

The 13th ACM International Conference on PErvasive Technologies Related to Assistive Environments

PETRA 2020

Conference Program

June 30 – July 3, 2020
Virtual Conference

Organized by

The University of Texas at Arlington, Arlington, Texas, USA

With sponsorship from:

The National Science Foundation (NSF), USA

MDPI Technologies Journal

The College of Engineering, University of Texas at Arlington (UTA), USA

The Department of Computer Science and Engineering at UTA, USA

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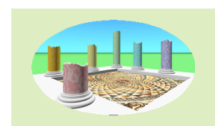
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LETTER FROM THE CONFERENCE CHAIR



Dear Friends and Colleagues,

On behalf of the Program Committee and the Organizing Committees, I welcome you to the **13th ACM International Conference on Pervasive Technologies Related to Assistive Environments, PETRA 2020**, taking place June 30 – July 03, 2020. Breaking with tradition, this year the conference will be virtual due to the COVID-19 pandemic. Originally to take place on the majestic island of Corfu, travel uncertainties and the outcomes of the survey we took with you, made us decide to conduct it virtually.

As PETRA is an interdisciplinary conference with focus on pervasive technologies that improve the quality of life and enhance human performance, addressing the pandemic challenge, we received permission from ACM to compensate the lack of physical interaction with enhanced features in the ACM proceedings. Thus, for this 13th PETRA, we provide a new opportunity to get to know the presenters and their work better with **video presentations** that accompany the accepted papers, a feature we may want to continue on future conferences.

In spite of its virtual occurrence, PETRA 2020 had a total of 104 submissions from 24 countries and 95 registrations. PC members came from 16 different countries. Paper acceptance included 27 full papers, 7 short papers and 12 poster papers. The conference had ten workshops and accepted 41 workshop papers. Like all previous years, the US National Science Foundation (NSF) supported the conference with a **Doctoral Consortium (DC) award** that enabled the DC committee to offer support to 13 student authors, from several different universities, 3 of them female. In addition, several accepted papers had undergraduate student coauthors, supported by the REU (**R**esearch **E**xperiences for **U**ndergraduates) NSF program. This year, PETRA 2020 distinguishes papers with five types of awards: *Best Technical Paper*, *Best Paper for Novelty*, *Best Student Paper*, *Best Poster Paper* and *Best Workshop Paper*.

This year, the conference theme of “*Pervasive Technologies Related to Assistive Environments*” takes a special meaning at this unique time in a world that is gripped by a pandemic crisis, as scientific results also bolster assistive technologies designed to meet human needs. Indeed, many of PETRA’s AI based methods show compelling social applications to help build, stone by stone (*PETRA means stone in Greek*), new ways of life to survive in an increasingly challenging world. Results range from basic research in computer vision, machine learning, data mining, human robot interaction, and big data, to engineering applications in robotics, sensors, devices and software solutions that address physical, cognitive, and mental performance assessment and monitoring. The conference addresses the needs of both healthy individuals and persons with special needs, such as providing safe in-home care for the elderly, or persons with Dementia, Alzheimer’s, Parkinson’s, chronic arthritis, PTSD, low vision, autism, COPD, Traumatic Brain Injury, and other conditions.

We hope that PETRA 2020 provides a scientific impetus and stimulant to address the diverse human needs that the COVID-19 health crisis has brought. We appreciate your participation and look forward to seeing you all in person in the beautiful blue surroundings of Corfu in 2021! **Please mark your calendars for June 29-July 2nd, 2021, for PETRA’21 in Corfu and feel free to send me feedback and suggestions.**

Wishing you a happy and safe summer,

Fillia Makedon
2020 PETRA Conference Chair
makedon@uta.edu

Session A: Accessibility Tools, Methods & Applications

A-1. AVIKOM – Towards a Mobile Audiovisual Cognitive Assistance System for Modern Manufacturing and Logistics.
Alexander Neumann, Benjamin Streng, Janne Uhlich, Katharina Schlicher, Günter Maier, Lars Schalkwijk, Joachim Waßmuth, Kai Essig, and Thomas Schack

A-2. Optimal Modality Selection Using Information Transfer Rate for Event Related Potential Driven Brain Computer Interfaces.

Aziz Koçanaoğulları, Murat Akçakaya, Barry Oken, and Deniz Erdoğan

A-3. Enhancing Information Transfer Rate of Multi-class BCI System by Improving Classification Accuracies using Machine Learning Methods.

