CYBER 2019: Program Contribution NexTech 2019 - Conference Schedule **Conference Venue Location** Registration **Hotel Novotel Porto Gaia** Rua Martir Sao Sebastiao, Afurada, Camera Ready 4400-499 Vila Nova de Gaia Phone: +351 22 772 8700 Deadlines Submission Jun 13, 2019 More details to follow. https://www.accorhotels.com/gb/hotel-1050-novotel-porto-gaia/index.shtml E-mail h1050@accor.com Notification 2019 Jul 14, Note: The final program might vary slightly according to the number of successful special tracks and the final Registration Jul 27, 2019 registrations. Conference rooms Camera Aug 07, Room A Room C Room B Room D Time slots 2019 ready Sunday, September 22 Past Events **Registration starts** The registration desk is located in front of the conference rooms 12:00 Operating during the entire conference **Tutorial I** Theme: Analyzing the Enron Corpus with the Shell 13:00 - 15:00 Prof. Dr. Andreas Schmidt, Karlsruhe Institute of Technology & University of Applied Sciences, Karlsruhe, Germany 15:00 - 15:15 Coffee Published by IARIA XPS **Tutorial II Press** 15:15 - 17:15 Theme: Challenges and Techniques in Drone Forensics Archived in the Dr. Hannan Azhar, Senior Lecturer, Canterbury Christ Church University, UK free access 17:15 - 17:30 Coffee **ThinkMind Digital Library Tutorial III** Prints available at 17:30 - 19:30 **Theme: Industrial Security** Curran Associates, Inc. Dr. Rainer Falk, Principal Key Expert, Siemens AG, Corporate Technology, Germany Authors of selected papers will be invited to **Welcome Cocktail** 19:30 - 20:30 submit extended You must have your badge to attend the cocktail versions to a IARIA <u>Journal</u> Monday, September 23 Indexing Procedure 09:00 - 09:15 **Opening Session** Affiliated Journals **Keynote Speech** 09:15 - 10:15 **Customer Segmentation using Unsupervised Natural Language Processing** Dr. Tim vor der Brück, Lucerne University of Applied Sciences and Arts, Switzerland 10:15 - 10:30 **Coffee Break SEMAPRO DATA ANALYTICS 1** UBICOMM 1 10:30 - 12:15 CYBER 1 **SEMANLP** 12:15 - 13:45 Lunch on your own ADVCOMP 1 DATA ANALYTICS 2 GLOBAL HEALTH 1 EMERGING 1 13:45 - 15:30 15:30 - 15:45 **Coffee Break** Panel on Advances in Data Processing Moderator Hesham Ali, University of Nebraska Omaha, USA 15:45 - 17:30 **Panelists** Dimitris Kardaras, Athens University of Economics and Business, Greece Wiam Ramadan, Lebanese International University, Lebanon **Tuesday, September 24 Keynote Speech** Innovative Population-based Approaches for Analyzing Mobility Data in Continuous 09:15 - 10:15 **Health Monitoring Applications** Prof. Dr. Hesham H. Ali, UNO Bioinformatics Core Facility, College of Information Science and Technology, University of Nebraska at Omaha, USA 10:15 - 10:30 **Coffee Break** UBICOMM 2 ADVCOMP 2 CYBER 2 / CWIRW GLOBAL HEALTH 2 10:30 - 12:15 12:15 - 13:45 Lunch on your own **SEMAPRO** DATA ANALYTICS 3 13:45 - 15:30 **UBICOMM 3** CYBER 3 2/ / AI-GH **SYMPHATY** 15:30 - 15:45 **Coffee Break** Panel on Challenges on Cyber Services Moderator Steve Chan, Decision Engineering Analysis Laboratory, USA 15:45 - 17:30 Anders Fongen, Norwegian Defence Cyber Academy, Norway Daniel Kästner, AbsInt GmbH, Germany Hannan Azhar, Canterbury Christ Church University, UK Wednesday, September 25 **Keynote Speech** 09:15 - 10:15 A Cyber Key to Log Analysis Dr. Steve Chan, Decision Engineering Analysis Laboratory, USA 10:15 - 10:30 **Coffee Break** EMERGING 2 / 10:30 - 12:15 **AMBIENT 1** CYBER 4 / AICYBER SPIPMO 12:15 - 13:45 Lunch on your own DATA ANALYTICS 4 / UBICOMM 4 / 13:45 - 15:30 **SWIoT** PDA 15:30 - 15:45 Coffee **Keynote