

College of Humanities

Béla Kapossy

**Politecnico di
Torino**

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Photo: Catherine Leutenegger

Mission

Encouraging and developing education, research and public engagement

A concept of POLY-perspective based on four perspectives:

1. Interdisciplinarity
2. Global awareness
3. Active citizenship
4. Creativity

The three pillars of CDH

■ TEACHING

- Bachelor, master's, and doctoral programs
- Administers EPFL's only course required for all first-year students ("Global Issues")
- Opportunities for students to do fieldwork abroad

■ RESEARCH

- World-class research in two institutes (Digital Humanities and Area and Global Studies) and one collaborative program with the University of Lausanne (CROSS)
- Emphasis on interdisciplinary links across EPFL's eight technical faculties and colleges

■ OUTREACH

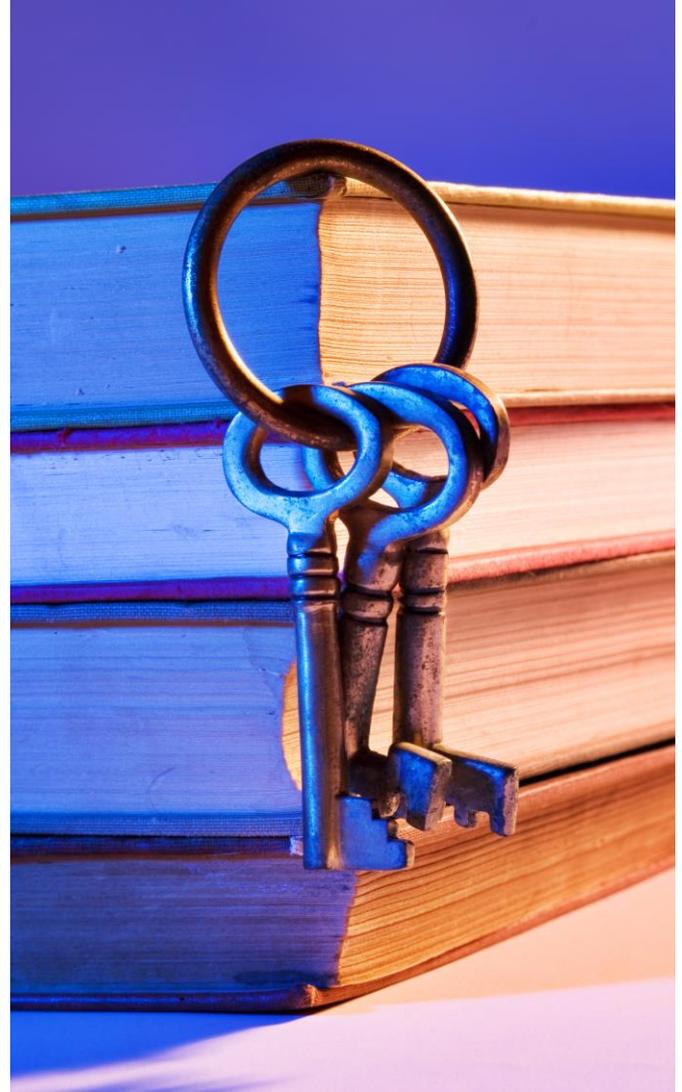
- EPFL's hub for the arts, culture and heritage
- ArtLab: three experimental exhibition and research spaces in digital humanities, under one roof