Hina Jabbar, Noman Naseer, and Adil Saeed

A-4. Improving Classification Performance of Hybrid EEG-fNIRS BCI System by Channel Optimization.

Adil Saeed, Noman Naseer, and Hina Jabbar

A-5. Real time direction estimation for pointing interactions using a depth sensor and a nine axis inertial motion unit.
Shome S. Das

A-6. Role of Intrinsic Motivation in User Interface Design to Enhance Worker Performance in Amazon MTurk.

Pushyami Kaveti and Md. Navid Akbar

Session B: Assistive Robotic Systems and HRI

B-1. Emotion Expression in a Socially Assistive Robot for Persons with Parkinson's Disease.

Andrew Valenti, Avram Block, Meia Chita-Tegmark, Michael Gold, and Matthias Scheutz

B-2. Non-Participatory User-Centered Design of Accessible Teacher-Teleoperated Robot and Tablets for Minimally Verbal Autistic Children.

Jamy Li, Daniel Davison, Alyssa Alcorn, Alria Williams, Snezana Babovic Dimitrijevic, Suncica Petrovic, Pauline Chevalier, Bob Schadenberg, Liz Pellicano, and Vanessa Evers

B-3. Increasing User Trust in a Fetching Robot using Explainable AI in a Traded-control Paradigm.

Jacob Cassidy, Chris Robinson, and Dan O. Popa

Session C: Multimodal Interfaces and HCI

C-1. BlindScanLine: Preliminary Implementation and Evaluation of a Cross-platform Line Scanning Sonification Approach using Frequency and Amplitude Modulation.

Julian Kreimeier, Maximilian Kappe, and Timo Götzelmann

C-2. Object Detection and Sensory Feedback Techniques in Building Smart Cane for the Visually Impaired: An Overview.

Summer Asad, Brittany Mooney, Ishfaq Ahmad, Manfred Huber, and Addison Clark

Session D: Human Affect, Physiology & Biosignal Analysis

D-1. *Towards Detecting Levels of Alertness in Drivers Using Multiple Modalities.*

Kais Riani, Michalis Papakostas, Hussein Kokash, Mohamed Abouelenien, Mihai Burzo, and Rada Mihalcea

D-2. *Biosensor Prediction of Aggression in Youth with Autism using Kernel-based Methods.*

Tales Imbiriba, Diana Cumanasoiu, James Heathers, Stratis Ioannidis, Deniz Erdogmus and Matthew Goodwin

D-3. *Motor Cortex Mapping using Active Gaussian Processes.*

Razieh Faghihpirayesh, Tales Imbiriba, Mathew Yarossi, Eugene Tunik, Dana Brooks, and Deniz Erdoğan

D-4. *Mapping Motor Cortex Stimulation to Muscle Responses: A Deep Neural Network Modeling Approach.*

Md Navid Akbar, Mathew Yarossi, Marc Martinez-Gost, Marc A. Sommer, Moritz Dannhauer, Sumientra Rampersad, Dana Brooks, Eugene Tunik, and Deniz Erdoğan

Session E: Activity Recognition & Human Tracking

E-1. *Data Augmentation for Time Series: Traditional vs Generative Models on Capacitive Proximity Time Series.*

Biying Fu, Florian Kirchbuchner, and Arjan Kuijper

E-2. *HAND-REHA: Dynamic Hand Gesture Recognition for Game-based Wrist Rehabilitation.*

Harish Ram Nambiappan, Farnaz Farahanipad, Ashish Jaiswal, Maria Kyrarini, and Fillia Makedon

E-3. *A sound-based crowd activity recognition with neural network based regression models.*

Wei Wang, Fatjon Seraj, and Paul Havinga

E-4. *A Tool-Based Methodology for Long-Term Activity Monitoring.*

Rafik Belloum, Charles Consel, and Nic Volanschi

Session F: Pattern Recognition in Assistive Application

F-1. *Unconstrained Workout Activity Recognition on Unmodified Commercial off-the-shelf Smartphones.*

Biying Fu, Florian Kirchbuchner, and Arjan Kuijper

F-2. *Personalized System for Human Gym Activity Recognition using an RGB Camera.*

Preetham Ganesh, Chinmaya Basavanahally Venkatesh, Reza Etemadi Idgahi, Ashwin Ramesh Babu, and Maria Kyrarini

F-3. *A Machine Learning Approach for Predicting Post-stroke Aphasia Recovery: A Pilot Study*

Yiwen Gu, Murtadha Bahrani, Anne Billot, Swathi Kiran, Margrit Betke, Emily Braun, Sha Lai, Maria Varkanitsa, Julia Bighetto, Brenda Rapp, Todd B Parrish, David Caplan, and Cynthia Thompson

