



Presentation of Aalborg University PYTHAGORAS Kick-off meeting

27 April 2022



AALBORG UNIVERSITY
DENMARK



ONE UNIVERSITY – THREE CAMPUSES

AALBORG

– approximately 19,800 students and 3,100 staff

COPENHAGEN

– approximately 3,250 students and 370 staff

ESBJERG

– approximately 600 students and 80 staff

RESEARCH AND EDUCATION

- ▶ Humanities
- ▶ Social Sciences
- ▶ Medicine
- ▶ Engineering and Science
- ▶ IT and Design

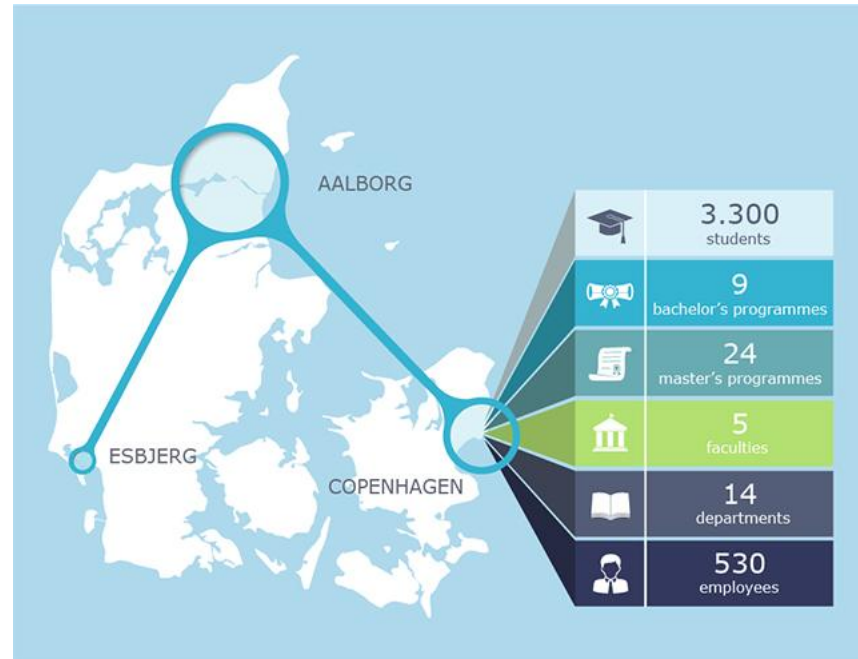


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Aalborg University

Aalborg University, AAU was inaugurated in 1974

Aalborg University differentiates itself from the older and more traditional universities with its focus on interdisciplinary, inter-faculty studies; a pedagogical structure based on problem-centred, real-life projects of educational and research relevance – which internationally has become known and recognized as ‘The Aalborg Model’.



Department of Architecture, Design and Media Technology - AD:MT (Faculty of Engineering and Science). The AD:MT is a multi campus department with branches in Aalborg, Copenhagen and Esbjerg.

The department's vision is to utilize and investigate the interplay between creativity and technology for development of new growth areas in research and education.

The ambition is to deliver excellent human design centred technology research.





AAU – KNOWLEDGE FOR THE WORLD

All degree programmes and research activities at Aalborg University are problem and project-based and have an interdisciplinary focus.

Through strong interplay between staff and students and intense collaboration with public and private sectors, degree programmes are oriented towards a real-world approach and provide world-class research.

This results in new insights, new solutions to societal challenges and knowledge that changes the world.

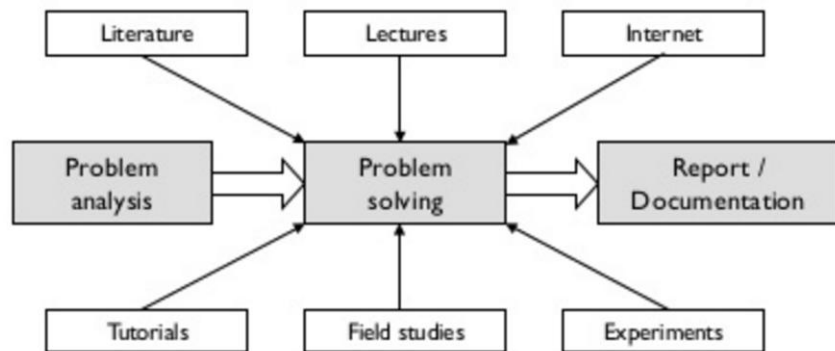


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PROBLEM AND PROJECT-BASED LEARNING

- ▶ Students are encouraged to solve a problem – they learn through problem solving
- ▶ Students complete a project in groups
- ▶ Students have an academic supervisor who assists them in the project process, challenges and discusses their ideas, and provides feedback on their project work
- ▶ Students document their work in a project report which is the subject of an oral (group) examination



WHY HOLD ON TO PBL?