I. TEACHING

TEACHING

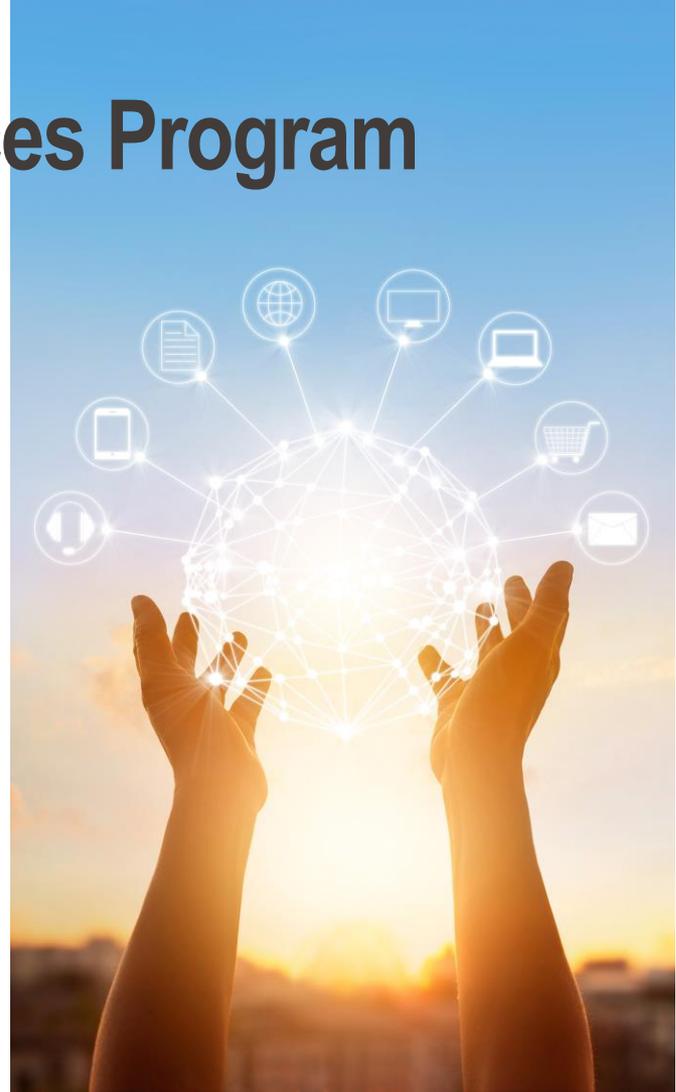
1. Social and Human Sciences Program (SHS)
2. Minor in Science, Technology and Area Studies (STAS)
3. Master of Science in Digital Humanities



Social and Human Sciences Program

The SHS program is **an integral part of all study plans at EPFL**, from the first year of a bachelor's degree to the first year of the master's degree.

It offers students a great freedom of choice, from around **140 courses** that cover a wide range of humanities and social sciences.



SHS Program in 2018-2019

- 7'983 students
- 143 classes by 123 professors
- 3 administrators

Year	Cycle	Cursus SHS	Weekly hours	Credits ECTS	Number of courses
1	Propaedeutic	1 course Global Issues - (Spring)	2	2	11
2	Bachelor	2 courses (Autumn/Spring)	2	2 + 2	48
3	Bachelor	2 courses (Autumn/Spring)	2	2 + 2	55
4	Master	1 course (Autumn and Spring)	2	3 + 3	29

SHS Propaedeutic Cycle

All first-year students choose one of the **GLOBAL ISSUES** courses on offer

- Six thematic tracks:
 1. Climate
 2. Energy
 3. Health
 4. Communication
 5. Food
 6. Mobility

- A ceremony to reward and celebrate:

The three best posters overall get presented on stage and get a prize

An internationally-renowned figure “Grand Témoin” gives a talk followed by a questions and answers session with the students, initiating reflection on the topic discussed



SHS highlights

Mediterranean myths and founding texts

Presents the myths specific to the different cultures of the Mediterranean basin

Focus particularly on the world's creative stories

- Course given by four lecturers
- Mythology, Myths, Mediterranean, Greece, Rome, Near East, Egypt, Mesopotamia, Antiquity, Anthropology, Civilizations, Religions



SHS highlights

Collective creation : improvised arts and engineering

Bachelor students reveals the underlying links between the creative processes of improvised arts and those of engineering design

- Course developed by Prof. Simon Henein
- In cooperation with the Arsenic Theater in Lausanne



SHS highlights

Industrial design for master's students

Practical instruction resulting in a functional object created in collaboration with a local craftsman or industry company

- Course developed by Tomas Kral
- In cooperation with the Cantonal Art School of Lausanne (ECAL)



