
TALLINN UNIVERSITY
UNIVERSIDADE FERNANDO PESSOA
JULY, 2019
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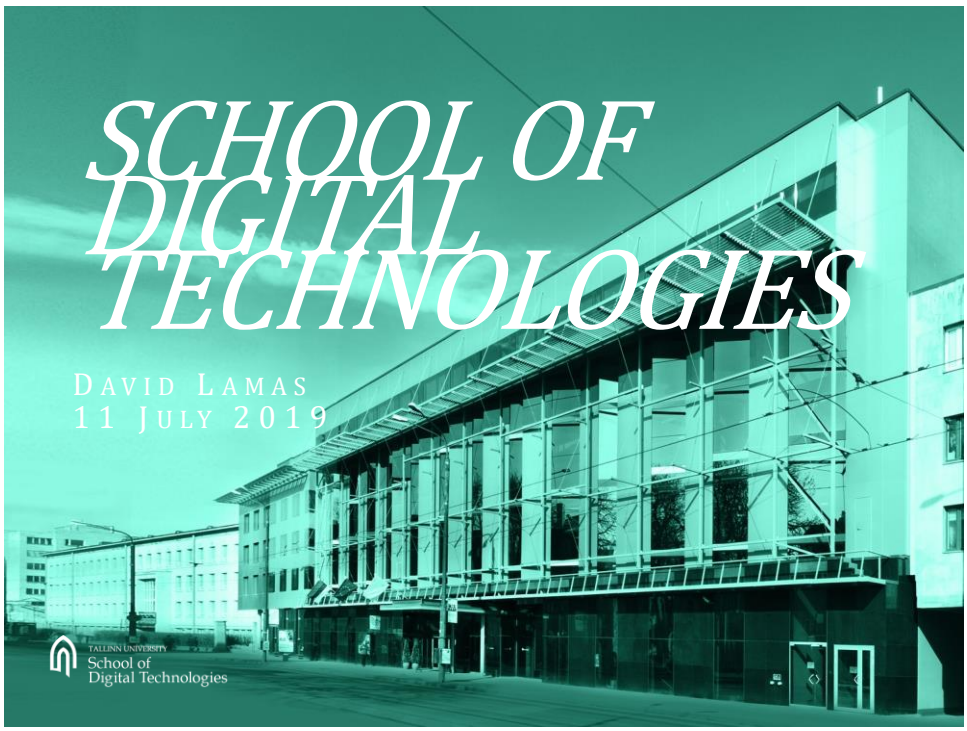
SCHOOL OF DIGITAL TECHNOLOGIES
DAVID LAMAS
11 JULY 2019
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HISTORY

TALLINN UNIVERSITY
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ESTABLISHED 18.03.2005 BY THE ESTONIAN PARLIAMENT BY MERGING:

- Tallinn Pedagogical University
- Institute of Ecology
- Institute of Estonian Demography
- Institute of International and Social Studies
- Institute of History
- Tallinn Pedagogical College
- Baltic Film and Media School
- Estonian Institute of Humanities
- Academy Nord
- Estonian Institute of Future Studies
- Estonian Archive Museum of Pedagogy
- The Academic Library of Estonia

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TALLINN UNIVERSITY FOCUS FIELDS

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THE DEVELOPMENT PLAN FOR 2015-2020

Educational innovation

Digital and media culture

Cultural competences

Healthy and sustainable lifestyle

Society and open governance

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SINCE 01.09.2015

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1

- School of Humanities
  - Estonian Institute of Humanities
  - Catherine's College
  - Institute of Estonian Language and Culture
  - Institute of Germanic and Romance Language and Cultures
  - Institute of Slavonic Language sand Cultures

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2

School of Natural Sciences and Health

- Institute of Ecology
- Institute of Mathematics and Natural Sciences (except Dep. of Mathematics)
- Institute of Health Sciences and Sports
- Institute of Psychology

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3

School of Digital Technologies

- Institute of Informatics
- Institute of Information Sciences
- Department of Mathematics

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4

- Baltic Film, Media, Arts and Communication School
  - Baltic Film and Media School
  - Institute of Fine Arts
  - Institute of Communication

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5

- School of Educational Sciences
  - Institute of Educational Sciences
  - Pedagogical College
  - Center for Innovation in Education

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- School of Governance, Law and Society
  - Estonian Institute of Future Studies
  - Estonian Institute of Population Studies
  - Institute of International and Social Studies
  - Institute of Political Science and Governance
  - Law School
  - Institute of Social Work

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FINANCING OF THE SCHOOLS

1. Financing of schools will motivate reducing teaching: 75% of the budget from previous year + 15% by achievements + 10% new initiatives.
2. Schools will rent the rooms from the university central administration: 3 or 9 €/month for 1 m^2.
3. For motivating R&D and offering continuing education: no (zero) overhead to the central administration.
4. There are university supported centers of excellence in each focus field.