Speech** 15:45 - 16:45 **Reinforcement Learning: Learning to Learn** Prof. Dr. Sandjai Bhulai, Vrije Universiteit Amsterdam, the Netherlands 16:45 - 17:00 Coffee **Panel on New Trends on Citizen-oriented Services Moderator** Korosh Vatanparvar, Samsung Research America, Digital Health Lab, USA 17:00 - 19:45 **Panelists** Konstantinos Kotis, University of the Aegean, Dept. of Cultural Technology and Communication, Intelligent Systems Lab, Lesvos, Greece Evgeniy Krastev, Sofia University St. Kliment Ohridsky, Bulgaria Paul Fortier, University Of Massachusetts Dartmouth, USA **CONFERENCE DINNER** 20:00 - 23:00 Thursday, September 26 **Keynote Speech** 09:15 - 10:15 Accelerating Integration and Prototyping of IP for Mobile and AI SoCs Dr. Antonio J. Salazar, Synopsys, Portugal 10:15 - 10:30 **Coffee Break AMBIENT 2** CYBER 5 **SEMAPRO 3** UBICOMM 5 / IFDA 10:30 - 12:15 12:15 - 12:30 **Coffee Break Tutorial IV** 12:30 - 14:30 Theme: Fast Track Introduction to Blockchain and Non-Currency Applications John Kaldis, AIT - Athens Information Technology, Greece **Coffee and Closing session** 14:30 - 14:45 Friday, September 27 Recommended tourist objectives to be visited on your own: https://www.accorhotels.com/gb/travel-guide/porto/index.shtml Livraria Lello: https://www.livrarialello.pt/en-us/ Fundação de Serralves: https://www.serralves.pt/en/museum/the-museum/ Porto wine caves: Caves Cálem: https://www.tripadvisor.com/Attraction_Review-g580268-d243625-Reviews-Porto_Calem-Vila Nova de Gaia Porto District Northern Portugal.html Caves Calém at Gaia waterfront is one of the most famous and most visited cellars for wine tours in Porto. Visits to Caves Calem include a guided tour to the cellar and its ancient traditions, followed by a tasting of Port wine - white and Burmester Porto Wine Cellars and Wine Tasting: https://sogevinus.com/tourism/burmester-cellars/ Burmester wine cellars are located in Gaia by the bottom deck of Luiz I bridge. There are guided tours of the cellars, filled with history and interesting stories. **Shopping:** Mercado do Bolhão Norte Shopping Cidade Bom Sucesso Arrábida Shopping To see in Porto: Clerigos Tower Casa da Música Serralves Park/Museum Bridges Cruise onboard with 'Rabelos Boats' Palácio da Bolsa Porto Cathedral **Detailed Program** ADVCOMP 2019, The Thirteenth International Conference on Advanced Engineering Computing and Applications in Sciences **ADVCOMP 1: Computing Applications in Science** Session chair: David Bouck-Standen Optimal Approximation for Multidimensional Nonlinear Point Data Sets Rudolf Neydorf, Dean Vučinić, Victor Poliakh A Localized Hybrid Penalization Method for Simultaneous Data Reconstruction and Biase Field Correction Linghai Kong Irrigation Reservoir Modeling in Catchments without Measurements of Stream Flow Milan Cisty, Veronika Soldanova, Barbora Povazanova **ADVCOMP 2: Advances in Computation Methods** Session chair: Evgeniy Krastev Code Verification of PECM with Strongly Discontinuous Flows Uncertainty Quantification of Density Reconstruction in High-Energy X-ray Radiography Haibo Xu, Xinge Li Multi-Factor Authentication for Public Displays using the Semantic Ambient Media Framework David Bouck-Standen, Josefine Kipke AMBIENT 2019, The Ninth International Conference on Ambient Computing, Applications, Services and **Technologies AMBIENT 1: Ambient Services, Technology and Platforms** Session chair: Alexander Gerka Efficient Online Cough Detection with a Minimal Feature Set Using Smartphones for Automated Assessment of Md Juber Rahman, Ebrahim Nemati, Md Mahbubur Rahman, Korosh Vatanparvar, Viswam