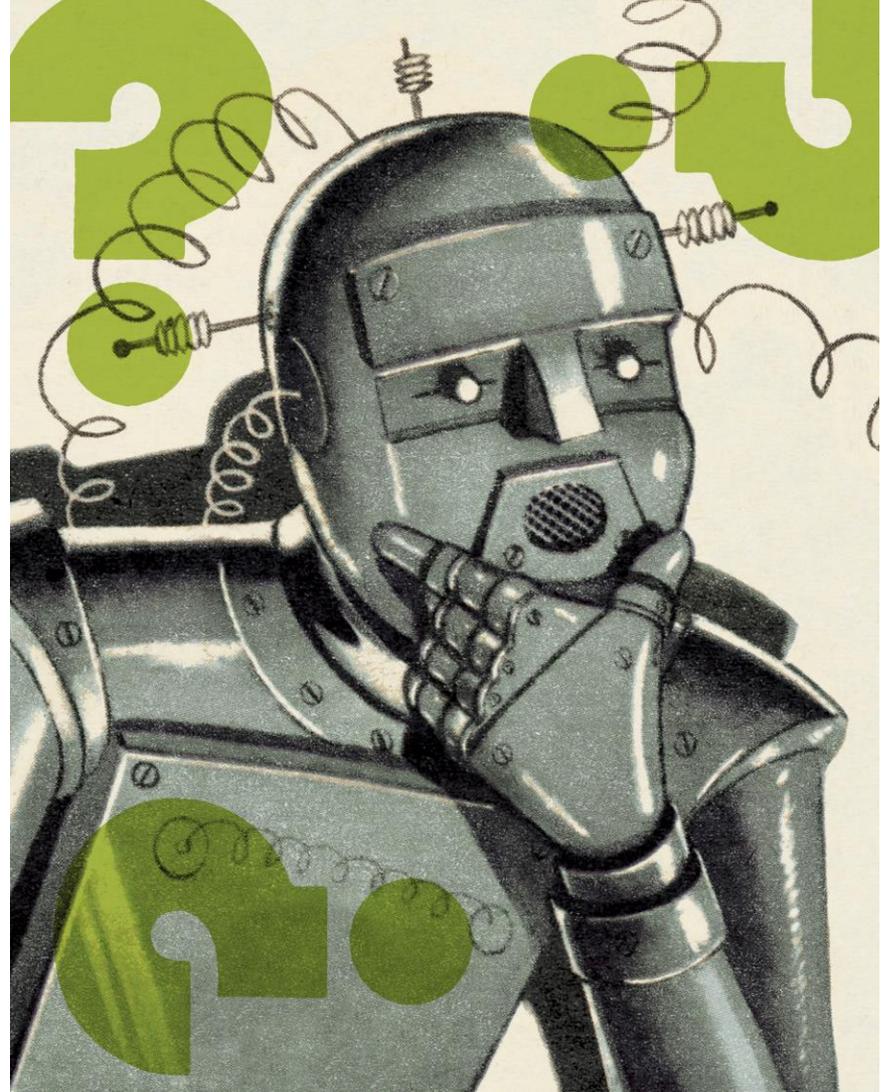
SHS highlights

Ethics and robotics

Encourage and propose a deeper understanding of the ethical challenges connected to robots

Conceptual issues:

- What is a robot?
- How should robots act?
- What if robots are widely deployed?



Minor in Science, Technology and Area Studies (STAS)

- Realization of technical/scientific project with interdisciplinary orientation
- Fieldwork in Russia, China and Asia
- Course EPFL in sciences and technology linked to fieldwork
- Masters students from all faculties may apply

China Hardware Innovation Camp (CHIC)

Fieldwork abroad – from idea to prototype

chi.camp

- Learn what it takes to bring a product from idea to market
- Develop user-centric design, interdisciplinary team work, applied project management and intercultural communication skills
- Connected device solutions are prototyped at EPFL, and finalized at local factories in Shenzhen and Hong Kong
- Projects are pitched Chinese incubators, accelerators and makers



Russia: investigating climate change and its consequences in the Arctic

uniarctic.ch

- An introduction to the problems of climate change via fieldwork carried out either on a research vessel (Arctic Floating University) or in a field camp in the tundra (Yamal)



Master of Science in Digital Humanities

Cross-disciplinary and quantitative projects in this new field

- Analyze, compare and critically reflect on culture and information issues, as well as to explore and quantitatively model real-world patterns and data
- Synergies with other schools and faculties



Master Program

Master Cycle

**Bloc 1 – Computer
Science
20 credits**

**Bloc 2 – Digital
Humanities
26 credits**

**Options
14 credits**

**Internship
30 credits**

Total: 90 credits

+

**PDM – Master
Thesis Project
30 credits**

Total: 120 credits

Cultural data & creative industries are everywhere

Advertising

Art

Press/media

Design

Software/game industry

Music

Books

Performing arts

Radio

Recording industry

Museums

Films

A human-centered approach

- Tech for the sake of tech is not enough
- The problems that tech creates cannot be solved by just adding more tech
- Humanities & social science have a say:
 - People interacting with technology
 - Culture intersecting with technology
 - Tech & society influencing one another



