ACM SAC 2018

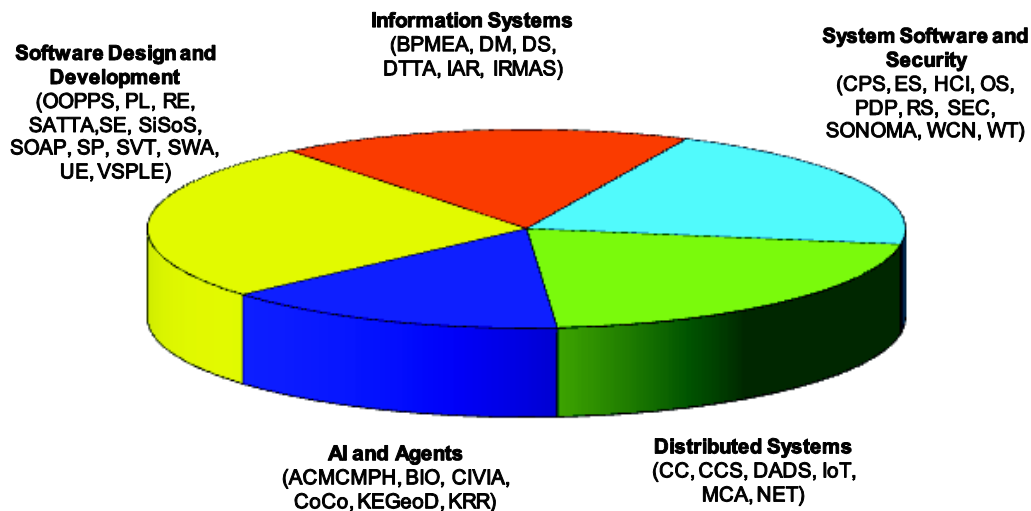The 33rd Annual ACM Symposium on Applied Computing

PROCEEDINGS OF THE 2018 ACM
SYMPOSIUM ON APPLIED COMPUTING

Pau, France
April 9-13, 2018

Organizing Committee

Phillipe Arnould
Richard Chbeir
Ernesto Exposito
Hisham Haddad
Junyoung Heo
Chih-Cheng Hung
John Kim

Maria Lencastre
Philippe Lopisteguy
Haritza Camblong Luiz
Armin R. Mikler
Hossain Shahriar
Dongwan Shin
Roger L. Wainwright

Software Design and Development
(OOPPS, PL, RE, SATTA,SE, SiSoS, SOAP, SP, SVT, SWA, UE, VSPLE)

Information Systems
(BPMEA, DM, DS, DTTA, IAR, IRMAS)

System Software and Security
(CPS, ES, HCI, OS, PDP, RS, SEC, SONOMA, WCN, WT)

AI and Agents
(ACMCMPH, BIO, CIVIA, CoCo, KEGeoD, KRR)

Distributed Systems
(CC, CCS, DADS, IoT, MCA, NET)

Hosted by
Université de Pau et des Pays de l'Adour (UPPA), Pau, France

****** SAC 2018 at Glance ******

Monday 4/9/2018	Tuesday 4/10/2018	Wednesday 4/11/2018	Thursday 4/12/2018	Friday 4/13/2018
Tutorial Sessions (9:00-12:30) **Coffee Break (10:30-11:00)**	**Opening Remarks (9:00-9:25)** **Keynote Session (9:25-10:40)** **Coffee Break (10:40-11:10)** **AM Breakout Sessions (11:10-12:50)**	**AM Breakout Sessions (9:00-10:40)** **Coffee Break (10:40-11:10)** **AM Breakout Sessions (11:10-12:50)** **AM Posters Sessions (10:40-12:50)**	**Keynote Session (9:25-10:40)** **Coffee Break (10:40-11:10)** **AM Breakout Sessions (11:10-12:50)**	**AM Breakout Sessions (9:00-10:40)** **Coffee Break (10:40-11:10)** **AM Breakout Sessions (11:10-12:25)**
SAC Luncheon for all (tutorial) Registered Attendees (12:30-14:30) (Location:Henri Faisans Room)	**SAC Luncheon for all Registered Attendees (12:50-14:20) (Location: Henri Faisans Room)**	**SAC Luncheon for all Registered Attendees (12:50-14:20) (Location: Henri Faisans Room)**	**SAC Luncheon for all Registered Attendees (12:50-14:20) (Location: Henri Faisans Room)**	
Tutorial Sessions (14:30-18:00) **Coffee Break (16:00-16:30)**	**PM Breakout Sessions (14:20-16:00)** **SRC Posters Exhibit (14:30-18:10)** **Coffee Break (16:00-16:30)** **PM Breakout Sessions (16:30-18:35)**	**PM Breakout Sessions (14:20-16:00)** **PM Posters Sessions (16:00-18:10)** **Coffee Break (16:00-16:30)** **PM Breakout Sessions (16:30-18:35)**	**PM Breakout Sessions (14:20-16:00)** **SRC Oral Presentations (14:30-16:30)** **Coffee Break (16:00-16:30)** **PM Breakout Sessions (16:30-18:10)**	
	SIGAPP Annual Business Meeting (18:40-19:30) (Ernest Gabard Room) **SIGAPP Reception (19:30-21:00) (Location: Henri Faisans Room)**	**Future SAC Organization Meeting (18:40-19:30) (Ernest Gabard Room)**	**Track Chairs Business Meeting (_working lunch_) (13:10-14:00) (Henri Faisans)** **SAC Banquet (21:00-23:30) (Location: Bellevue Room in Biarritz)**	