Nathan, Jilong Kuang An Efficient Message Collecting and Dissemination Approach for Mobile Crowd Sensing and Computing Initial Investigation of Position Determination of Various Sound Sources in a Room Takeru Kadokura, Yuki Hashizume, Shigenori Ioroi, Hiroshi Tanaka A Neural NLP Framework for an Optimized UI for Creating Tenders in the TED Database of the EU Sangramsing N Kayte, Peter Schneider-Kamp **AMBIENT 2: Ambient Devices, Applications and Systems** Session chair: Aderonke Thompson Multivariate Event Detection for Non-intrusive Load Monitoring Alexander Gerka, Benjamin Cauchi, Andreas Hein Performance Isolation of Co-located Workload in a Container-based Vehicle Software Architecture Johannes Büttner, Pere Bohigas Boladeras, Philipp Gottschalk, Markus Kucera, Thomas Waas Effect of Heart Rate Feedback Virtual Reality on Cardiac Activity Shusaku Nomura, Rei Sekigawa, Naoki Iiyama Introducing SAM.F: The Semantic Ambient Media Framework David Bouck-Standen CYBER 2019, The Fourth International Conference on Cyber-Technologies and Cyber-Systems **CYBER 1: Cyber Security I** Session chair: Hannan Azhar Towards Secure Robot Process Automation Environments Enhancing Attack Resilience by Protecting the Physical-World Interface of Cyber-Physical Systems Rainer Falk, Steffen Fries Threat Based Cyber Security Investment Strategies [PRESENTATION] A Fraud Detection Framework using Machine Learning Approach Leon Aborisade, Aderonke Thompson and Esther Odeniyi CYBER 2 / CWIRW: The Challenges of Implementing Cyber Security in the Real World Session chair: Anne Coull Introduction / Editorial [PRESENTATION] Anne Coull How Much Cyber Security is Enough? Anne Coull Cyber Security Controls Leonie Shepherd GS 007 - What Auditors are looking for? [PRESENTATION] Open Discussion and Closing Remarks [DISCUSSION] Anne Coull **CYBER 3: Cyber Security II** Session chair: Andrei L. Quieroz Detecting Spectre Vulnerabilities by Sound Static Analysis Daniel Kästner, Laurent Mauborgne, Christian Ferdinand, Henrik Theiling Hardware Implementation of Lightweight Chaos-Based Stream Cipher Guillaume Gautier, Maguy Le Glatin, Safwan El Assad, Wassim Hamidouche, Olivier Deforges, Sylvain Guilley, Adrien Eavesdropping Hackers: Detecting Software Vulnerability Communication on Social Media Using Text Mining Andrei Lima Queiroz, Susan Mckeever, Brian Keegan A Secure Storage Scheme for Healthcare Data Over the Cloud Based on Multiple Authorizations Zeyad A. Al-Odat, Sudarshan K. Srinivasan, Eman M. Al-Qtiemat, Sana Shuja CYBER 4 / AICYBER: The Nexus of Cognitive Computing, Artificial Intelligence and Cyber Security – Anomaly **Detection at Scale** Session chair: Steve Chan Introduction / Editorial [PRESENTATION] Steve Chan Annealed Cyber Resiliency: Cyber Discernment for the Launch Providers of Space Systems Steve Chan, Bob Griffin Surveying and Enhancing Grid Resilience Sensor Communications: An Amalgam of Narrowband, Broadband, and Hybridizing Spread Spectrum Steve Chan, Ika Oktavianti Najib, Verlly Puspita Fast Training of Support Vector Machine for Forest Fire Prediction Steve Chan, Ika Oktavianti Najib, Verlly Puspita Context-Referenced Telemetry Data for Distribution Utilities: Quality Assurance/Quality Control by Lateral Sensors Steve Chan, Ika Oktavianti Najib, Verlly Puspita Open Discussion and Closing Remarks [DISCUSSION] Steve Chan **CYBER 5: Cyber Forensics** Session chair: Maguy Le Glatin Refinement Checker for Embedded Object Code Verification Mohana Asha Latha Dubasi, Sudarshan K. Srinivasan, Sana Shuja, Zeyad A. Al-Odat Comparisons of Forensic Tools to Recover Ephemeral Data from