SHS Prizes

- Master's program: best overall dissertation
- Propaedeutic: best poster





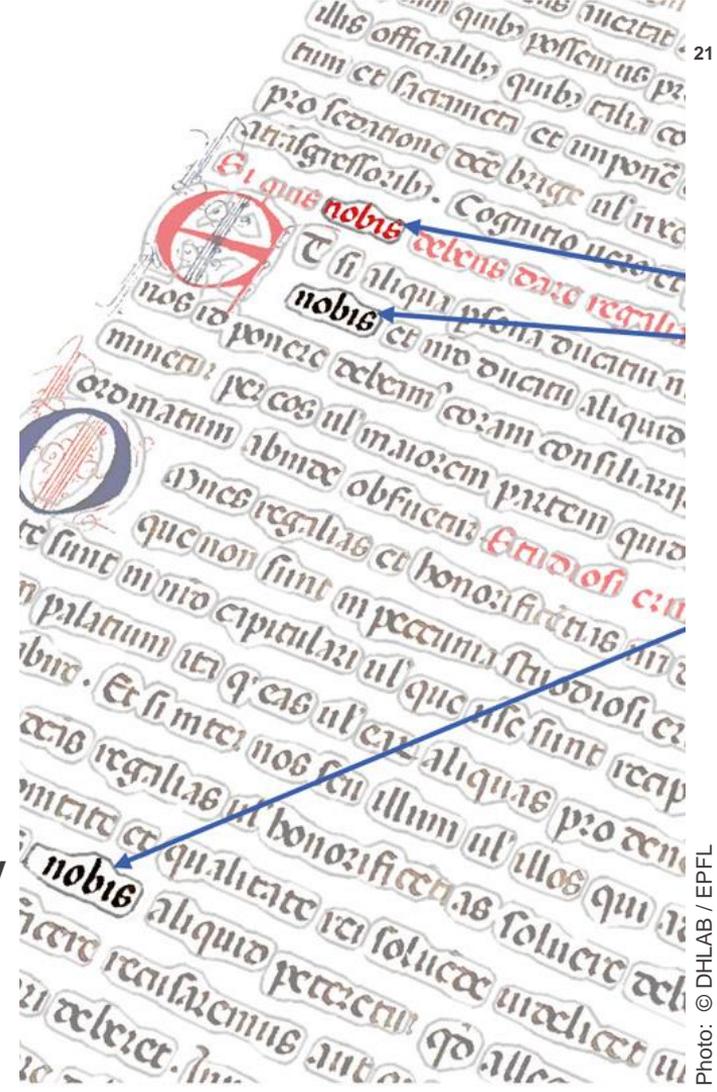
II. RESEARCH

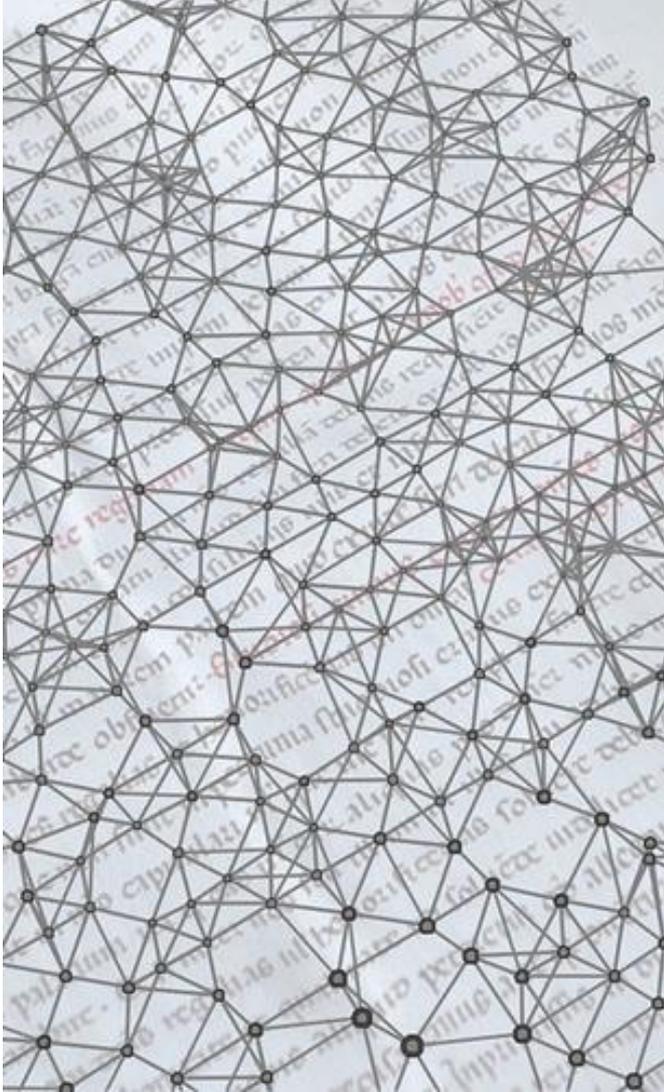
1. Digital Humanities Institute (DHI)

