Fabrizio Bracco

Researcher

fabrizio.bracco@unige.it

Education and training

2003

PhD in Methodology of research - Psychology curriculum

Where to look at what to see how much to remember. Theoretical and methodological approaches to natural scene perception

Università di Genova - Genova - IT

Academic experience

2010 - ONGOING

Researcher in General Psychology

Università di Genova - Genova - IT

Professor of General Psychology

Language skills

English

Proficient

Teaching activity

Assistant professor in:

- General Psychology, bachelor degree in Communication sciences
- Psychology of emotion and motivation, master degree in Psychology
- Cognitive ergonomics, master degree in Digital Humanities

Postgraduate research and teaching activity

Supervision of PhD students, residents and post-doctoral fellows

PhD students supervision

PhD courses on data visualization and critical reviews of research papers

Research interests

My main research topics are concerning cognitive ergonomics and human factors in high-risk sociotechnical systems.

I am coordinator of several research projects about human performance

and cognition in technical systems, workload and situation awareness, interface design, simulation and training in emergency situations, development and training of non-technical skills

Grants

2017 - ONGOING

Mitigazione del rischio ambientale letture geostoriche e governance territoriale

MIUR - IT

Participant

member of the local unit, research on flood risk perception

2017 - 2018

A multimethod system for the assessment and training of teamwork in simulated scenarios

FonCsi - FR

25000 - Pricipal investigator

Simulation has proved to be a useful method to improve learning and increase the safety of work operations. It has become a relevant tool for safety training in aviation and other domains (healthcare, road safety, etc.), both for technical and non technical skills (e.g. Crew Resource Management, in aviation). The debriefing session, after the scenario, is the core of the simulation, since it allows participants to integrate the experience with the theoretical frameworks and the procedural guidelines. Notwithstanding the evidence of the relevance of non-technical skills (NTS) for the safe and efficient accomplishment of operations, the observation, assessment and feedback about these skills is particularly complex, because the process needs expert observers and the feedback is often provided in judgmental and ineffective ways. In the context on the *Topic 2*, partners will develop new methods based on real cases analysis, useful to enhance the NTS and identify the best practices to be implemented. The aim of this study is therefore to develop and test a set of observation and rating forms for the NTS behavioural markers of workers involved in a simulation of electric tasks. In addition, we want to add a new method for observing behaviours based on non-verbal cues, like movement in the operational environment. We aim at developing a new generation of sensor-based systems and indexes for monitoring team coordination. By automatically quantifying human behaviour using wearable and non-invasive sensors, we can find relationships between sensor data and team performance and thus identify optimal behaviour patterns that would lead to improved performance. The developed method could be shared with internal and external stakeholders through an effective communication campaign, in order to inform all interested actors about the development of the project and the results achieved. The transfer of such method to stakeholders is relatively easy, since it is based on paper-and-pencil assessment system (the SPS checklist) and a NVC tracking system that could be implemented, after proper validation, on current smartphones and on software and hardware for the

recording of scenarios during the simulation.

2015 - 2017

Promoting Safety as an emergent property of a resilient system.

Inail - IT

36000 - Pricipal investigator

According to literature, “a system is resilient if it can adjust its functioning prior to, during, or following events
(changes, disturbances, and opportunities), and thereby sustain required operations under both expected and unexpected
conditions.” (Hollnagel et al., 2011). The main safety methods to improve resilience are therefore based on the capacity to (a) anticipate, (b) monitor, (c) respond, and (d) learn.
Our research focus was on the anticipatory capacity of the system and in particular on the knowledge and skills needed by middle-managers to promote and enhance this ability in co-workers and, therefore, in the whole system. We state that this capacity is mainly based on Non-Technical Knowledge and Skills (NTKS), in other words social and cognitive abilities shared by all kind of workers.

2011 - 2012

FODAI Fatigue and Overload Detection and Advising Interface European Defence Agency

EU

Participant

Mental workload analysis of radar operators by means on non-intrusive methods like eye-tracking

2012 - 2018

Prodifcon

MIUR - IT

86000 - Participant

Information visualization methods in high-risk and high-stress environments
analysis of the current methods for data visualization on naval combat systems
User-centered design prototype for a decision support system for naval unit commanders

Editorial activity

Reviewer for international peer-reviewd journals on human factors

Other professional activities

Founder of the university spinoff VIE srl
www.vie-srl.com