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SCHOOL OF DIGITAL TECHNOLOGIES

Academic areas:

- Applied Informatics (head: prof Peeter Normak)
- Digital Learning Ecosystems/Educ. Technology (senior researcher Kai Pata)
- Human-Computer Interaction (prof David Lamas)
- Information Sciences (prof Sirje Virkus)
- Mathematics and Didactics of Mathematics (assoc prof Madis Lepik)

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SCHOOL OF DIGITAL TECHNOLOGIES

Laboratories:

- Interaction Design
- User Experience Evaluation
- Digital Learning Games
- Software Development
- Hardware Development

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BACHELOR LEVEL CURRICULA

- Informatics (focus on software engineering)
- Information Sciences
- Mathematics

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MASTER LEVEL CURRICULA (ESTONIAN)

- Information Sciences
- Management of Information Technology
- Educational Technology
- Teacher of Mathematics
- Teacher of Informatics, School IT Manager

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MASTER LEVEL CURRICULA (ENGLISH)

- Human-Computer Interaction
- Digital Learning Games
- Open Society Technologies

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MASTER LEVEL CURRICULA (ENGLISH, JOINT)

- Digital Library Learning – face-to-tace, jointly with University of Parma (Italy)
- Interaction Design – online, jointly with Cyprus University of Technology (Cyprus)

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DOCTORAL LEVEL CURRICULUM (ENGLISH)

- Information Society Technologies

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COOPERATION WITH INDUSTRY (POLICY LEVEL)

1. Companies are represented in the council of the school.
2. The school represents the university in *Estonian Association of Information Technology and Telecommunications (ITL)*.
3. The school is represented in *Information Technology and Telecommunications qualifications committee* (skills council) of *Estonian Qualifications Authority.*
4. Participation in the development of a 2030 vision for Estonia in IT.
5. Participation in the development of a roadmap for implementation of ICT in education (in Estonia).

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COOPERATION WITH INDUSTRY (CURRICULUM DEVELOPMENT)

1. Involvement in initial curriculum development.
2. Companies are represented in curriculum councils.
3. Feedback from the companies (examples):
   - Questionnaires (to the graduates and to their bosses)
   - Seminars in the companies (one seminar a week).
4. Companies are always represented in graduation committees.
5. Companies are always represented in accreditation committees.

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COOPERATION WITH INDUSTRY (LECTURES)

1. Examples of courses completely taught by industry experts:
   - ICT Strategic Management
   - IT Operations and Management
   - Agile Software Development
2. Examples of courses where some topics are taught by industry experts:
   - Development of Infrastructure of IT
   - ICT Procurements and Contracts
   - Programming of Applications
3. Experts from the industry are also used as (co-)supervisors and theses reviewers.
4. Seminars in the companies.

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EDUCATION EVALUATION

University	No of Strengths	Areas of improvement and recommendations
Tallinn University of Technology	2	15
University of Tartu	5	11
Tallinn University	6	8

Self-Evaluation Report:
http://www.cs.tlu.ee/instituut/dokumendid/TLU-self-Evaluation-Informatics-2013-submission.pdf

Expert Report:
http://ekka.archimedes.ee/wp-content/uploads/TLU_IT_Assessment_Report.pdf

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WE EMPHASIZE TECHNOLOGY FOR THE **BENEFIT OF PEOPLE**!