- *Digital Humanities Laboratory (DHLab)*
- *Digital and Cognitive Musicology Laboratory (DCML)*
- *Laboratory for Experimental Museology (EM+)*
- *Laboratory for the History of Science and Technology (LHST)*
- *Social Computing Group - IDIAP*

2. Institute for Area and Global Studies (IAGS)

3. Collaborative Research on Science and Society (CROSS)





DHLab

Frédéric Kaplan

dhlab.epfl.ch

Research areas

- *Massive digitization and long-term data preservation*
- *Automatic transcription and document analysis*
- *Historical geographical information systems*
- *Text mining and linguistic computing*
- *Network analytics*
- *Interface and data visualization*

Recent & ongoing projects

- *Venice Time Machine: multidimensional model of Venice and its evolution over 1000 + years*
- *ScanVan (SNSF): distributed 3D digitalization platform for cities*
- *Recognition and Enrichment of Archival Documents (Horizon2020): platform for the automated recognition, transcription and search of historical documents*



DCML

Martin Rohrmeier

dcml.epfl.ch

Research areas

- *Principles of musical structure-building*
- *Musicological corpus research across styles*
- *Cognitive foundations of music*
- *Computational modelling and creativity*

Recent & ongoing projects

- *Principles of Musical Structure Building: Theory, Computation, and Cognition (ERC)*
- *From Bach to the Beatles – Exploring Compositional Building Blocks and Musical Style Change with Hermeneutic and Computational Methods (Volkswagen Foundation)*
- *Distant Listening: the development of harmony over three centuries (1700–2000) (SNSF)*
- *General Corpus Project – annotation of musicology data*



EM+

Sarah Kenderdine

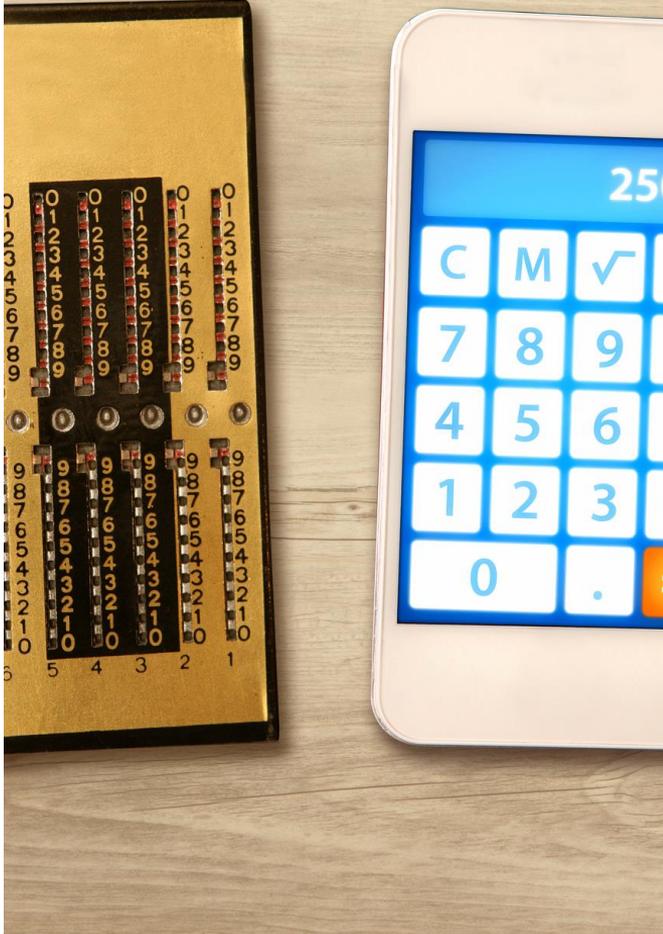
emplus.epfl.ch

Research areas

- *Experimental museography*
- *Interactive archives and emergent narratives*
- *Embodied knowledge systems*
- *Immersive visualization*
- *Immersive pedagogy*
- *Image science, visual computing and data curation*

Recent & ongoing projects

- *Atlas of Buddhism: transforming visualization in museums - deep mapping for narrative coherence*
- *Digitization of Potala Palace in Tibet*
- *Hong Kong martial arts living archive: archiving and annotating a living Kung Fu tradition using state-of-the art data capture tools*
- *Transmission through imitation (CROSS program): transforming intangible cultural heritage archives through virtual reality and sports science*



