. Companies are seeking professionals who are equipped with soft skills (foreign languages, agility etc.), technical skills and knowledge. Meanwhile, students are seeking greater autonomy and personalization in acquiring skills. For example, they wish to be able to act responsibly in the face of the ecological crisis.

Against this backdrop, the role of teachers is undergoing a transformation. They no longer just impart knowledge, they act as mentors who accompany students on a comprehensive journey to acquire skills, using a variety of teaching methods.

Learning as experience

The health crisis has also upped the pace of the transformation of teaching in a hybrid or co-modal way. Students are looking for learning environments that are active, immersive and, most importantly, hands-on. The educational teams at Institut Mines-Télécom are committed to producing meaningful learning experiences based, for example, on virtual reality, gamification and simulation. These new methods stimulate students and give them new motivation to learn.

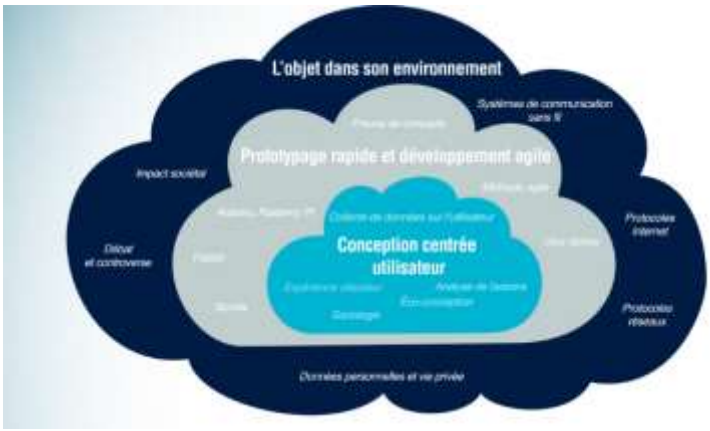
Research professors at Institut Mines-Télécom are strongly committed to these educational transformations. IMT wished to recognize their commitment through this award, which rewards initiatives and brings recognition to the winning teams among the higher education community.

Winners of the 2021 IMT Teaching Award for "commitment, teaching, education"
Videos presentations by the candidates are available on YouTube.

Jury Award
The Jury Award recognizes a collective initiative (inter-school, inter-team etc.)

Annabelle Boutet-Dieye and Charlotte Langlais, IMT Atlantique: "Designing Communicating Objects Area of Advanced Study (TAF)."

This area of advanced study aims to make engineers aware of the central role end users play in the innovation and design of communicating objects. According to instructors in this area of study, future engineers must consider these objects within the context of their societal uses. They have developed learning activities based on the sociology of uses, design thinking, agile methods and the fablab culture. The goal is to train agile engineers with strong communication skills who are prepared to meet both technological and human challenges.



In their fablab which brings together a wide range of individuals (designers, engineers, sociologists etc.) students test innovative methods for user-centered design and rapid prototyping. They therefore develop all the stages of the innovation process.

In order to inform students in their choice of eco-design or ecological impact, research professors organize debates on current topics.

Emerging program
This category recognizes an innovative emerging teaching method.

Siegfried Rouvrais-Delahaie, IMT Atlantique: "Experiential learning for decision-making skills in complex and uncertain situations "Ready to take the plunge?"

In 2015, the European reference document on engineers recommended better training for engineers in the area of decision-making. As such, Siegfried Rouvrais-Delahaie developed an educational experience with the Naval School in order to prepare future professionals who are better able to handle crises and manage the complexity of uncertainty.

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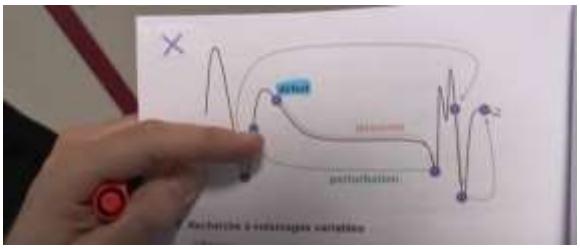
Students set sail for a week on the school's sailboat to experience decision-making in complex, uncertain and unknown situations. Using man overboard rescue exercises, they developed rules that can be applied to crisis management as well as analyses that have been written about in international publications.