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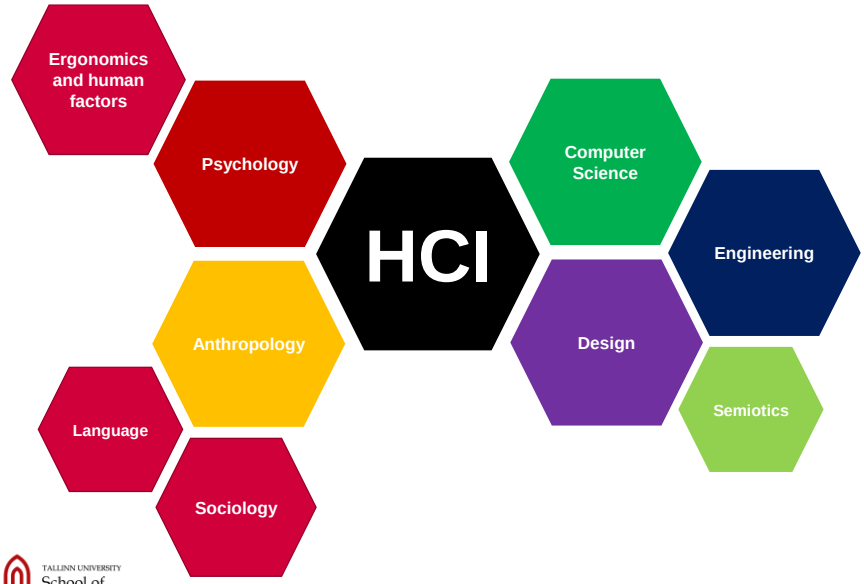

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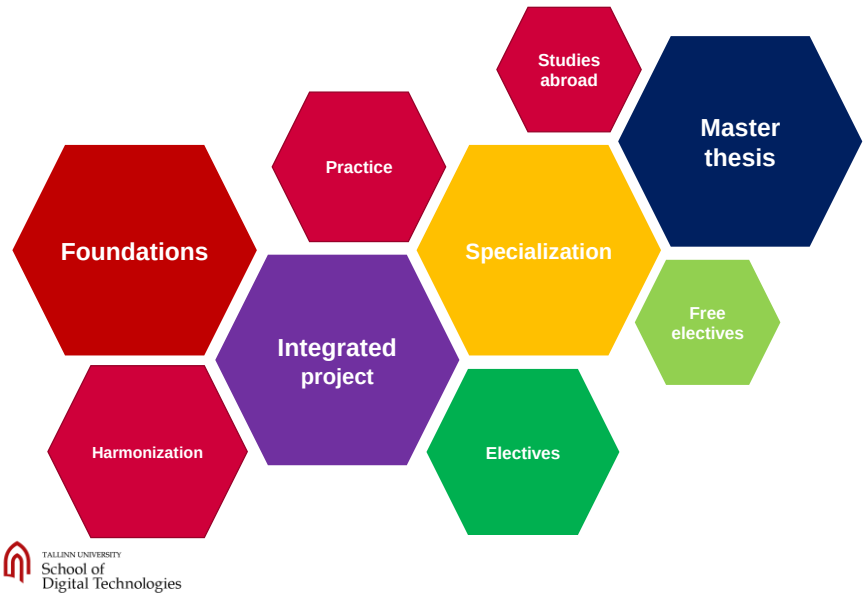

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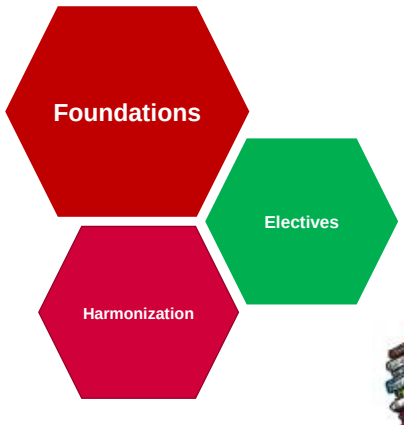

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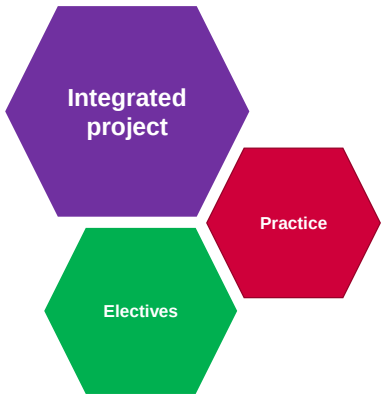