**** SAC 2018 Session Schedule ****

Monday April 9, 2018
Tutorial Sessions – Please see more on Tutorials Page at SAC 2018 webpage

Tuesday April 10, 2018				
Room	**9:00 - 10:40**	**11:10 - 12:50**	**14:20 - 16:00**	**16:30 – 18:35**
Alphonse de Lamartine	**Opening Remarks (9:00am) Keynote Address (9:25am)** *Alfred de Vigny Auditorium*	BIO (4)	CoCo (4)	ACMMIPH (4)
Adolphe Alphand		CC-1 (4)	CC-2 (4)	NET (5)
Aristide de Monpezat		BPMEA-1 (4)	BPMEA-2 (3)	MCA (4)
Ernest Gabard		PL-1 (4)	PL-2 (4)	OOPPS (5)
A. de Vigny Auditorium		SEC-1 (4)	SEC-2 (4)	SiSoS (5)
Wright Open Space			**SRC Poster Presentations (14:30 – 18:00)**	

SIGAPP Business Meeting (18:40 – 19:30) at Ernest Gabard Room

SGAPP Welcome Reception (19:30 - 21:00) at Henri Faisans Room

Wednesday April 11, 2018				
Room	**9:00 - 10:40**	**11:10 - 12:50**	**14:20 - 16:00**	**16:30 – 18:35**
Alphonse de Lamartine	CIVIA-1 (4)	CIVIA-2 (3)	IRMAS (4)	KRR (5)
Adolphe Alphand	EMBS-1 (4)	EMBS-2 (2)	DS (3)	DADS (5)
Aristide de Monpezat	SONAMA-1 (4)	SONAMA-2 (4)	SONAMA(2)+IAR(1)	IAR (5)
Ernest Gabard	CCS (4)	SE-1 (4)	SE-2 (4)	SE-3 (5)
A. de Vigny Auditorium	CPS (4)	OS- 1 (4)	OS-2 (4)	VSPLE (5)
Wright Open Space	**AM Posters Display Session (10:40 – 12:50)**		**PM Posters Display Session (16:00 – 18:10)**	

Future SAC Organization Meeting (18:40 – 19:30) at Ernest Gabard Room

Thursday April 12, 2018				
Room	**9:15 - 10:40**	**11:10 - 12:50**	**14:20 - 16:00**	**16:30 – 18:10**
Alphonse de Lamartine	**Keynote Address (9:25am)** *Alfred de Vigny Auditorium*	SVT-1 (4)	SVT-2 (4)	SVT-3 (3)
Adolphe Alphand		DTTA (4)	IoT-1 (4)	IoT-2 (4)
Aristide de Monpezat		RE-1 (4)	RE-2(2)+SATTA(2)	SATTA-2 (4)
Ernest Gabard		WT-1 (4)	WT-2(2)+SWA-1(2)	SWA-2 (4)
A. de Vigny Auditorium		PDP (4)	RS-1 (4)	RS-2 (4)
Wright Open Space			**SRC Oral Presentations (14:30 – 16:30)**	

Track Chair Meeting (working lunch, 13:10 – 14:00) at Henri Faisans Room

SAC Banquet Dinner (21:00 – 23:30) at Bellevue Room in Biarritz

Friday April 13, 2018			
Room	**9:00 - 10:40**	**11:10 - 12:25**	
Alphonse de Lamartine	HCI-1 (4)	HCI-2 (3)	
Adolphe Alphand	KEGeoD (4)	SOAP (3)	
Aristide de Monpezat	UE (3)	SP (3)	
Ernest Gabard	DM-1 (4)	DM-2 (3)	
A. de Vigny Auditorium	WCN-1 (4)	WCN-2 (3)	

SAC 2018

Introduction

SAC 2018 is a premier international conference on applied computing and technology. Attendees have the opportunity to hear from expert practitioners and researchers about the latest trends in research and development in their fields. SAC 2018 features two keynote speakers on Tuesday and Thursday, from 9:25 to 10:40, respectively. The technical program of the symposium consists of tutorial sessions, regular research paper sessions, poster sessions, and Microsoft-sponsored student research competition (SRC) sessions. Five half-day tutorials are offered on Monday 9th, 2018, and 235 research papers in 39 tracks with different research topics are presented from Tuesday April 10th through Friday April 13th, 2018. The sessions for regular research papers start at 9:00 and end at 18:35 (except for Friday when they end at 12:25). Two poster tracks also run on Wednesday April 11th, from 10:40 to 12:50 and from 16:00 to 18:10. Finally, SRC posters display session runs on Tuesday from 14:30 to 18:00 and SRC Presentations session runs on Thursday from 14:30 to 16:30.