Session G: Pervasive Systems for the Aged & Smart Health

G-1. *Implicit factors related to Greek older adults' perceived usability of online technologies: An exploratory study.*
Diogenis Alexandrakis, Konstantinos Chorianopoulos, and Nikolaos Tselios

G-2. *Healing Spaces: Feasibility of a Multisensory Experience for Older Adults with Advanced Dementia and their Caregivers.*

Gabriela Purri R. Gomes, Sydney Rubin, Leah I. Stein Duker, Donna Benton, Andreas Kratky, Sze Yu A. Chen, Maryalice Jordan-Marsh, and Marientina Gotsis

G-3. *Designing Smart Home Controls for Elderly.*

Silvia Rus, Florian Kirchbuchner, Stefan Helfmann, and Arjan Kuijper

G-4. *Gait Analysis and Visualization in a Fall Risk Assessment System.*

Tanner Amundsen, Matthew Rossman, Ishfaq Ahmad, Manfred Huber, and Addison Clark

G-5. *Serious Games to Cognitively Stimulate Older Adults: A Systematic Literature Review.*

Vanessa Palumbo and Fabio Paternò

Session H: Telepresence, Virtual and Augmented Reality

H-1. *Understanding Research Methodologies When Combining Virtual Reality Technology with Machine Learning Techniques.*

Luis Quintero

H-2. *BlindWalkVR: Formative Insights into Blind and Visually Impaired People's VR Locomotion using Commercially Available Approaches.*

Julian Kreimeier, Pascal Karg, and Timo Götzelmann

H-3. *Tabletop Virtual Haptics: Feasibility Study for the Exploration of 2.5D Virtual Objects by Blind and Visually Impaired with Consumer Data Gloves.*

Julian Kreimeier, Pascal Karg, and Timo Götzelmann

H-4. *AR-Glasses-Based Attention Guiding for Complex Environments - Requirements, Classification and Evaluation.*

Patrick Renner and Thies Pfeiffer

Session I: Wearable Systems and Monitoring Devices

I-1. *Tactile Navigation with Checkpoints as Progress Indicators? Only when Walking Longer Straight Paths.*

Oliver Korn, James Gay, Rúben Gouveia, Lea Buchweitz, Annika Sabrina Schulz, and Moritz Umfahrer

I-2. *Enabling Data Sovereignty for Patients through Digital Consent Enforcement.*

Arno Appenzeller, Ewald Rode, Erik Krempel, and Jürgen Beyerer

I-3. *Empathics System: Application of Emotion Analysis AI through Smart Glasses.*

Tzuhsiang Lin, Christopher Tran, LeAnn Huang, Tian Feng, Jenna James, Richard Zaragoza, Blake Hannaford, Linda E. Wagner, and John Raiti

Workshop W1: AGENT

The 2nd International Workshop on Multimodal SiGnal Sensing/Analysis, Innovative Interactive Environments and PersoNalized Behavioral Modeling for Improving QualiTy-of-Life

Workshop Organizers: Petros Daras, Kosmas Dimitropoulos, Nicholas Vretos, Leontios Hadjileontiadis, and Federico Alvarez

W1-1. *Hand Over Face Segmentation using MPSPNet.*

Sakher Ghanem, Alex Dillhoff, Ashiq Imran, and Vassilis Athitsos

W1-2. *Quality of Life Support System for People with Intellectual Disability.*

Maria Papadogiorgaki, Vasileios Mezaris, Nikos Grammalidis, Kostas Grigoriadis, Ekaterini Bei, George Livanos, and Michalis Zervakis

W1-3. *DALÍ: A Digital Assistant for the Elderly and Visually Impaired using Alexa Speech Interaction and TV Display.*

Apostolos Meliones and Stavros Maidonis

W1-4. *Developing Accessibility Multimedia Services: The Case of EasyTV.*

Dimitrios Konstantinidis, Kosmas Dimitropoulos, Kiriakos Stefanidis, Thanassis Kalvourtzis, Salim Gannoum, Nikolaos Kaklanis, Konstantinos Votis, Petros Daras, Sara Rovira-Esteva, Pilar Orero, Silvia Uribe, Francisco Moreno, Alvaro Llorente, Pablo Calleja, Maria Poveda-Villalon, Pasquale Andriani, Giuseppe Vitolo, Giuseppa Caruso, Nicolamaria Manes, Fabrizio Giacomelli, Jordi Fabregat, Francesc Mas, Jordi Mata, Stavros Skourtis, Chrysostomos Bourlis, Giuliano Frittelli, Emilio Ferreiro, and Federico Alvarez

