



Curriculum Vitae

Petar Jerčić

Place of living : Split, Croatia
Date of birth : September 11, 1984
Nationality : Croatian
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International researcher mainly focused on measurements and interpretation of emotional states in users with the use of psychophysiological methods and equipment. These have been integrated into serious games for the biofeedback training in emotion-regulation, to improve human decision-making on the task.

Development Skills

- Python (NumPy, SciPy, Pandas, Biosppy), Matlab, R
- C++14 standard
- Qt5, Unity 3D

Education

- **Ph.D. in Computer Science**, Blekinge Institute of Technology (Sweden)
Research focus: Game Development and Design
Ph.D. thesis: The Effects of Emotions and Their Regulation on Decision-making Performance in Affective Serious Games
- **M.Sc. in Computer Science**, University of Split (Croatia)
MS thesis: Business layer logic in the information system for job applications
- **Mindfulness MBSR teacher**, Mindful Academy (Spain)

Working experience

- 02/2020 - Present** **Visiting Researcher**
University Medical Center Groningen, Groningen (Netherlands)
- Research on the possibilities of biofeedback applications in VR treatment for psychiatric disorders at the Department of Psychiatry
- 09/2019 - Present** **Healthcare Researcher**
Jamzone, Leeuwarden (Netherlands)
- Research on affective states of stress and relaxation, and how these influence the mental mindset of gamers
 - Data analysis of physiological data relating to the task performance in the Stressjam serious game
 - System architect for the affective artificial intelligence in the Stressjam serious game for the stress-related treatments
 - Protocol design for the clinical RTC user study, together with the ethical approval applications

- 12/2018 - 08/2019** **Senior Lecturer**
Blekinge Institute of Technology, Karlskrona (Sweden)
- Course responsible for research methodology courses in higher education
 - Course responsible and supervision for bachelor thesis in Computer science
 - Master thesis supervision in Computer science
- 10/2016 - 11/2018** **R&D Software Designer**
Philips Healthcare, Best (Netherlands)
- Development of X-ray systems in the area of cardiac or vascular medical diagnosis and intervention (i.e., a “dotter” treatment)
 - Development of the user interface for the low-level control for the movement to combine (high speed) motion with safety for the patient and the operator
 - Following the Software Documentation Process ISO 13485 standard for Software Development for Medical devices - Class III (IEC 60601)
- 01/2015 - 09/2016** **Researcher and Developer of Physiology sensors for Hearing Aid (*Ph.D. related*)**
The School of Medicine, Split (Croatia)
Research Fellowships for professional development of young researchers and postdoctoral researchers in the field of medical neuroelectronics [EU project]
- Development of physiology sensors and experiments for the use of fundamental investigation of neurobiology in the human hearing
 - Development of the neuroelectronic software interface based on electroencephalography (EEG) sampled at high frequency (> 20 kHz)
 - Development of the artifact removal algorithm for the cochlear implants on EEG signals using Independent Component Analysis (ICA)
- 01/2014 - 05/2014** **Robotic system developer (*Ph.D. related*)**
RIKEN Brain Science Institute (RIKEN BSI), Tokyo (Japan)
- Development of robotic technologies communicating with physiological sensor technologies (i.e., EEG and Microsoft Kinect)
 - Collaborative interaction between human and robot
- 04/2013 - 06/2013** **Brain-Computer Interface (BCI) developer (*Ph.D. related*)**
Radboud University, Nijmegen (Netherlands)
- Development of Brain-Computer Interface (BCI) technologies using Serious Games as training tools, which use EEG medical sensor to extract information on various brain states
 - Used wearable EEG device and Serious games allowing the convenience and short setup times
 - Demonstration at Europeans Researcher Night 2014 for popularization of science
- 06/2012 - 09/2013** **Researcher and Developer of Dynamic Robotic Systems (*Ph.D. related*)**
Blekinge Institute of Technology, Karlskrona (Sweden)
PsyIntEC [EU project]
- Advances that address safe ergonomic and empathetic adaptation by a robotic system to the needs and characteristics of a human co-worker during collaborative work in a joint human-robot work cell
 - Psychophysiological (or biometric) data input (i.e., ECG, EEG, and GSR) as the basis for affective and cognitive modeling of the human partner as a basis for behavioral adaptation
 - Project proposal, managing publishing, and reporting research

03/2010 - **Researcher and Developer of Serious Game Technologies (Ph.D. related)**
09/2012 **Blekinge Institute of Technology, Karlskrona (Sweden)**
xDelia [EU project]

- Improving financial decision making by developing and evaluating the potential of serious games and medical sensors
- Development of tools to conduct experimental and field research, medical instrumentation and serious games
- The importance for competence building of contextual and psychological validity, and of the need for timely and relevant feedback
- Biofeedback using Serious games and medical sensors (i.e., ECG, EEG, and GSR)
- Managing, publishing and reporting research

Awards and Honors

- The Honorary Mention Best Paper Award, IFIP-ICEC 'Entertainment Computing' 2019 and 2018

Lecturing experience

Blekinge Institute of Technology (Sweden)

- Introduction to Programming, School of Computing, 2010-13
- 3D Programming, School of Computing, 2010-14
- Advanced 3D Programming, School of Computing, 2010-14
- Game and Interaction Design, School of Computing, 2013-14
- Student Game Projects, School of Computing, 2013-14
- Research Methodology (Course Responsible), Department of Computer Science, 2018-19
- Data Visualization, Department of Computer Science, 2018-19
- Bachelor Thesis in Computer Science (Course Responsible, Supervision) BTH 2013-19
- Supervision of bachelor and master theses in Computer Science, Game Development and Technical Artist program (BTH) 2013-19
- Master Thesis in Computer Science (Supervision) 2019
 - Joakim Jerkenhag
 - Karl Hansson
 - Mikael Hernvall
- Certified in three Higher Education Pedagogy courses bearing 22.5 ECTS points

Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Split (Croatia)

- Introduction to Programming, Department of Computing, 2008-09
- Programming for Web, Department of Computing, 2008-09

Guest lecturer

- Instructional Design of Serious Games for Healthcare, Singapore University of Technology and Design (SUTD), 2020

Service

- Invited speaker at the 8th International Week at HAN University of Applied Sciences 2020 (Nijmegen, Netherlands)
- Invited speaker at Human Factors NL Congress 2019 (Sosteborg, Netherlands)
- Organizational board member for Games for Health Journal

- Reviewer for IEEE Transactions on Affective Computing, Games for Health Journal, Robotics
- Reviewer for International Conference on Entertainment Computing 2019 (IFIP), International Conference on Virtual Worlds and Games for Serious Applications 2019 (VS-Games), IEEE International Conference on Systems, Man, and Cybernetics 2019 (SMC)
- Reviewer for Springer Workshop on Digital Transformation for an Inclusive Society 2019

Languages

- English (fluent)
- Swedish (intermediate)
- Japanese (intermediate)
- Dutch (beginner)
- Croatian

Other

Music (guitar), free climbing