iOS Apps Used for Cyberbullying Aimee Chamberlain, M A Hannan Bin Azhar Recovery of Forensic Artefacts from a Smart Home IoT Ecosystem M A Hannan Bin Azhar, Samuel Benjamin Louis Bate Integated Certification System ISMS-P [PRESENTATION] Jong Chan Ann **DATA ANALYTICS 2019, The Eighth International Conference on Data Analytics DATA ANALYTICS 1: Target Analytics** Session chair: Steve Chan Improve Operations of Real-Time Image Classification Utilizing Machine Learning and Knowledge Evolution David Prairie, Paul Fortier Johann Sebastian Bach's Music is Speeding Up: Fake News? David van Erkelens, Daan van den Berg Analyzing the Structural Health of Civil Infrastructures Using Correlation Networks and Population Analysis Prasad Chetti, Hesham Ali A Website Selection Model in Programmatic Advertising using Fuzzy Analytic Hierarchy Process and Similarity Methods Dimitris Kardaras, Stavroula Barbounaki **DATA ANALYTICS 2: Application-oriented Analytics** Session chair: Claudia Lanza Analytical Models of Firing Rate Statistics in Sensory Neuroscience Experiments Charles Pack, Christopher Pack Architecture of a Big Data Platform for a Semiconductor Company Daniel Müller, Stephan Trahasch A Multi-source Experimental Data Fusion Evaluation Method Based on Bayesian Method and Evidence Theory Huan Zhang, Wei Li, Ping Ma, Ming Yang Automated Extraction of Domain-Specific Information from Scientific Publications Philipp Kief, Clarissa Marguardt, Katja Nau, Steffen Scholz, Andreas Schmidt DATA ANALYTICS 3 / AI-GH: Artificial Intelligence in Global Health Session chair: Les Sztandera Introduction / Editorial [PRESENTATION] Les Sztandera Leveraging Statistical Methods for an Analysis of Demographic Factors of Opioid Overdose Deaths Amna Alalawi, Daniel Fooks, Les Sztandera, Sean Zakrzewski Effects of New Media on Eviction Rates Regina Ruane New Concepts in the Prevention, Treatment and Rehabilitation of Memory Disorders [PRESENTATION] Sanna Kotisaari Open Discussion and Closing Remarks [DISCUSSION] Les Sztandera **DATA ANALYTICS 4 / PDA: Predictive Data Analytics** Session chair: Sandjai Bhulai Introduction / Editorial [PRESENTATION] Sandjai Bhulai Applied Urban Fire Department Incident Forecasting Guido Legemaate, Jeffrey de Deijn, Sandjai Bhulai, Rob van der Mei Data-driven Direct Marketing via Approximate Dynamic Programming Jesper Slik, Sandjai Bhulai Open Discussion and Closing Remarks [DISCUSSION] Sandjai Bhulai EMERGING 2019, The Eleventh International Conference on Emerging Networks and Systems Intelligence **EMERGING 1: Networks and Systems Intelligence** Session chair: Rainer Falk An RSU Placement Framework for V2I Scenarios Baris Kara, Atay Ozgovde Dynamic Path Discovery for In-band Control Plane Communication in a Tactical SDN Network Semi-Automated Footwear Print Retrieval Using Hierarchical Features Tim vor der Brück, Thomas Stadelmann The Use of E- Portfolio to Develop Student's Self-reflection in Pre-school - The case of a Private Saida (Lebanon) High School Rouaa Chahine, Hassan M. Khachfe EMERGING 2 / SPIPMO: Advanced Techniques of Signal Processing with Application in Operating and Monitoring the Industrial Processes Session chair: Anisia Culea-Florescu Introduction / Editorial [PRESENTATION] Anisia Culea-Florescu, Theodor D. Popescu Vibration Analysis with Application in Predictive Maintenance of Rolling Element Bearings Theodor D. Popescu, Dorel Aiordachioaie, Anisia Culea-Florescu A Method of Feature Extraction from Time-Frequency Images of Vibration Signals in Faulty Bearings for Classification Dorel Aiordachioaie, Theodor Popescu, Bogdan Dumitrascu