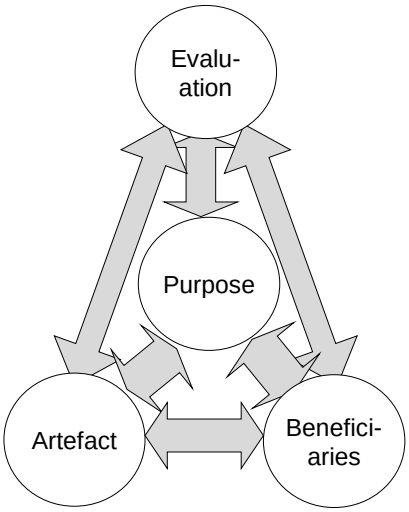

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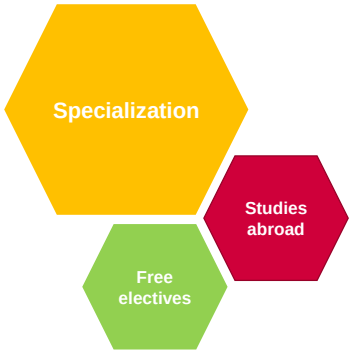

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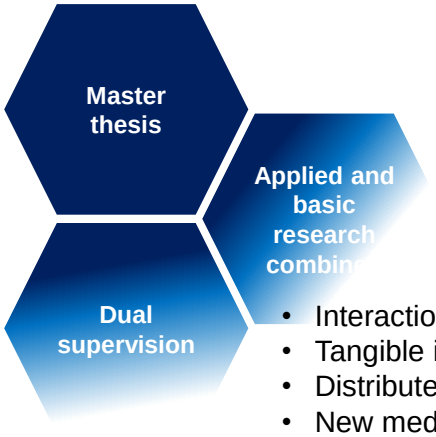
(Cartoons by S. Iwasawa from Pfeifer & Bongard: How the body shapes the way we think



- Interaction aesthetics
- Tangible interfaces for music making
- Distributed music making
- New media art
- Eye-tracking and user experience
- Trust and engagement
- Wearables and well-being
- User-modeling and adaptation strategies
- Flow, gameplay and electroencephalograms

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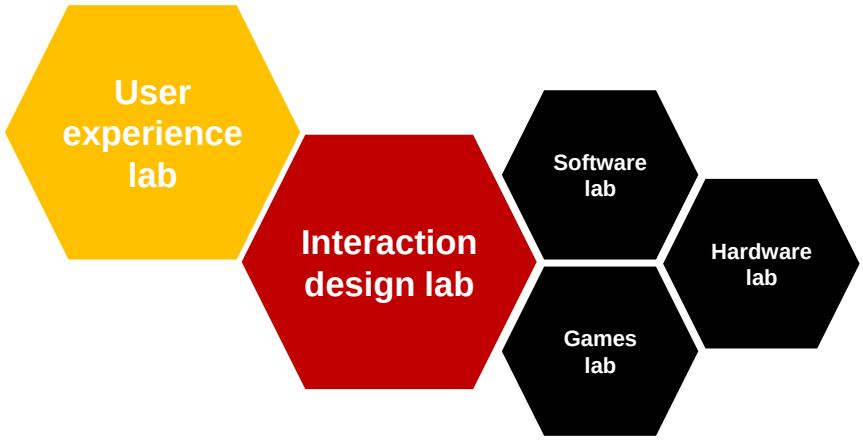

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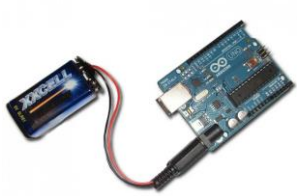

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CURRENT AND RECENT PROJECTS

- EU funded “BrainHack: Bringing the arts and sciences of brain and neural computer interface together”
- COST funded network on “Algorithms, Architectures and Platforms for Enhanced Living Environments”
- NORDPLUS funded “COLLECTIVE DREAMING: Experimental Interaction Design course for non-ICT audiences”

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CURRENT AND RECENT PROJECTS

- Estonian funded “GoProSocial: Neurocinematis System for Assessing and Training ProSocial Behaviours”
- Tallinn University funded "STARTS@TLU: A platform for art, science, technology and society partnerships: new approaches to design and development through research in the wild”

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RESEARCH EVALUATION

- International research evaluation in educational sciences (2013): "The Panel thought especially notable the high quality, originality and international significance of the publications emanating from the *Centre for Educational Technology* ... ".
- Expert assessment (2014): "This team is very active in the European landscape and recognized as an important actor ... . They have the potential to become a leading team in Europe".
- International research evaluation in ICT (2015): "excellent"

  (http://www.etag.ee/wp-content/uploads/2012/05/Evaluation_raport2015veeb.pdf).

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TRUST IN HUMAN-COMPUTER INTERACTION

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MODELING TRUST

- As technology becomes seamlessly integrated and diffused within people's day to day tasks, uncertainties and increasing dependency on technologies are evident.
- In this light, there is a need for deepening our understanding the role of trust in Human-Computer Interaction.