W1-5. *Innovative interventions for Parkinson's disease patients using iPrognosis Games: An evaluation analysis by medical experts.*

Sofia Balula Dias, Ioannis Ioakeimidis, Kosmas Dimitropoulos, Athina Grammatikopoulou, Nikos Grammalidis, José Diniz, Vicky Zilidou, Theodore Savvidis, Evdokimos Konstantinidis, Panagiotis D. Bamidis, Michael Stadtschnitzer, Dhaval Trivedi, Lisa Klingelhofer, Sevasti Bostantzopoulou, Zoe Katsarou, Stelios Hadjidimitriou, Vasileios Charisis, and Leontios J. Hadjileontiadis

Workshop W2: DAEM

The 4th International Workshop on Designing Assistive Environments for Manufacturing

Workshop Organizers: Sebastian Büttner, Mario Aehnelt, Mario Heinz, Markus Funk, Henrik Mucha, and Thomas Kosch

W2-1. *Spatial augmented reality: a tool for operator guidance and training evaluated in five industrial case studies.*

Tim Bosch, van Rhijn, Frank Krause, Reinier Konemann, Ellen Wilschut, and Michiel de Looze

W2-2. *Macro Workstep Detection for Assembly Manufacturing.*

Abdelrahman Ahmad, Michael Haslgrübler, Alois Ferscha, Birgit Ettinger, and Jullius Cho

W2-3. *Learning and Performing Assembly Processes - An Overview of Learning and Adaptivity in Digital Assistance Systems for Manufacturing.*

Hendrik Oestreich, Sebastian Wrede, and Britta Wrede

Workshop W3: DigiTAI – The 1st International Workshop on Digital Health Systems for the Aging Population

Workshop Organizers: Kristina Yordanova, Nikolaj Graf von Malotky, Tomasz Sosnowski, and Moh'd Abuazizeh

W3-1. *A Probabilistic Conversational Agent for Intelligent Tutoring Systems.*

Tomasz Sosnowski and Kristina Yordanova

W3-2. *Computational State Space Model for Intelligent Tutoring of Students in Nursing Subjects*

Moh'D Abuazizeh, Thomas Kirste, and Kristina Yordanova

W3-3. *INTEGRA: A Web-Based Differential Diagnosis System Combining Multiple Knowledge Bases.*

Aris Papakonstantinou, Haridimos Kondylakis, and Emmanouil Marakakis

W3-4. *A mixed-methods evaluation of a supporting app for informal caregivers of people with dementia*

Lena Rettinger, Lucia Zeuner, Katharina Werner, Valentin Ritschl, Erika Mosor, Tanja Stamm, Elisabeth Haslinger-Baumann, and Franz Werner

Workshop W4: HealthWear - The 1st International Workshop on Wearable Systems and Applications for Smart Healthcare

Workshop Organizers: Ming Li and Khosrow Behbehani

W4-1. *An embedded wearable device for monitoring diabetic foot ulcer parameters.*

Vishwajit V. Kulkarni, and Fatjon Seraj

W4-2. *Wrist-worn Accelerometer based Fall Detection for Embedded Systems and IoT devices using Deep Learning Algorithms.*

Dimitri Kraft, Karthik Srinivasan, and Gerald Bieber

W4-3. *A Wearable Fitness Tracking Ecosystem for Exercise Therapy for Traumatic Brain Injury Patients.*

Ahmad Turki, Kan Ding, Rong Zhang, Ming Li, Kathleen Bell, and Khosrow Behbehani

Workshop W5: IoT-MAT - The 1st International hands-on Workshop on Internet-of-Things and Multimodal Assistive Technologies at Home

Workshop Organizers: Daniela Elisabeth Ströckl, Johannes Oberzaucher, Elena Oberrauner, and Johanna Plattner

W5-1. *Smart City Technology meets Smart Health Assistive Systems on the example of the project AYUDO.*

Daniela Elisabeth Ströckl, Elena Oberrauner, Johanna Plattner, Vladimir A. Shekhovtsov, Gerhard Leitner, Claudia Steinberger, Christian Kop, and Peter Schartner

W5-2. *Using IoT Middleware solutions in Interdisciplinary Research Projects in the Context of AAL.*

Johanna Plattner, Elena Oberrauner, Daniela Elisabeth Ströckl, and Johannes Oberzaucher