Fault Detection using NLMS Adaptive Filtering for a Wastewater Treatment Process Mihaela Miron, Anisia Culea-Florescu, Mihai Culea A Battery Charging Smart System Using a Power Management Algorithm and Adaptive Impedance Nicusor Nistor, Laurentiu Baicu, Bogdan Dumitrascu Open Discussion and Closing Remarks [DISCUSSION] Anisia Culea-Florescu, Theodor D. Popescu GLOBAL HEALTH 2019, The Eighth International Conference on Global Health Challenges **GLOBAL HEALTH 1: Challenges** Session chair: Evgeniy Krastev Effects of Perigestational Exposure to Chlorpyrifos and/or High Fat Diet on Sleep Apnea in Young Adult Rats Hiba El Khayat El Sabbouri, Wissam H. Journaa, Jérôme Gay-Quéheillard, Veronique Bach, Marion Guibourdenche, Narimane Djekkoun, Walaa Darwiche, Wiam Ramadan Population Level Analysis of Acute Stroke Care Patterns in Hungary István Vassányi, Zsolt Vassy, Tamás Kováts, György Surján, Zoltán Nagy Software Implementation of the EU Patient Summary with Archetype Concepts Evgeniy Krastev, Dimitar Tcharaktchiev, Lyubomir Kirov, Petko Kovatchev, Simeon Abanos, Alexandrina Lambova The Role of School Administartion in Providing and Promoting Health Education in Schools in Nabatieh (Lebanon) Area Amani Berjawi, Ali Al Khatib, Hassan Khachfe **GLOBAL HEALTH 2: Health and Wellness Informatics** Session chair: István Vassányi Determining Testbed Requirements for Technology Enhanced Speech Rehabilitation After Stroke - the Informed Coworkers' View Point Karin Ahlin, Awais Ahmad, Peter Mozelius Implementation of a Distributed System to Collect, Search and Manage Data of Patients with Leprosy in Hiperendemic Artenes Nogueira, Valney Conde, Cláudio Salgado, Guilherme Conde HemiPhysio App Moez ur Rehman, Tauseef Kamal Automated Measurement of Echocardiographic Global Longitudinal Strain Hisham Safawi, Mohamad Hajj-Hassan, Houssein Hajj-Hassan, Hassan M. Khachfe SEMAPRO 2019, The Thirteenth International Conference on Advances in Semantic Processing SEMAPRO 1 / SemaNLP: Semantic Methods for Natural Language Processing Session chair: Anne Coul Introduction / Editorial [PRESENTATION] Tim vor der Brück Example Sentence Selection for Feedback on Preposition Usage John Lee Text Similarity Estimation for Targeted Marketing with Outlier Robust Centroids of GloVe Word Embeddings Tim vor der Brück Open Discussion and Closing Remarks [DISCUSSION] Tim vor der Brück SEMAPRO 2 / SyMpATHY: SeMAntic Technologies for Healthcare and Accessibility Applications Session chair: Nasrine Olson Introduction / Editorial [PRESENTATION] Efstratios Kontopoulos, Sándor Darányi, Marina Riga A Data Referencing Formalism for Information Exchange between Deafblind People and Databases Carlos Seror Static and Dynamic Haptograms to Communicate Semantic Content Sándor Darányi, Nasrine Olson, Marina Riga, Efstratios Kontopoulos, Ioannis Kompatsiaris A State of the Art Survey: Business Cases Based on Semantic Web Technologies in Healthcare Vivi Ntrigkogia, Thanos G. Stavropoulos, Maro Vlachopoulou, Ioannis Kompatsiaris Knowledge-based Intelligence and Strategy Learning for Personalised Virtual Assistance in the Healthcare Domain Eleni Kamateri, Georgios Meditskos, Spyridon Symeonidis, Stefanos Vrochidis, Ioannis Kompatsiaris, Wolfgang Minker Open Discussion and Closing Remarks [DISCUSSION] Efstratios Kontopoulos, Sándor Darányi, Marina Riga **SEMAPRO 3: Semantic Applications/Platforms/Technologies** Session chair: Petre Dini A Semantic Model for the Validation of ePassport Certificate Chain of Trust Elwaleed Elmana, Hind Zantout, Hani Ragab Hassen Semantic Queries Supporting Crisis Management Systems Manfred