LHST

Jérôme Baudry

New in 2019

Research areas

- *History of innovation and the interactions between science and technology*
- *History of patents and intellectual property*
- *Citizen science*

Recent & ongoing projects

- *Virtual physics museum*



Social Computing Group

Daniel Gatica-Perez

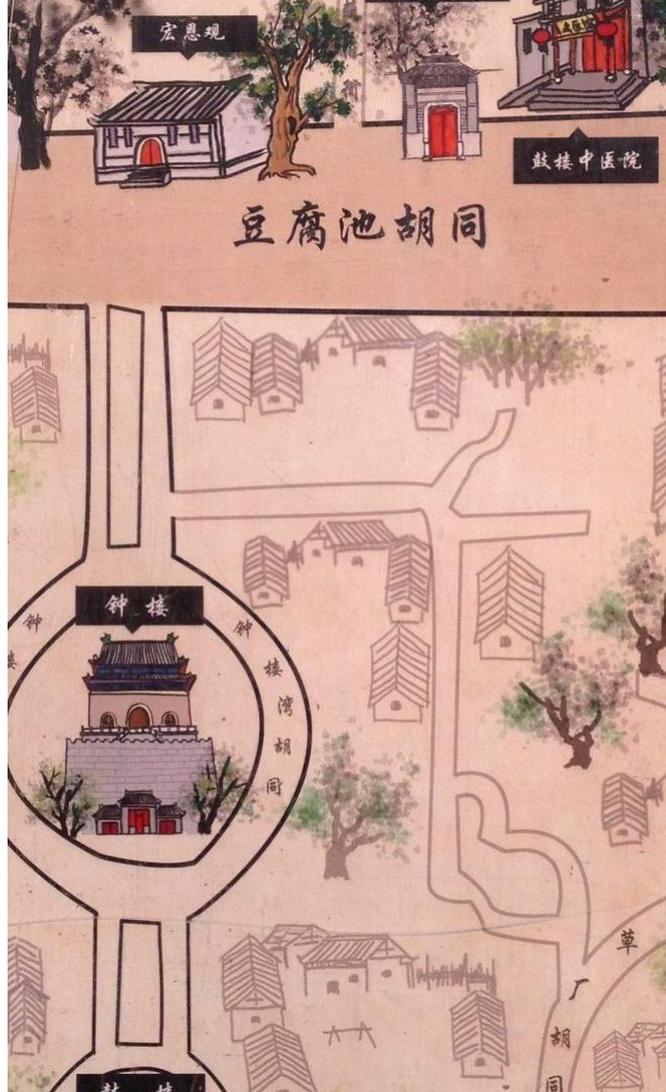
idiap.ch (IDIAP Research Institute)

Research areas

- *Use of computing, machine learning, social media and social science theories and models to study behavior*
- *Devices and systems to support interaction and communication*
- *Methods for urban computing from phone and mobile social network data*
- *Behavioral analysis of social video*
- *Crowdsourcing*
- *Machine learning bias*

Recent & ongoing projects

- *WENET (Horizon2020): developing a diversity-aware, machine-mediated paradigm for social interactions.*
- *ADVANCE (CTI): Augmented dialogue tool based on verbal and non-verbal behavior computing*
- *DUSK2DAWN (SNSF): Characterizing youth nightlife spaces, activities, and drinks*



IAGS

Research and teaching activities in local realities across diverse contexts

Research areas

- *Contemporary Asian and Russian societies and their economies*
- *Heritage and cultural policies, creative industries, innovation and technology*

Recent & ongoing projects

- *Makerspaces: Politics and communities of innovation in contemporary China (SNSF)*
- *Memory and the city: Assessing tools for interdisciplinary research and teaching (with Politecnico di Torino)*
- *Mapping controversial memories in the historic urban landscape (SNIS): a multidisciplinary study of Beijing, Mexico City and Rome*



IAGS

Designing innovative learning experiences

Senior lecturer Marc Laperrouza leads projects like the China Hardware Innovation Camp and the India Switzerland Social Innovation Camp as part of a wider initiative to design new learning experiences and teaching formats:

- **Interdisciplinarity:** Students from different disciplines, universities, and countries work together.
- **A project-based approach with real life applications:** Students are encouraged to consider their project from an end-to-end perspective.
- **Human-centered design:** Using designers' research methods, students are asked to observe contexts, question people and exercise empathy.
- **Possibility to fail:** An environment is created to make failure acceptable and productive.