ACM SIGAPP

The ACM Special Interest Group on Applied Computing is ACM's primary applications-oriented SIG. Its mission is to further the interests of the computing professionals engaged in the development of new computing applications and applications areas and the transfer of computing technology to new problem domains. SIGAPP offers practitioners and researchers the opportunity to share mutual interests in innovative application fields, technology transfer, experimental computing, strategic research, and the management of computing. SIGAPP also promotes widespread cooperation among business, government, and academic computing activities. Its annual Symposium on Applied Computing (SAC) provides an international forum for presentation of the results of strategic research and experimentation for this inter-disciplinary environment. SIGAPP membership fees are: $15.00 for ACM Non-members, $15.00 for ACM Professional Members, and $8.00 for ACM Student Members. For further information on SIGAPP, please contact Jiman Hong at jiman@ssu.ac.kr or visit the SIGAPP website at http://www.acm.org/sigapp.

Support

The SRC Program of SAC 2018 is sponsored by Microsoft Research.

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Symposium Chair Message

Hisham M. Haddad
Kennesaw State University, Kennesaw, GA, USA

Roger L. Wainwright
University of Tulsa, Tulsa, OK, USA

Richard Chbeir
University of Pau & Pays Adour, Pau, France

On behalf of the Organizing Committee, we welcome you to the 33rd Annual ACM Symposium on Applied Computing (SAC 2018), hosted by Université de Pau et des Pays de l'Adour (UPPA), Pau, France. For more than three decades this international forum has been dedicated to computer scientists, engineers, and practitioners for the purpose of presenting their research findings and results in various areas of applied computing. The organizing committee is grateful for your participation in this exciting international event. We hope that this conference proves interesting and beneficial for all of you. The Symposium on Applied Computing is sponsored by the ACM Special Interest Group on Applied Computing (SIGAPP), whose mission is to further the interests of computing professionals engaged in the design and development of new computing applications, interdisciplinary applications areas, and applied research. This conference is dedicated to the study of applied computing research of real-world problems. In addition, this event provides an avenue to discuss and exchange new ideas in the wide spectrum of applied computing areas. We all recognize the importance of updating the latest developments and research in our current areas of expertise.

SAC 2018 offers Tutorials, Technical Tracks, and Poster Sessions. The success of the conference can be attributed to the substantial contribution of dedicated Track Chairs and Co-Chairs. Each track maintains a program committee and a group of highly qualified reviewers. We wish to thank the Track Chairs, Committee Members, and participating

reviewers for their hard work and effort to make SAC 2018 a high quality conference. We also thank our invited keynote speakers, Dr. Jose A. Lozano, University of País Vasco, Spain, and Prof. Michael P. Papazoglouholds, Tilburg University, Netherlands, for sharing their knowledge and expertise with SAC 2018 attendees. Most of all, we would like to especially thank the authors and presenters for sharing their experience with the rest of us, and all attendees for joining us in Pau, France this year.

The local organizing committee has been a major contributor to the success of the conference. Our gratitude goes to the Local Arrangement Chairs Dr. Philippe Lopisteguy, University of Pau & Pays Adour, France, and Dr. Haritza Camblong Ruiz, University of País Vasco, Spain. We extend our thanks to the Publication Chair, Dr. Hossain Shahriar, Kennesaw State University, Marietta, Georgia, USA, for his tremendous effort in putting together the conference proceedings, to the Posters Chair, Dr. Chih-Cheng Hung, Kennesaw University, Marietta, Georgia, USA, for managing the Poster Program, and to the Tutorials Chairs Drs. Ernesto Exposito and Philippe Arnould, University of Pau & Pays Adour France, for arranging an exciting set of Tutorials. Many thanks to Dr. Armin R. Mikler, University of North Texas, Denton, Texas, USA for organising the Student Research Competition. Finally, special thanks to our Program Co-Chairs Dr. Dongwan Shin, New Mexico Tech, Socorro, New Mexico, USA, and Dr. Maria Lencastre, University of Pernambuco, Recife, Pernambuco, Brazil, for coordinating and bringing together an excellent Technical Program.

Again, we welcome you to SAC 2018 in the beautiful city of Pau, France. We hope you enjoy the SAC 2018 conference and your stay in France. Next year, we invite you to participate in SAC 2019.

Program Chairs Message

Dongwan Shin
New Mexico Tech, New Mexico, USA

Maria Lencastre
University of Pernambuco, Recife, Brazil

Welcome to the 33rd International Symposium on Applied Computing (SAC 2018). For the past 32 years, SAC has become a major international venue for computing researchers and applied practitioners to convene and share ideas on recent developments in a variety of applied areas of computer science and information technology. The success of SAC has been the consolidation of a wide range of applied areas into specialized modules called Tracks. Each of the Tracks is then organized and administered by experts in the respective areas by instituting program committees, carrying out blind reviews according to the ACM guidelines, and finally selecting highly qualified papers for the Track. Since its inception fifteen years ago, the Poster Sessions at SAC have become a tradition, and this year again the Poster will be an integral part of the Technical Program at SAC 2018.