Schenk, Tobias Hellmund, Philipp Hertweck, Jürgen Moßgrabe Knowledge Base Completion With Analogical Inference on Context Graphs Nada Mimouni, Jean-Claude Moissinac, Anh Tuan Vu Knowledge Representation Frameworks for Terminology Management in Cybersecurity: The OCS Project Use Case Claudia Lanza, Elena Cardillo, Maria Taverniti, Roberto Guarasci UBICOMM 2019, The Thirteenth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies **UBICOMM 1: Users, Applications, and Business Models** Session chair: Joao Carreira TPM Feature Set: a Universal Algorithm for Spatial-Temporal Pressure Mapping Imagery Data Bo Zhou, Paul Lukowicz Multi-device Notifications: A Comparison Between MQTT and CoAP Luis Augusto Silva, Gabriel de Mello, Bruno A. da Silva, Gabriel Villarrubia González, Juan De Paz Santana, Paula Prata, Valderi R. Q. Leithardt EARTH COURSE Pilot: NEWTON Project Support for STEM Education Cristina Hava Muntean, Diana Bogusevschi NEWTON Programming Pilot: Enhancing Learner's Experience in Higher Education Programming Courses [PRESENTATION] Gabriel-Miro Muntean **UBICOMM 2: Information Ubiquity** Session chair: Giuseppe Ercolani AHRS Calibration for a Drill String Sensor Network Application Emmanuel Odei-Lartey, Klaus Hartmann, Hubert Roth Predicting User Interests Based on Their Latest Web Activities Takeshi Tsuchiya, Hiroo HIROSE, Tetsuyasu YAMADA, Hirokazu YOSHINAGA, Keiichi KOYANAGI UHD Panoramic Video Coding for Multi-camera and Multi-processor Acquisition Systems Joao Duarte, Joao Carreira, Pedro Assuncao **UBICOMM 3: Mobility** Session chair: Hannan Aznar Approximate Analytical Model for Queued Handover Requests in Cellular Networks Vicente Casares-Giner, Jorge Martinez-Bauset Contextualization of the Trialability Concept in the SaaS Model for Mobile and Ubiquitous Environment Deployed in Giuseppe Ercolani, Jose Vicente Rodriguez Muñoz **UBICOMM 4 /SWIoT: Semantic Web and IoT Technologies** Session chair: Konstantinos Kotis Introduction / Editorial [PRESENTATION] Konstantinos Kotis, Christos Goumopoulos, Dimitris Kavroudakis Automating the Semantic Labeling of Stream Data Konstantinos Kotis Interoperability in IoT: A Vital Key Factor to Create the "Social Network" of Things Antonios Pliatsios, Christos Goumopoulos, Konstantinos Kotis Innovative Micro Authentication Server (MAS) Providing Trusted Authorization Services To Mobile Users Equipped with TLS Token Simon Elrharbi, Pascal Urien Open Discussion and Closing Remarks [DISCUSSION] Konstantinos Kotis, Christos Goumopoulos, Dimitris Kavroudakis **UBICOMM 5 / IFDA: IIoT for Flexible Digital Automation** Session chair: John Kaldis Introduction / Editorial [PRESENTATION] John Soldatos, Pedro Malo Business Case Evaluation Methodology (BCEM) for Factories Digitalization Roberto Rocca, Giacomo Tavola, Filippo Boschi, Paola Fantini, Marco Taisch Architectural Blueprint Solution for Migrating Towards FAR-EDGE Ambra Calà, Filippo Boschi, Paola Fantini, Giacomo Tavola, Marco Taisch Digital Models for Data Analytics and Digital Twins in Industrial Automation Applications, Introduction of a Common Interoperability Registry Nikos Kefalakis, John Kaldis, John Soldatos, Mauro Isaja A Field Study: The Perception of Edge Computing for Production Industry Volkan Gezer, Jakob Zietsch, Nils Weinert, Martin Ruskowski Open Discussion and Closing Remarks [DISCUSSION] John Soldatos, Pedro Malo Copyright (c) 2006-2020, IARIA

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The Fourth International Conference on Cyber-Technologies and Cyber-Systems
CYBER 2019
September 22, 2019 to September 26, 2019 - Porto, Portugal