CROSS

Transdisciplinary research projects bringing together the University of Lausanne and EPFL

Research areas

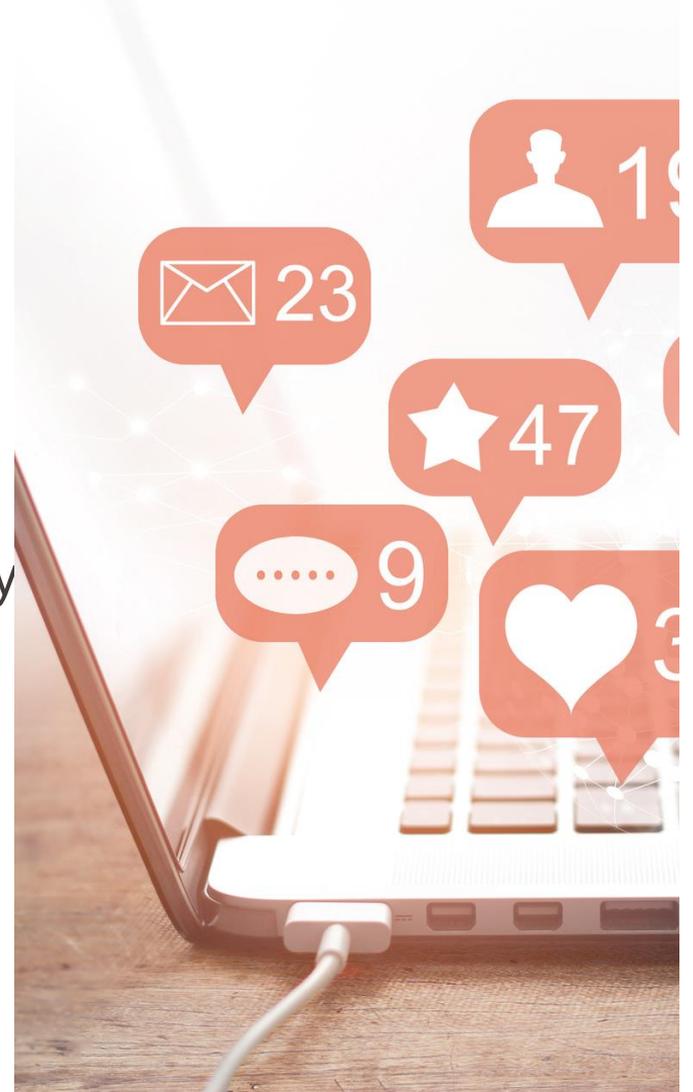
- *Social sciences and humanities at the intersection of engineering, natural and life sciences*
- *Contemporary socio-technical challenges*

Recent & ongoing projects

- *ReMediation: improving resistance to trauma through digital mediation*
- *Resisting human obsolescence in a world disrupted by machines*
- *Leveraging on-device smartphone inference to address resistance to participate in social surveys*
- *Mellowing extreme views via celebrity spokespeople - but gently*

The future of CDH research

- Education in engineering schools
- Ethics in science and technology
- Artificial intelligence and philosophy
- Artist in residence
- Visiting professorship