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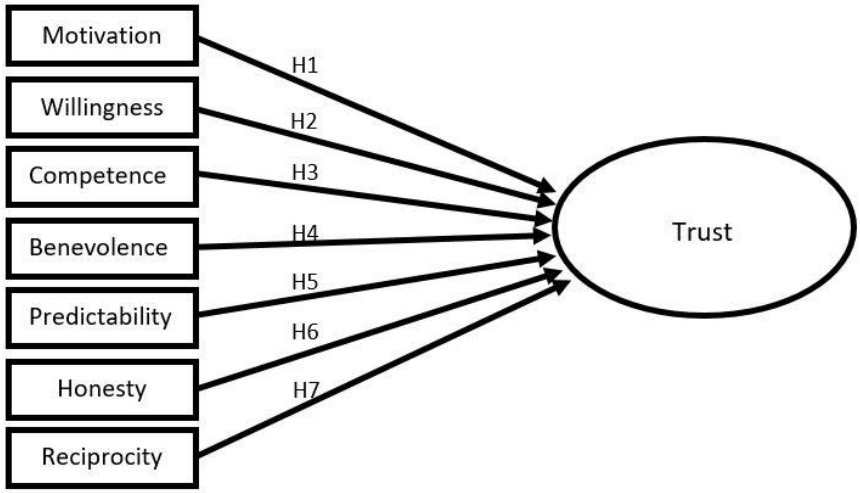

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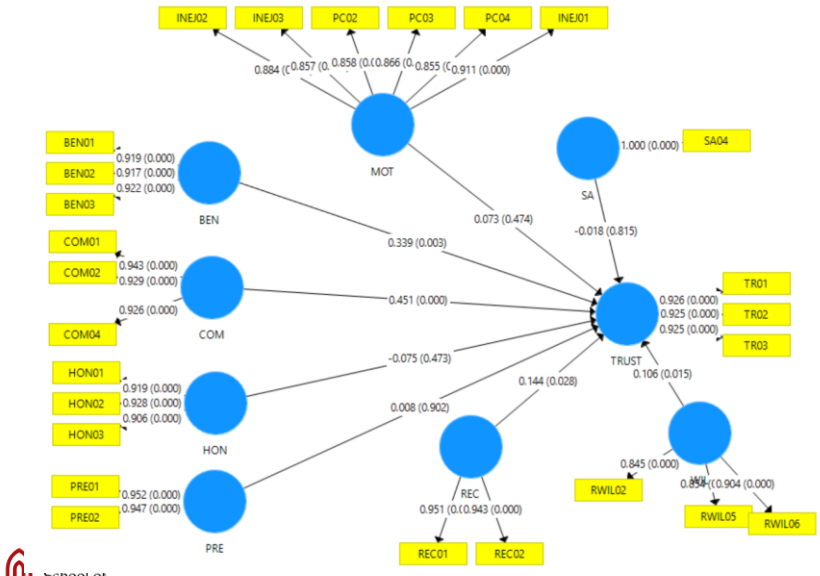

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NEUROPHYSIOLOGICAL ART AS A RESEARCH TOOL TO EXPLORE AND STUDY NEW FORMS OF IMPLICIT HUMAN-COMPUTER INTERACTION

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NEUROTHEATRE

- A specific type of interactive theatre where audience and actors can communicate through brain and neural computer interaction (BNCI) interfaces using multimodal sensors and actuators.
- This combines computer science, neuroscience, engineering, design, performative arts and biohacking, for instance.

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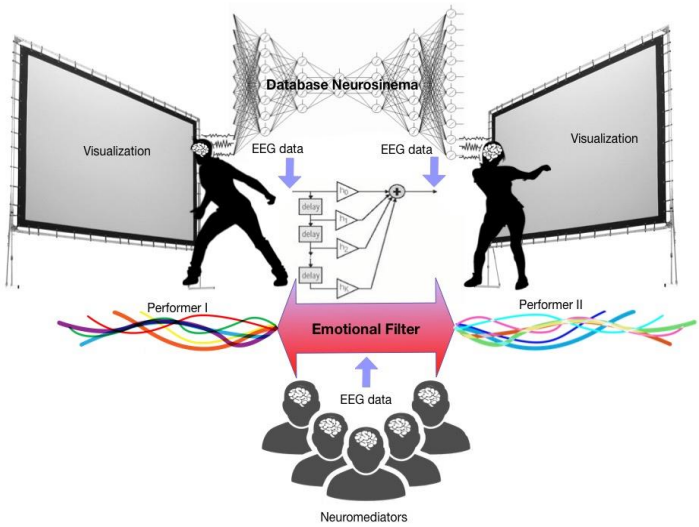