The open Call for Track Proposals and after prescreening the proposals, 40 Tracks were finally accepted for SAC 2018. The prescreening and selections were made based on the success of those Tracks in the previous SACs as well as targeting new and emerging areas. The Call for Papers for these Tracks attracted 931 final paper submissions from over 50 different countries. The submitted papers underwent the blind review process and 235 submissions were finally accepted as full papers for inclusion in the Conference Proceedings and presentation during the Symposium. The final acceptance rate for SAC 2018 is (25%) for the overall track. In addition to the accepted full papers, 53 submissions that received high enough review scores were accepted as poster papers for the Posters program. The Student Research Competition (SRC) program, sponsored by Microsoft Research, is designed to provide graduate students the opportunity to meet and exchange ideas with researchers and practitioners in their areas of interest. 51 SRC abstract submissions received and finally 19 (37%) submissions were accepted.

The Technical Program of SAC 2018 is made possible through the hard work of many people from the scientific community who have volunteered and committed many hours to make it a success. Much credit goes to all Track Chairs for making SAC 2018 Technical Sessions a huge success. Some of the popular Tracks had an unprecedented submissions and having at least three blind reviews for each paper was certainly a major challenge. Once again this year, we follow the previous years' tradition in organizing various tracks into five different themes. The Symposium Proceedings and the technical presentations are focused around these themes to form a series of related track sessions. On behalf of the entire SAC 2018 Organizing Committee, we congratulate all the authors for having their papers accepted in their respective Tracks, and we wish to thank all of those who made this year's technical program a great success. Specifically, we wish to thank the speakers, posters chair, SRC chair, track chairs, reviewers, technical program committee members, session chairs, presenters, and all the attendees. We also wish to convey our special thanks to the local organizing committee. We wish you all a pleasant stay in Pau, France, and have the opportunity to share and exchange your ideas and foster new collaborations. We also hope to see you at SAC 2019.

SAC 2018 Themes

This year SAC tracks are divided into five themes: tracks with relevant topics are grouped into a theme, and a single room is assigned for one theme for oral presentantion. Hence related tracks will take place sequentially in the same room in most cases, so as to promote sharing and cross-fertilization of ideas for the whole audience of a theme. Check the program schedule for details. The five themes of SAC 2018 are listed below:

(AIA) AI and Agents: Tracks: ACMMIPH, BIO, CIVIA, CoCo, IRMAS, KEGeoD, KRR
(DS) Distributed Systems: Tracks: CC, CCS, DADS, IoT, MCA, NET, WCN, WT
(IS) Information Systems: Tracks: BPMEA, DM, DS, DTTA, IAR, SONAMA, SWA
(SD) Software Design and Development: Tracks: OOPPS, PL, RE, SATTA, SE, SOAP, SP, SVT, UE, VSPLE
(SSS) System Software and Security: Tracks: CPS, EMBS, HCI, OS, PDP, RS, SEC, SiSoS

Keynote Speakers

Tuesday April 10, 2018   9:25 - 10:40

Dr. Jose A. Lozano
Department of Computer Science
and Artificial Intelligence
University of the Basque Country UPV/EHU
Spain

Title: Non-Standard Supervised Classification Problems

Abstract

The literature around machine learning has recently seen many problems that depart from the standard supervised classification problem. In these problems the common structure of a supervised dataset where there is a label associated to each instance is broken: an instance can have several labels, a label is assigned to a subset of instances, etc. These problems present different degrees of uncertainty in learning but also in prediction. In this talk I will provide a taxonomy of non-standard machine learning problems illustrating each of them with case examples. I will also elaborate on how to learn classifiers in these scenarios, how to evaluate them and finally I will point out to some results on PAC learning on these problems.

Speaker's Bio

Jose A. Lozano received the PhD in computer science in 1998 and currently is full professor in the Department of Computer Science and Artificial Intelligence at the University of the Basque Country UPV/EHU (Spain) where he leads since 2005 the Intelligent Systems Group. His research interests ranged over several areas of computer science, particularly metaheuristic optimization, probabilistic graphical models and machine learning and their application to problems in biomedicine, bioinformatics, ecology and risk analysis, to name a few. Prof. Lozano has published more than 100 ISI journal papers receiving his works more than 9100 citations in google scholar. He is currently associate editor of IEEE Trans. on Neural Networks and Learning Systems and IEEE Trans. Evolutionary Computation and member of the editorial board of Evolutionary Computation journal, memetic computing and several other journals on computational intelligence.