Workshop W6: NOTION - The 5th International Workshop on Human Behaviour Monitoring, Interpretation and Understanding

Workshop Organizers: Ahmad Lotfi, Amir Pourabdollah, Diego Resende Faria, and Junpei Zhong

W6-1. *A Multi-scale Fuzzy Entropy Measure for Anomaly Detection in Activities of Daily Living.*

Aadel Howedi, Ahmad Lotfi, and Amir Pourabdollah

W6-2. *Human Activity of Daily Living Recognition in Presence of an Animal Pet Using Thermal Sensor Array.*

Abdallah Naser, Ahmad Lotfi, Junpei Zhong, and Jun He

W6-3. *Fuzzy Logic Web Services for Real-time Fall Detection Using Wearable Accelerometer and Gyroscope Sensors.*

Bhavesh Pandya, Amir Pourabdollah, and Ahmad Lotfi

W6-4. *Reducing Race-Based Bias and Increasing Recidivism Prediction Accuracy by using Past Criminal History Details.*

Bhanu Jain, Manfred Huber, Ramez Elmasri, and Leonidas Fegaras

W6-5. *Employing a Deep Convolutional Neural Network for Human Activity Recognition Based on Binary Ambient Sensor Data.*

Gadelhag Mohamed, Ahmad Lotfi, and Amir Pourabdollah

W6-6. *A Machine Learning Approach for Gender Identification of Greek Tweet Authors.*

Spiros Baxevanakis, Stelios Gavras, Despoina Mouratidis, and Katia Kermanidis

W6-7. *Vibroarthrography using Deep Neural Networks.*

Dimitri Kraft and Gerald Bieber

Workshop W7: Smart-Access - The 2nd International Workshop on Accessibility and the Smart City: Technological Challenges and Open Accessibility Issues

Workshop Organizers: Eleni Efthimiou and Stavroula-Evita Fotinea

W7-1. *SL-ReDu: Greek Sign Language Recognition for Educational Applications. Project Description and Early Results.*

Gerasimos Potamianos, Katerina Papadimitriou, Eleni Efthimiou, Stavroula-Evita Fotinea, Galini Sapountzaki, and Petros Maragos

W7-2. *Human-Centered Design for a Sign Language Learning Application.*

Jerry Schnepf, Rosalee Wolfe, Souad Baowidan, Ronan Johnson, and John McDonald

W7-3. *Towards the Inclusion of Wheelchair Users in Smart City Planning through Virtual Reality Simulation.*

Timo Götzelmann and Julian Kreimeier

W7-4. *Optimization of Navigation Considerations of People with Visual Impairments through Ambient Intelligence.*

Timo Götzelmann and Julian Kreimeier

Workshop W8: PerInt – The 2nd International Workshop on Pervasive Intelligence in Engineering

Workshop Organizers: Nikolaos Doulamis, Anastasios Doulamis, and Athanasios Voulodimos

W8-1. *A Cost -Effective Photonics-based Device for Early Prediction, Monitoring and Management of Diabetic Foot Ulcers.*

Anastasios Doulamis, Nikolaos Doulamis, and Aikaterini Angeli

W8-2. *Long-term Recurrent Convolutional Networks for Non-Intrusive Load Monitoring.*

Maria Kaselimi and Nikolaos Doulamis

W8-3. *Transportation Mode Detection using Machine Learning Techniques on Mobile Phone Sensor Data.*

Ifigenia Drosouli, Athanasios Voulodimos, and Georgios Miaoulis

W8-4. *Multi-Label Deep Learning Models for Continuous Monitoring of Road Infrastructures.*

Eftychios Protopapadakis, Iason Katsamenis, and Anastasios Doulamis

W8-5. *Man Overboard Event Detection from RGB and Thermal Imagery: Possibilities and Limitations.*

Iason Katsamenis, Eftychios Protopapadakis, Athanasios Voulodimos, Dimitris Dres, and Dimitris Drakoulis

W8-6. *A novel Classification Method for Customer Experience Survey analysis.*

Ioannis Rallis, Ioannis Markoulidakis, Ioannis Georgoulas, and George Kopsiaftis

W8-7. *Neural Network Architectures for the detection of SYN flood attacks in IoT systems.*

Spilios Evmorfos, George Vlachodimitropoulos, Nikolaos Bakalos, and Erol Gelenbe

W8-8. *Semantic Classification of Monuments' Decoration Materials Using Convolutional Neural Networks: A Case Study in Meteora Byzantine Churches.*