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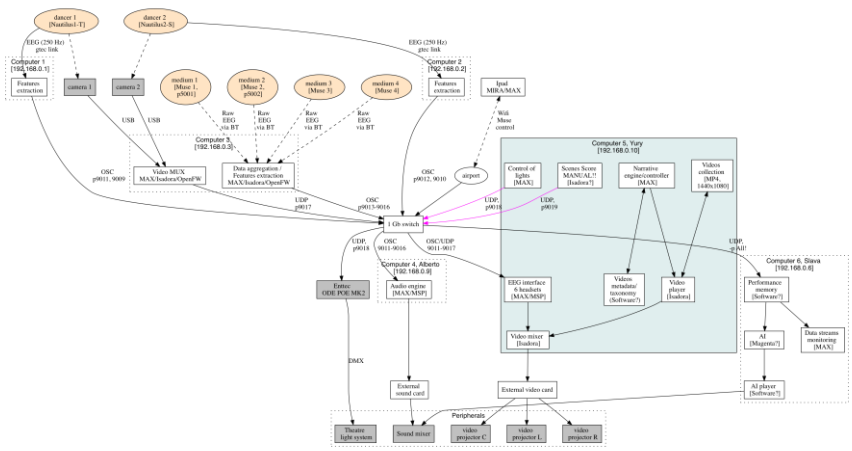

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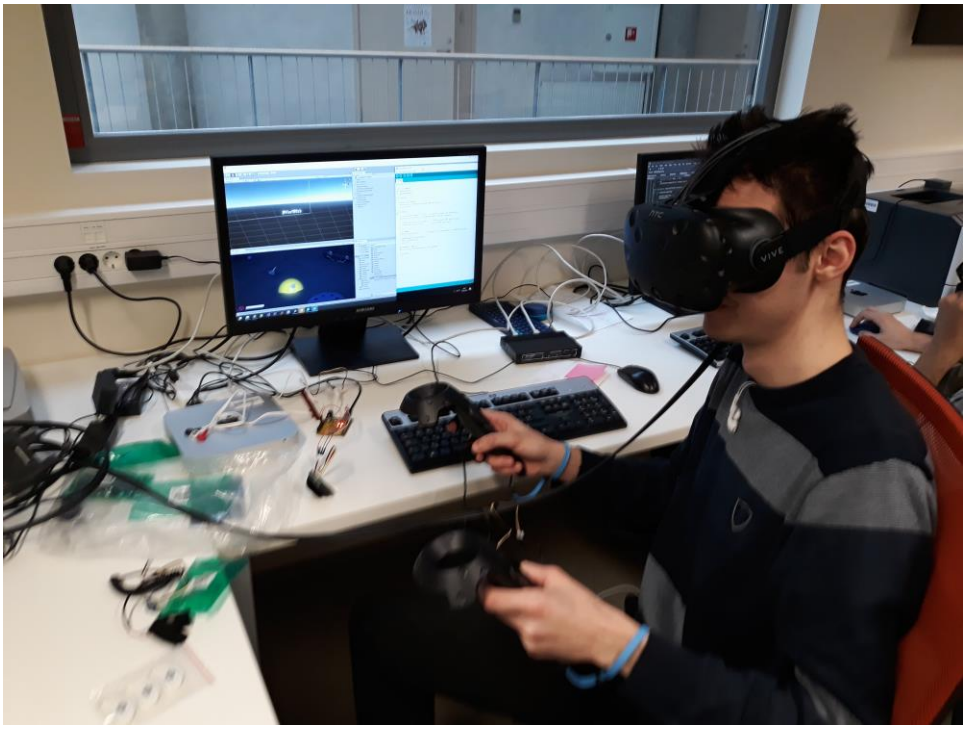

BODY-CENTRIC INTERACTIONS

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WEARABLE TECHNOLOGIES FOR A BETTER SELF

- The goal is to bring together knowledge from the domains of kinesiology, personal informatics, behavior psychology, human-computer interaction, and learning sciences into a united framework to be used to improve one's well-being.