Tuesday April 12, 2018   9:25 - 10:40

Dr. Michael P. Papazoglouholds
Tilburg School of Economics and Management
Department of Management
Tilburg University
Netherlands

Title: From Smart Data Systems to Smart Industrial-Purpose Applications

Abstract

Smart data systems and applications support the processing and integration of data into a unified view from disparate big data sources, sensors and devices in the Internet of Things, social platforms, and databases, whether on-premises or cloud, and software-as-a- service applications to enable more effective decision making. The decisive criterion here is not necessarily the amount of data available, but smart content techniques that promote not only the collection and accumulation of related data, but also its context, and understanding. This requires discovering associations between the data, prioritizing results, finding useful insights, discovering patterns and trends within the data to reveal a wider picture that is more relevant to the problem in hand and react to them. The mechanisms that convert stale data to smart data focus on knowledge-based meta-data representation techniques that structure and associate the data sets and content, annotate them, link them with associated processes and software services, and deliver or syndicate information to recipients.

Smart Industrial-Purpose Applications are a new generation of software applications that combine the benefits of smart data and advanced analytics to help

organizations manage their resources (including humans), data, sensors, processes and systems more efficiently. They promise to bring greater speed and efficiency to industries as diverse as smart agriculture, smart cities, smart manufacturing, and smart healthcare delivery where they can provide meaningful insights to decision makers and help them solve complex problems.

This talk will focus on the role, characteristics, potential of smart data and applications for diverse domains, and their enabling technologies. To illustrate the potential of smart data and applications, the talk will draw on examples that highlight the interplay of medical and technical aspects of smart healthcare applications. Smart healthcare involves deploying computing, information, service, sensor and visualization technologies to aid in preventing disease, improving the quality of care and lowering overall cost. The talk will also examine the design and deployment requirements, particularly for point -of-care medical applications, which emerge from the interplay of the actual clinical situation and the novelty of the smart healthcare application.

Speaker's Bio

Prof. Michael (Mike) Papazoglou is a highly acclaimed academic with noteworthy experience in areas of education, research and leadership pertaining to computer science, information systems, service-engineering, cloud computing, and digital manufacturing. He holds the Chair of Computer Science and is the executive director of European Research Institute in Service Science (ERISS) at Tilburg University. He is noted as one of the original promulgators of 'service-oriented computing' and was the scientific director of the acclaimed EU Network of Excellence in Software Systems and Services (S-CUBE). He is renowned for establishing local 'pockets of research excellence' in service science and engineering in several European countries, China, Australia and the Middle East. Papazoglou is an author of the most highly cited papers in the area of service engineering and Web services worldwide with a record of publishing 25 (authored and edited) books, and over 200 prestigious peer-refereed papers along with approx. 17,000 citations (H-index factor 52). He is a distinguished/honorary professor with an exemplary teaching and R&D record at 11 universities around the globe. He is the founder and editor-in-charge of the MIT Press book series on Information Systems as well as the founder and editor-in-charge of the Springer-Verlag book series on Service Science. His expertise is in the areas of Distributed Systems, Service Oriented Computing, Cloud Computing, Data Engineering and Federated Databases, IoT, Software Engineering, Model Driven Architectures, and Smart Applications, such as Smart Cities and Smart Manufacturing.0

Other Activities

SIGAPP Annual Business Meeting: Tuesday April 10, from 18:40 to 19:30 (Location: Ernest Gabard Room). Open to everyone.

SIGAPP Reception: Tuesday April 10, from 19:30 to 21:00 (Location: Henri Faisans Room). Open to everyone.

Future SAC Organization Meeting: Wednesday April 11, from 18:40 to 19:30 (Location: Ernest Gabard Room). Open to everyone.

Track Chairs Business Meeting (working lunch): Thursday April 12, from 13:10 to 14:00 (Location: Henri Faisans Room). Open for the Organizing Committee and (potential) Track Chairs.

SAC Banquet: Thursday April 12, from 21:00 to 23:30 (Location: Bellevue Room in Biarritz). Open for Banquet Ticket holders. See your tickets for full details.

SAC Best Papers/Best Posters Award: Thursday April 12. During the SAC Banquet Program Chairs and Posters Chair will award one best paper for each of the five themes and best posters of this conference.

SRC Program: The Student Research Competition program includes Poster Display on Tuesday at 14:30 and Oral Presentations on Thursday (Location: Wright Open Space). Medals and certificates will be given to the top three winners during the SAC Banquet.

Monday April 9, 2018

Mon 9:00–10:30
Rooms: Adolphe Alphand, Ernest Gabard, Gérard de Nerval

Tutorials
See tutorial pages for more details

Mon 10:30 – 11:00
Coffee Break

Mon 11:00–12:30
Rooms: Adolphe Alphand, Ernest Gabard, Gérard de Nerval

Tutorials, continued

Mon 12:30 – 14:30
Lunch Break
(Room Henri Faisans)

Mon 14:30–16:00
Rooms: Adolphe Alphand, Ernest Gabard, Gérard de Nerval

Tutorials
See tutorial pages for more details

Mon 16:00 – 16:30
Coffee Break

Mon 16:30–18:00
Rooms: Adolphe Alphand, Ernest Gabard, Gérard de Nerval

Tutorials, continued

Tuesday April 10, 2018

TUE 9:25–10:40
Room: Alfred de Vigny Auditorium

Keynote Address
Dr. Jose A. Lozano
See page 5 for details.