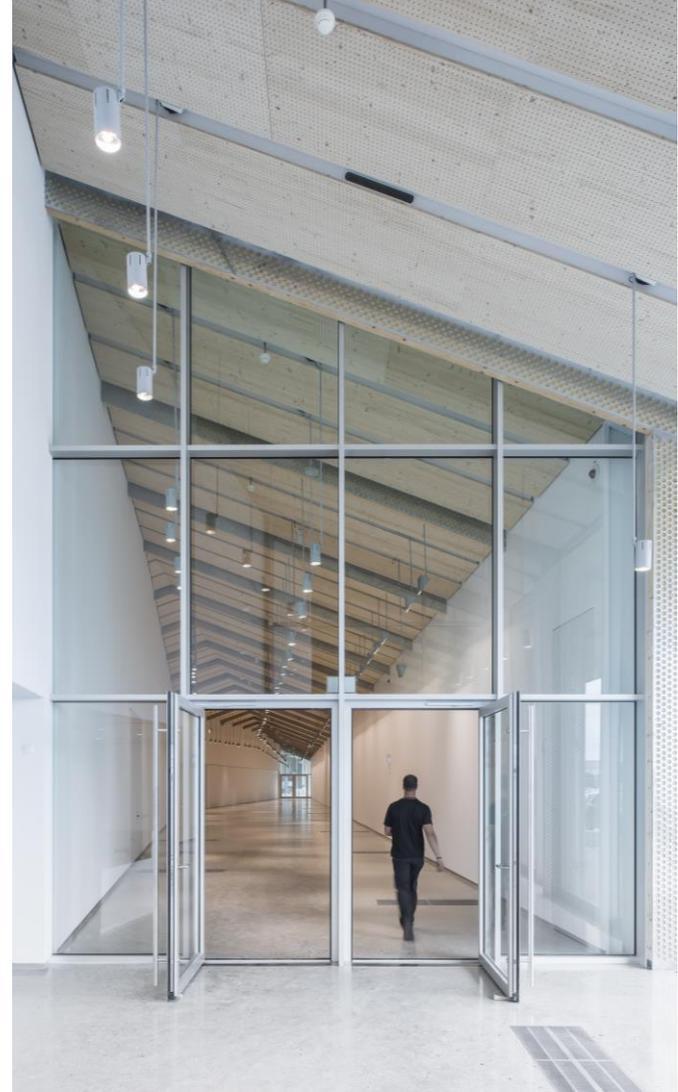




III. OUTREACH

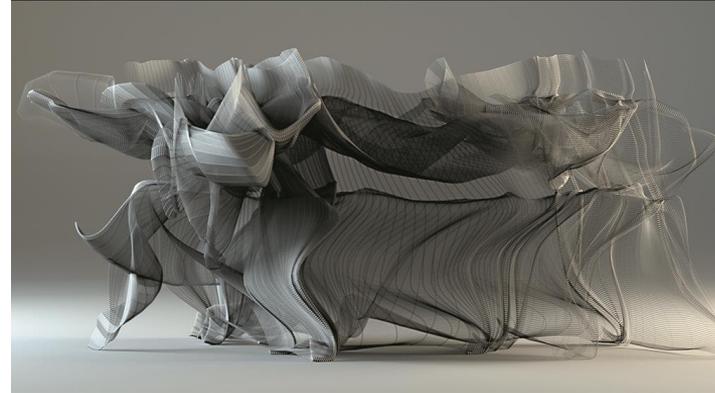
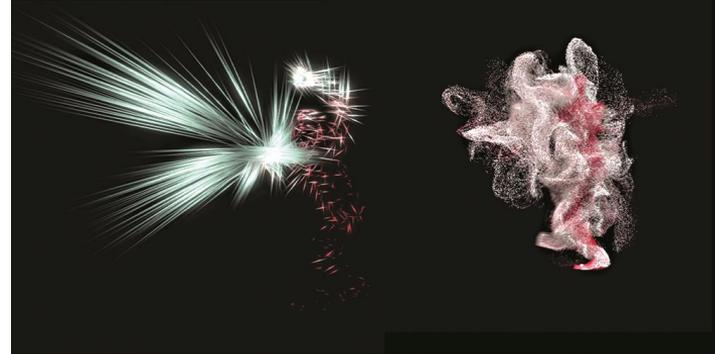
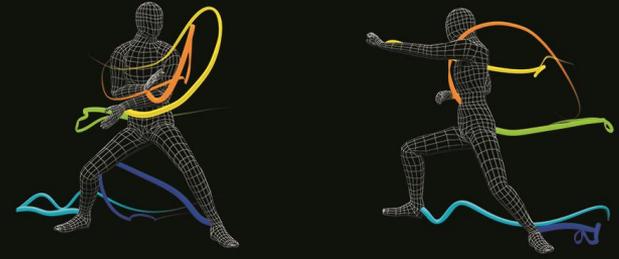
ArtLab

- Artlab presents temporary and long-term exhibitions that bring the world of science and the humanities closer together.
- It also houses a Montreux Jazz Café in which it is possible to consult the festival's audio-visual archives.
- Opened in the fall of 2016, the building was designed by Japanese architect Kengo Kuma.



Kung Fu Motion exhibition at ArtLab (2018)

- Examines strategies for encoding, retrieving and re-enacting intangible heritage in ways that allow these archives to be 'alive' in the present.
- Brings together historical materials with creative visualizations derived from advanced documentation processes including motion capture, motion-over-time analytics, 3D reconstruction, and panoramic video.
- Archival materials are re-interpreted and re-performed through the mediums of augmented virtual reality and interactive media art.



Thinking Machines. Ramon Llull and the ars combinatorial (2018-2019)

- Bold exhibition that draws together scholarly, scientific and artistic modes of enquiry.
- Through it, we reread the late Middle Ages in the works of Ramon Llull, the outstanding Catalan philosopher and theologian, to explore the ramifications of his thinking in the realms of modern and contemporary art, and computation.





**Thank
you**