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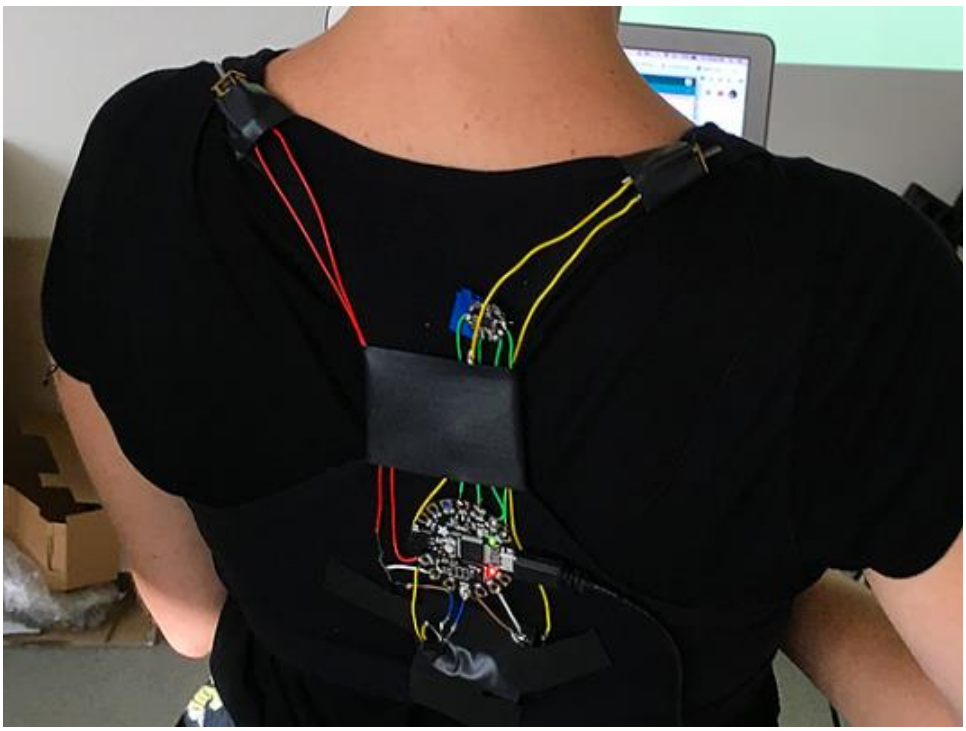