TUE 10:40 – 11:10
Coffee Break

TUE 11:10 – 12:50
Room: Alphonse de Lamartine

(BIO) Bioinformatics
Session Chair: Alessio Bechini, University of Pisa, Italy

A tf-idf based Topic Model for Identifying lncRNAs from Genomic Background
Manu Madhavan, National Institute of Technology Calicut, India
Gopakumar G, National Institute of Technology Calicut, India

A Multi-Criteria Decision Making Approach for Predicting Cancer Cell Sensitivity to Drugs
Salma Daoud, University of Sfax, Tunisia
Afef Mdhaffar, University of Sousse, Tunisia
Bernd Freisleben, University of Marburg, Germany
Mohamed Jmaiel, University of Sfax, Tunisia

Interpretable CNV-based Tumour Classification using Fuzzy Rule based Classifiers
Mattia Ricatto, University of Pisa, Italy
Marco Barsacchi, University of Florence, Italy
A. Bechini, University of Pisa, Italy

How to Compute Protein Residue Contacts more Accurately?
Pedro M. Martins, Universidade Federal de Minas Gerais, Brazil
Vinícius D. Mayrink, Universidade Federal de Minas Gerais, Brazil
Sabrina de A. Silveira, Universidade Federal de Viçosa, Brazil
Carlos H. da Silveira, Universidade Federal de Itajubá, Brazil
Leonardo H.F. de Lima, Universidade Federal de São João del-Rei
Raquel C. de Melo-Minardi, Universidade Federal de Minas Gerais

(CC-1) Cloud Computing
Session Chair: Priya Chandran,
National Institute of Technology Calicut, India

Transparent IO Access Control for Application-Level Tenant Isolation
Majid Makki, imec-DistriNet, KU Leuven, Belgium
Dimitri Van Landuyt, imec-DistriNet, KU Leuven, Belgium
Bert Lagaisse, imec-DistriNet, KU Leuven, Belgium
Wouter Joosen, imec-DistriNet, KU Leuven, Belgium
Nick Hofstede, Inventive Designers, Belgium

Gelly-Scheduling: Distributed Graph Processing for Service Placement in Community Networks
Miguel E. Coimbra, Universidade de Lisboa, Portugal
Mennan Selimi, University of Cambridge, UK
Alexandre P. Francisco, Universidade de Lisboa, Portugal
Felix Freitag, Universitat Politècnica de Catalunya, Spain
Luís Veiga, Universidade de Lisboa, Portugal

An Integer Linear-programming based Resource Allocation Method for SQL-like Queries in the Cloud
Mohamed Mehdi Kandi, Paul Sabatier University, France
Shaoyi Yin, IRIT Laboratory, Paul Sabatier University, France
Abdelkader Hameurlain, Paul Sabatier University, France

Multi-Level Per Node Combiner (MLPNC) to Minimize MapReduce Job Latency on Virtualized Environment
Rathinaraja Jeyaraj, NIT Karnataka, India
Ananthanarayana V S, NIT Karnataka, India

(BPMEA-1) Business Process Management & Enterprise Architecture
Session Chair: Marco Brambilla, Politecnico di Milano,

Ordering Stakeholder Viewpoint Concerns for Holistic Enterprise Architecture (The W6H Framework)
Mujahid Sultan, Ryerson University, Canada
Andriy Miranskyy, Ryerson University, Canada

Similarity Resonance for Improving Process Model Matching Accuracy
Nour Assy, Eindhoven University of Technology, The Netherlands
Boudewijn F. van Dongen, Eindhoven University of Technology
Wil M.P. van der Aalst, Eindhoven University of Technology

Verifying BPMN Understandability with Novice Business Managers
Vanessa Mendoza, University of Pernambuco, Brazil
Denis Silva da Silveira, Federal University of Pernambuco, Brazil

Maria Luiza Albuquerque, Federal University of Pernambuco, Brazil
João Araújo, Universidade NOVA de Lisboa, Portugal

Using Enterprise Architecture Model Analysis and Description Logics for Maturity Assessment
Diogo Proença, IST/INESC-ID, Portugal
José Borbinha, IST/INESC-ID, Portugal

(PL-1) Programming Language
Session Chair: Barrett Bryant, UNT, USA

A Constraint-logic Object-oriented Language
Jan C. Dageförde, University of Münster, Germany
Herbert Kuchen, University of Münster, Germany

Syntax Error Recovery in Parsing Expression Grammars
Sérgio Medeiros, Federal University of Rio Grande do Norte, Brazil
Fabio Mascarenhas, Federal University of Rio de Janeiro, Brazil

Declarative Algorithms for Generation, Counting and Random Sampling of Term Algebras
Paul Tarau, University of North Texas, USA