In 2017, a European (Erasmus +) project was launched with six partners. The starting point for the project is the observation that many decisions must be made in a complicated VUCA – Volatile, Uncertain, Complex, Ambiguous – context. To provide better training for societal decision-making, the academic partners formalized a list of seven decision-making skills based on a VUCA grid. The list is implemented by students in learning situations. The European partners also developed a common VUCA scale to characterize the increasing complexity of situations.

In late 2019, over 200 engineering students tried managing a pandemic crisis at the national level at the University of Reykjavik in connection with several players in the decision-making and emergency response process, using the decision-making skills framework based on VUCA.

Concepts and approaches based on VUCA can be applied to other environments: project rooms, managing industrial accidents, entrepreneurship etc.

Tie for the 'Coup de cœur' Award
Students vote for the winner in this category.



- Gaëlle Guigon, IMT Lille-Douai: "Escape Classroom and its SEGAM design model"
This educational escape game helps students understand complex notions from Jérémie Humeau's course on combinatorial optimization. The fundamental principles of the course are turned into fun puzzles that must be solved using everyday objects based on academic knowledge. At the end of the escape game, the research professor goes over notions that have not been fully understood.

- Imed Boughazala, Institut Mines-Télécom Business School: "One Day Challenges"

This experimental program organized with companies puts students in role-playing situations with a focus on digital transformation. They learn how to act as consultants and work collaboratively, while developing their problem-solving abilities. It is also an opportunity for companies to discover young talent.

The challenge kicks off with presentations by companies, who outline the problems for which the students must work in groups to find solutions. At the end of the day, they present a deliverable in the form of a video. The teams are coached by research professors and employees of the companies. The "One Day Challenges" are shared with other higher education institutions as teaching case studies.

Three other nominees were in the running for the award:

- Florian Tena Chollet, IMT Mines Alès: "BURGER CRIZ"
Adapted from the famous TV game show, this method focuses on risk and crisis management. Two groups of students face off to test their knowledge while the rest of the class plays the role of the audience. This game allows students to apply a wide range of skills: coordination, communication, memorization, time management.

- Maria Bioa Figueiredo, Institut Mines-Télécom Business School: "Hybrid learning programs for project management"
The aim is to give students the opportunity to gradually try out various project environments over two years. The program combines aspects of a simulation, role-playing and a project approach. It is a hybrid learning program, with various project management SPOOCs over the first year, interspersed with mentoring sessions. In the second year, students participate in "My dream campus" to imagine a user experience on their campus.

- Baptiste Gaultier, IMT Atlantique: "Hybrid learning program for digital manufacturing and rapid prototyping". This research support engineer documented the technologies and methodologies used in fablabs through MOOCs. He realized that the communities who enroll in MOOCs go to fablabs to carry out the activities presented in the online courses. Based on this finding, he designed hybrid sequences of theoretical and hands-on learning in fablabs.

Angelo Montoni, coordinator for educational transformation at Institut Mines-Télécom notes, "*The pandemic has upended how teaching is organized and has permanently changed the way knowledge is transmitted and acquired. Research professors have taken on the challenges of these new teaching practices and shifted their role, to train students who wish to develop the abilities they need to take action in a changing world. This award is a recognition of our research professors' strong commitment to students.*"

The full ceremony is available online: https://www.youtube.com/watch?v=Kpg5f9OPa3M

About IMT www.imt.fr

Institut Mines-Télécom is a French public higher education institution under the aegis of the Ministry of Economy, Finance and Recovery. It includes 8 engineering schools: IMT Atlantique, IMT Lille Douai, IMT Mines Albi, IMT Mines Alès, Institut Mines-Télécom Business School, Mines Saint Etienne, Télécom Paris and Télécom Sudparis, 2 subsidiary schools: EURECOM and InSIC and a network of

strategic affiliated partners. Its activities in the fields of engineering and digital technology contribute to training engineers and managers, developing research partnerships, promoting innovation and supporting economic development. Always attentive to the economic world, IMT combines strong academic and scientific legitimacy, close corporate relations and strategic positioning in the key transformations of the 21st century: digital technology, industry, energy and ecology, and education. IMT is a founding member of the Alliance for the Industry of the Future and co-founder of the Franco-German Academy for the Industry of the Future with Technische Universität München (TUM). It is recognized by 2 Carnot Institute certifications for the quality of its partner-based research. Each year, IMT trains over 13,000 students, concludes nearly 70 million research contracts, and hosts some 70 start-ups in its incubators each year.

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