- ▶ Students learn best when they are **actively participating** and apply theory and **research-based knowledge** to problem solving
- ▶ This learning model supports the development of students' **communication and collaboration skills**
- ▶ Students learn to take an **analytical and result-oriented approach** to their work
- ▶ PBL provides students with tools for **independent acquisition of knowledge** at an advanced academic level
- ▶ PBL provides students with the opportunity to **cooperate with external partners** on solving specific problems
- ▶ PBL can support **gamification** of learning





AAU ranking

At **Times Higher Education**, Aalborg University is ranked no. 201-250 (~207) in the overall World University Ranking, and no. 25 in Top 100 under the age of 50.

According to **US News World Ranking**, Aalborg University ranks as no. 250 in the overall world university rankings and as no. 8 in the world, and best in Europe, within the field of Engineering.

According to **QS**, Aalborg University is no. 326 in the overall world university ranking, and no. 34 in the top 50 of universities established within the past 50 years.

According to the 2018 **MIT report**, Aalborg University is considered to have the best engineering programme in Europe - a programme that takes fourth place in the world!



AAU ranking in sustainability

Times Higher
Education Impact
Ranking measures
how universities are
performing against
**the United Nations
Sustainable
Development Goals.**

SDG	AAU RANK
Overall THE Impact rank	6
SDG1: No Poverty	18
SDG2: Zero Hunger	71
SDG3: Good Health and Wellbeing	201-300
SDG4: Quality Education	1
SDG5: Gender Equality	101-200
SDG6: Clean Water and Sanitation	2
SDG7: Affordable and Clean Energy	88
SDG8: Decent Work and Economic Growth	101-200
SDG9: Industry, Innovation and Infrastructure	41
SDG10: Reduced Inequalities	16
SDG11: Sustainable Cities and Communities	101-200
SDG12: Responsible Consumption and Production	57
SDG13: Climate Action	101-200
SDG14: Life below Water	14
SDG15: Life on Land	96
SDG16: Peace, Justice and Strong Institutions	85
SDG17: Partnership for the Goals	22



Medialogy (BSc and MSc)

Medialogy combines technology and scientific experiments with focus on both hardware and software in designing new products and tools for use within media technology.

Main areas: human-computer interaction, user experience design, programming, web & mobile applications, audio processing, computer graphics, computer vision, machine learning and sensor technology



New Master Educations at ADMT Copenhagen



SOUND AND MUSIC COMPUTING - COPENHAGEN



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About myself...

Ph.D. degree in image/video processing from Aristotle University of Thessaloniki, Greece

Over 20 years experience in computer vision, smart systems and technology enhanced learning

10 years of teaching experience with PBL at AAU (Medialogy and Lighting Design)