An Approach based on a DSL + API for Programming Runtime Adaptivity and Autotuning Concerns
Tiago Carvalho, University of Porto, Portugal
João M.P. Cardoso, University of Porto, Portugal

(SEC-1) Computer Security
Session Chair: Lieen Desmet,
Katholieke Universiteit Leuven, Belgium

Applying Deep Learning on Packet Flows for Botnet Detection
Jos Van Roosmalen, Open Universiteit, The Netherlands
Harald Vranken, Open Universiteit, The Netherlands
Marko Van Eekelen, Open Universiteit, The Netherlands

Measuring E-Mail Header Injections on the World Wide Web
Sai Prashanth Chandramouli, Arizona State University, USA
Pierre-Marie Bajan, IRT SystemX, France
Christopher Kruegel, University of California, Santa Barbara, USA
Giovanni Vigna, University of California, Santa Barbara, USA
Ziming Zhao, Arizona State University, USA
Adam Doupé, Arizona State University, USA
Gail-Joon Ahn, Arizona State University, USA

The Security Risks of Power Measurements in Multicores
Philipp Miedl, ETH Zurich, Switzerland

Lothar Thiele, ETH Zurich, Switzerland

Ransomware Prevention using Application Authentication-Based File Access Control
Or Ami, Ben-Gurion University of the Negev, Israel
Yuval Elovici, Ben-Gurion University of the Negev, Israel
Danny Hendler, Ben-Gurion University of the Negev, Israel

TUE 12:50 – 14:20
Lunch Break
(Henri Faisans Room)

TUE 14:30 – 18:00
SRC Posters Exhibition
WRIGHT OPEN SPACE
See page 20 for details.

TUE 14:20 – 16:00
Room: Alphonse de Lamartine
(CoCo) Cognitive Computing
Session Chair: Mauro Dragoni, Fondazione Bruno Kessier

Predicting Facebook-Users' Personality based on Status and Linguistic Features via Flexible Regression Methodologies
Prantik Howlader, Cisco Systems, India
Kuntal Kumar Pal, Cavium Networks, India
Alfredo Cuzzocrea, University of Trieste and ICAR-CNR, Italy
S.D. Madhu Kumar, National Institute of Technology, India

Predicting Incorrect Mappings: A Data-Driven Approach Applied to DBpedia
Mariano Rico, Universidad Politécnica de Madrid, Spain
Nandana Mihindukulasooriya, Universidad Politécnica de Madrid
Dimitris Kontokostas, Leipzig University, Germany
Heiko Paulheim, University of Mannheim, Germany
Sebastian Hellmann, Leipzig University, Germany
Asunción Gómez-Pérez, Universidad Politécnica de Madrid, Spain

Review-Level Aspect-Based Sentiment Analysis using an Ontology
Sophie de Kok, Erasmus University Rotterdam, The Netherlands
Linda Punt, Erasmus University Rotterdam, The Netherlands
Rosita van den Puttelaar, Erasmus University Rotterdam
Karoliina Ranta, Erasmus University Rotterdam, The Netherlands
Kim Schouten, Erasmus University Rotterdam, The Netherlands
Flavius Frasincar, Erasmus University Rotterdam, The Netherlands

Deep Reinforcement Learning Boosted by External Knowledge
Nicolas Bougie, National Institute of Informatics, Japan
Ryutaro Ichise, National Institute of Informatics, Japan

TUE 14:20 – 16:00
Room: Adolphe Alphand
(CC-2) Cloud Computing
Session Chair: Priya Chandran,
National Institute of Technology Calicut, India

Data Locality and VM Interference Aware Mitigation of Data Skew in Hadoop Leveraging Modern Portfolio Theory
Seyed Morteza Nabavinejad, Sharif University of Technology, Iran
Maziar Goudarzi, Sharif University of Technology, Iran

A Memory-Deduplication Side-Channel Attack to Detect Applications in Co-Resident Virtual Machines
Jens Lindemann, University of Hamburg, Germany
Mathias Fischer, University of Hamburg, Germany

Cloud Transactions Adhere to Strict Policy Consistency for Improved Performance
Dileep Mardham, Missouri University of Science & Technology, USA
Sanjay Madria, Missouri University of Science and Technology, USA
James Milligan, Air Force Research Lab, USA
Mark Linderman, Air Force Research Lab, USA

Bounding the Cost of Virtual Machine Migrations for Resource Allocation in Cloud Data Centers
M.P. Gilesh, Government Engineering College Wayanad, India
S.D. Madhu Kumar, National Institute of Technology Calicut, India
Lillykutty Jacob, National Institute of Technology Calicut, India

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TUE 14:20 – 16:00
Room: Aristide de Monpezat
(BPMEA-2) Business Process Management & Enterprise Architecture
Session Chair: Marco Brambilla, Politecnico di Milano,

Conceptual Modeling of Inter-dependencies between Processes and Data
Carlo Combi, Università degli Studi di Verona, Italy
Barbara Oliboni, Università degli Studi di Verona, Italy
Mathias Weske, Hasso Plattner Institute at the University of Potsdam, Germany
Francesca Zerbato, Università degli Studi di Verona, Italy