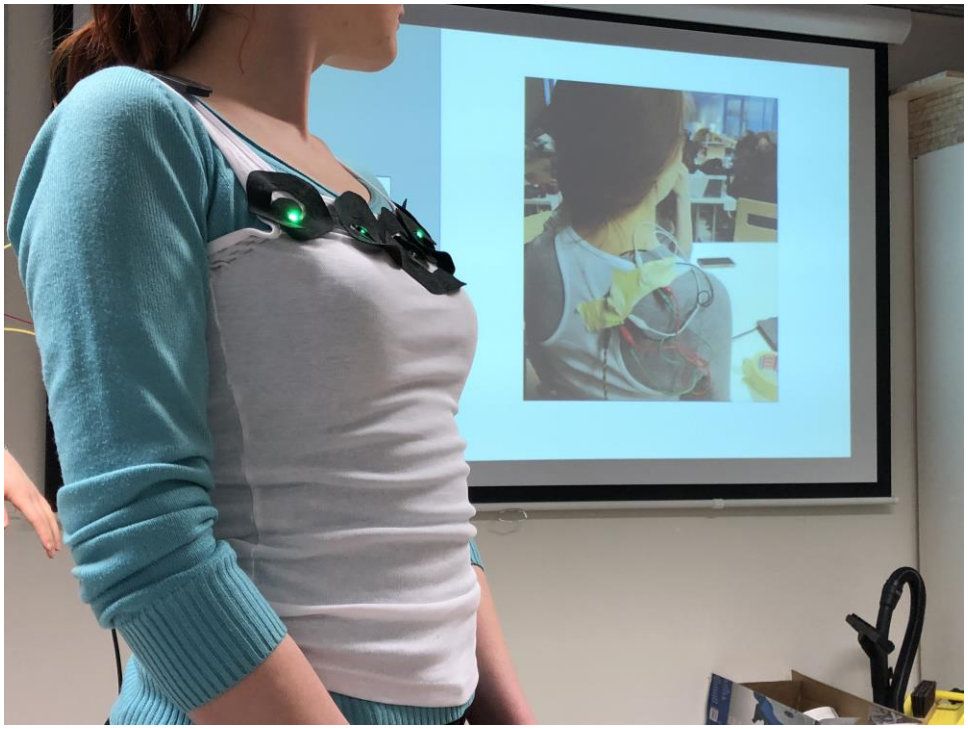

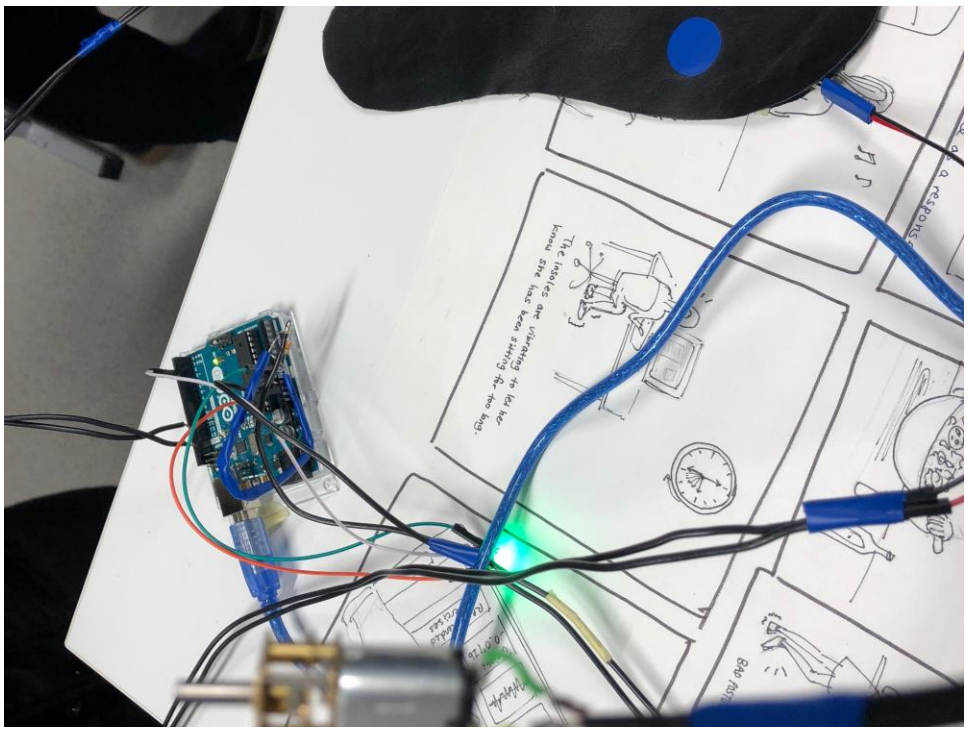

DESIGN THEORY AND METHODOLOGY

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DESIGN FOR PEOPLE BY PEOPLE

- We focus on theory-informed, empirically-supported, development, application and evaluation of methods, including the adaptation of existing methods.
- Shaped on theory, we progress investigating hypotheses about the reasoning and practices of those involved in design processes, and then we shape theory.

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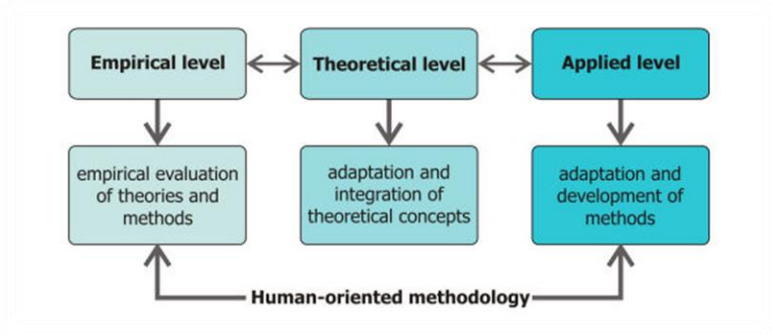

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THERE IS
STARTS.EE

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THERE IS ALSO OUR
COURSE IN
**EXPERIMENTAL
INTERACTION
DESIGN**

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WINTERSCHOOL.TLU.EE

SUMMERSCHOOL.TLU.EE

AND OUR **WORLD USABILITY DAY**

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CONFERENCES 2019 ONWARDS

- INTERACT 2019, The 17th IFIP TC13 International Conference on Human-Computer Interaction
- WUD Tallinn 2019, the 11th celebration of the World Usability Day in Estonia
- NordiCHI 2020, the 10th biannual Nordic forum for Human-Computer Interaction

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THANK YOU!

David Lamas

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