This project has received funding from the European Union's Horizon 2020 research and innovation programme under the MariWe Skłodowska-Curie grant agreement No 813234.

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Horizon 2020 European Union funding for Research & Innovation



PRESENT:



modelling and pRedicting **Human decision-making Using Measures of subconscious Brain** processes through mixed reality interfaces and biOmetric signals

BENEFICIARIES

PARTNER ORG.



OBJECTIVES

RHUMBO aims to create an innovative multinational, multi-sectorial, and multidisciplinary excellence doctoral training network programme to produce 11 ESRs in cognitive neuroscience, transparently immersive experiences and artificial intelligence with a focus on neuro-business. Specific application in consumer behaviour has been selected to test the novel models and measurements developed by the project.

INTRODUCTION

RHUMBO proposes using measures of subconscious brain processes through the use of mixed reality technologies (MRT) and advanced biometric signals processing as a new paradigmtoimprovetheknowledgethatimplicitbrainprocesseshaveinhumandecision-making.

VISION

RHUMBO will produce a set of tools and models to predict human decision-making in business environments.

Scientific

The main scientific goal of RHUMBO is to use mixed reality technologies (MRT) together with different biometric signals, supported by artificial intelligence processing techniques to examine consumer behavioural patterns during dynamic, complex and realistic situations for a deeper understanding of internal human psychological states.

Training

To provide a high-level personalised multidisciplinary training program both in technical including enrolment in a PhD. and transferable skills (such as entrepreneurship, project management, ethical issues, IPR, open access) with the long term aim to produce scientific leadership – foundation for ERC starting grants and/or industry leadership – Industry Fellow.

Dissemination and outreach

Disseminate the neuroscience-based business methods and tools developed by the project to a wide spectrum of stakeholders ranging from the scientific community to corporate users; create awareness in the general public about neuroscienceandthefundamentalrolethatithasinourdaily decisions; to encourage neuroscience vocational careers among young students, with special emphasis on women.

RESEARCHERS

Jaikishan Khatri

Masoud Moghaddasi

Suman Sarkar

Diana Shih

Ameeruddin Ghouse

Candia

Aline

Simonetti

Sofia Sapia

Mauro Nascimben









Diego

Rivera



Sobhit

Kakaria





Matilde

Dirodi



	Factors affecting core cognitive pro- cesses in MRT envi- ronments	A neuroscience model of hu- man-human inter- actions	Narrative cognition and decision-mak- ing in mixed reality systems	Increasing pre- dictive validity of human decisions under risk situa- tions using fMRI measurements and mixed reality tech- nology	New neurometrics based on the anal- ysis of brain dy- namics	New neurometrics based on the analy- sis of autonomous nervous system activity	Customer brand choice behaviour in virtual commerce	Information pro- cessing on adver- tising stimuli: a morphing para- digm IPAS	Novel metrics for fNIRS in neu- ro-business	Hardware for re- al-time EEG and other bioelectrical signals	Systematic design of virtual and aug- mented commerce sites
l	Host	Host	Host	Host	Host	Host	Host	Host	Host	Host	Host
	UPV	UPV	Aalborg Uni	UKB	Aalborg Uni	Università di Pisa	UV	UV	Artinis	Guger Tech .	Neurons Inc .