Nikolaos Bakalos, Sophia Soile, and Charalambos Ioannidis

Workshop W9: RAI4Children – The 1st International Workshop on Innovative Technological and Robot-Assisted Interventions for Children with Autism Spectrum or other Neurodevelopmental Disorders

Workshop Organizers: Yiannis Koumpouros, Costas Tzafestas, and Christina F. Papaeliou

W9-1. *User centered design and assessment of a wearable application for children with Autistic Spectrum Disorder supporting daily activities.*

Yiannis Koumpouros and Thomas Toulas

W9-2. *A Three-module Proposed Solution to Improve Cognitive and Social skills of Students with Attention Deficit Disorder (ADD) and High Functioning Autism (HFA).*

Ourania Manta, Thelma Androutsou, Athanasios Anastasiou, Yiannis Koumpouros, George Matsopoulos, and Dimitris Koutsouris

W9-3. *BrainHood: Towards an Explainable Recommendation System for Self-Regulated Cognitive Training in Children.*

Konstantinos Tsiakas, Emilia Barakova, Vassilis-Javed Khan, and Panos Markopoulos

Workshop W10: RoboSense – The 2nd International Workshop on Robotic Sensing in Human-Robot Interaction

Workshop Organizers: Ge Gao, Maria Kyrarini, Michalis Papakostas, Akilesh Rajavenkatanarayanan, and Konstantinos Tsiakas

W10-1. *Towards a Serious Game based Human-Robot Framework for Fatigue Assessment.*

Varun Kanal, James Brady, Harish Nambiappan, Maria Kyrarini, Glenn Wylie, and Fillia Makedon

W10-2. *Evaluation of 3D markerless pose estimation accuracy using OpenPose and depth information from a single RGB-D camera.*

Fotios Lygerakis, Maria Dagioglou, Athanasios C Tsitos, Fillia Makedon, and Vangelis Karkaletsis

Session P: Poster Papers

P-1. *A Comparative Study of Text Entry Performance of Low-Profile versus High-Profile Keyboards.*

Camilla Arntzen, Jan Fredrik Eri Kopperud, Thomas Horn, and Frode Eika Sandnes

P-2. *Measuring Motion Behavior to Detect Spatial Disorientation in a VR Environment.*

Stefan Lüdtke, Chimezie O. Amaefule, Thomas Kirste, and Stefan J. Teipel

P-3. *Wearable or HMD? How to Support Tactile Navigation.*

Karan Nandkumar, Annika Sabrina Schulz, and Oliver Korn

P-4. *Using Smartphones as Magnifying Devices: A Comparison of Reading Surface Finger Tracking and Device Panning.*

Alireza Shoaee Shirehjini and Frode Eika Sandnes

P-5. *Object Detection and Localization For An Indoor Assistive Environment Scenario.*

Christos Sevastopoulos, Mohammad Zaki Zadeh and Fillia Makedon

P-6. *Modular Virtual Reality to enable efficient user studies for autonomous driving.*

Kathrin Konkol, Elisabeth Brandenburg, and Rainer Stark

P-7. *Towards Cognitive Fatigue Detection from Functional Magnetic Resonance Imaging Data.*

Mohammad Zaki Zadeh, Ashwin Ramesh Babu, Jason Bernard Lim, Maria Kyrarini, Glenn Wylie, and Fillia Makedon

P-8. *Participation of Elderly People in Smart City Planning by Means of Virtual Reality.*

Timo Götzelmann and Julian Kreimeier

P-9. *Human Action Recognition with Deep Learning Techniques.*

Eirini Mathe, Athanasia Tranou, Evaggelos Spyrou, and Stavros Perantonis

P-10. *Skeleton Geometric Transformation For Human Action Recognition Using Convolutional Neural Networks.*

Antonios Papadakis, Ioannis Vernikos, Eirini Mathe and Evaggelos Spyrou

P-11. *Sedentary workers recognition based on machine learning.*

Sotiris Alexiou, Nikos Fazakis, Otilia Kocsis, Nikos Fakotakis, and Konstantinos Moustakas

P-12. *Prediction of Epilepsy Development in Traumatic Brain Injury Patients from Diffusion Weighted MRI.*

Md Navid Akbar, Rachael Garner, Marianna La Rocca, Dominique Duncan, and Deniz Erdoğan

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11. Kais Riani - *University of Michigan, USA*
12. Christopher Robinson - *University of Louisville, USA*
13. Christos Sevastopoulos - *University of Texas at Arlington, USA*

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