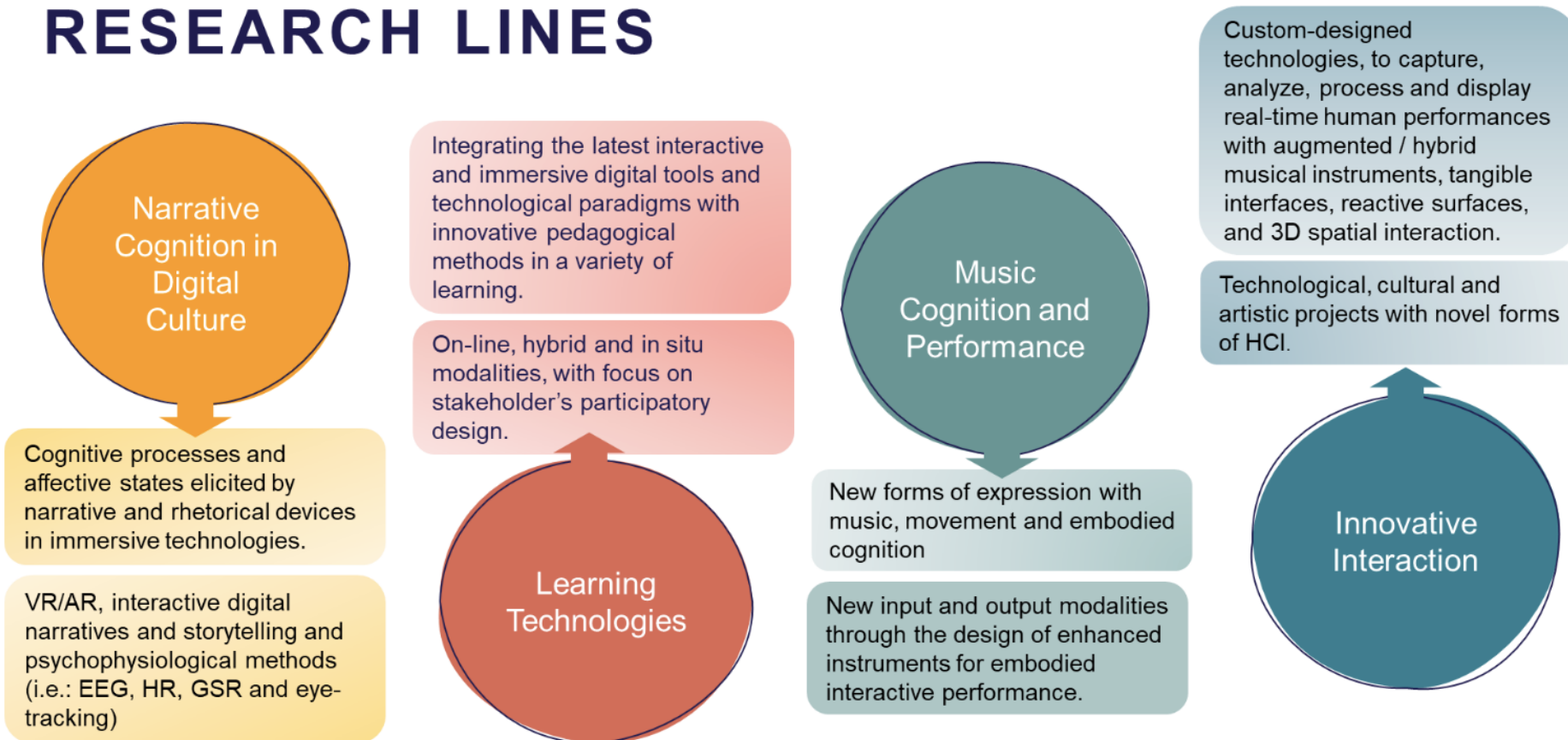
Involved in more than 30 national and international research competitive projects

Edited three special issues, chaired 4 conferences, and published more than 110 referred research papers with more than 1000 citations (source google scholar).



MeCIS: Media Cognition and Interactive Systems

RESEARCH LINES



DEPARTMENT OF ARCHITECTURE, DESIGN, AND MEDIA TECHNOLOGY



Relevant current Erasmus+ projects

EU Programme	Year	Project Identification or Contract Number Project name	Applicant/ Beneficiary Name
Cooperation partnerships in higher education	2022	INVITE: Developing Competences and Innovative Designs for International Virtual and Blended Modalities	AAU
Cooperation partnerships in higher education	2022	PYTHAGORAS: Learning scenarios and guide for gamifying online and hybrid mathematics education at university level	Sibiu Univ
Strategic Partnership	2021	RURAL CANVAS: Fostering Rural Resilience through Creativity- and Arts-driven Entrepreneurship (RURAL CANVAS)	AAU
Strategic Partnership	2021	AGME: Agile Methodology in Education	EVM
Strategic Partnership	2021	V4U: Virtual technologies For (4) Universities: Supporting online learning with virtual technologies (V4U),	AAU





EXPECTATIONS FROM THE PROJECT

- Investigate successful applications of gamification in online and hybrid mathematics
- Identify opportunities and challenges
- Develop specific learning scenarios to be used for gamifying mathematics in online and hybrid education