Automated Analysis of Industrial Workflow-based Models
Mario Cortes-Cornax, University of Grenoble Alpes, France
Ajay Krishna, University of Grenoble Alpes, France
Adrian Mos, Naver Labs, France
Gwen Salaün, University of Grenoble Alpes, France

Dynamic High-level Requirements in Self-Adaptive Systems
Davide Rossi, University of Bologna, Italy
Francesco Poggi, University of Bologna, Italy
Paolo Ciancarini, University of Bologna, Italy

TUE 14:20 – 16:00
Room: Ernest Gabard

(PL-2) Programming Language
Session Chair: Barrett Bryant, UNT, USA

Leveraging Teenagers Feedback in the Development of a Domain-Specific Language – The Case of Programming Low-Cost Robots
Ankica Barišić, Universidade NOVA de Lisboa, Portugal
João Cambeiro, Universidade NOVA de Lisboa, Portugal
Vasco Amaral, Universidade NOVA de Lisboa, Portugal
Miguel Goulão, Universidade NOVA de Lisboa, Portugal
Tarquinio Mota, Artica Creative Computing, Portugal

Efficient Evaluation of Context-Free Path Queries for Graph Databases
Ciro M. Medeiros, UFRGN, Brazil
Martin A. Musicante, UFRGN, Brazil
Umberto S. Costa, UFRGN, Brazil

A Framework for Constructing JavaScript Virtual Machines with Customized Datatype Representations
Takafumi Kataoka, Kochi University of Technology, Japan
Tomoharu Ugawa, Kochi University of Technology, Japan
Hideya Iwasaki, The University of Electro-Communications, Japan

Communications in Choreographies, Revisited
Luís Cruz-Filipe, University of Southern Denmark, Denmark
Fabrizio Montesi, University of Southern Denmark, Denmark
Marco Peressotti, University of Southern Denmark, Denmark

TUE 14:20 – 16:00
Room: Gérard de Nerval

(SEC-2) Computer Security
Session Chair: Lieen Desmet,
Katholieke Universiteit Leuven, Belgium

Bridging the Gap in Privacy-Preserving Revocation: Practical and Scalable Revocation of Mobile eIDs
Michael Hölzl, JKU Linz, Austria
Michael Roland, University of Applied Sciences Upper Austria
Omid Mir, Institute of Networks and Security, JKU Linz, Austria
René Mayrhofer, JKU Linz, Austria

Behavior Analysis in the Medical Sector: Theory and Practice
Mahdi Alizadeh, EUT, The Netherlands
Sander Peters, EUT, The Netherlands
Sandro Etalle, EUT The Netherlands
Nicola Zannone, EUT, The Netherlands

Combinatorial Subset Difference Public Key Broadcast Encryption Scheme for Secure Multicast
Jihye Kim, Kookmin University, South Korea
Seunghwa Lee, Kookmin University, South Korea
Jiwon Lee, Hanyang University, South Korea

Hyunok Oh, Hanyang University, South Korea

State-Aware Anomaly Detection for Industrial Control Systems
Hamid Reza Ghaeini, SUTD, Singapore
Daniele Antonioli, SUTD, Singapore
Ferdinand Brasser, Technische Universitat Darmstadt, Germany
Ahmad-Reza Sadeghi, Technische Universitat Darmstadt, Germany
Nils Ole Tippenhauer, SUTD, Singapore

TUE 16:00 – 16:30
Coffee Break

TUE 16:30 – 18:35
Room: Alphonse de Lamartine

(ACMMIPH) Advanced Computational Methods in biomedical Imaging and Population Health
Session Chair: Mohammed El Hassouni, Mohammed V University in Rabat, Morocco

Mining String Patterns for Individuating Reading Pathologies
Fabio Fassetti, University of Calabria, Italy
Ilaria Fassetti, LogopediaTherapeia Rehabilitation Center, Italy

Discovering, Selecting and Exploiting Feature Sequence Records of Study Participants for the Classification of Epidemiological Data on Hepatic Steatosis
Tommy Hielscher, Otto-von-Guericke University Magdeburg, Germany
Henry Völzke, University Medicine Greifswald, Germany
Panagiotis Papapetrou, Stockholm University, Sweden
Myra Spiliopoulou, Otto-von-Guericke University Magdeburg, Germany

A Parallel Framework for HCC Detection in DCE-MRI Sequences with Wavelet-Based Description and SVM classification
Ana L.M. Pavan, São Paulo State University, Brazil
Marwa Benabdallah, University of Sfax, Tunisia
Marie-Ange Lebre, Université Clermont Auvergne, France
Diana Rodrigues de Pina, São Paulo State University, Brazil
Faouzi Jaziri, Université Clermont Auvergne, France
Antoine Vacavant, Université Clermont Auvergne, France
Achraf Mtibaa, Université de Sfax, Tunisia
Hawa Mohamed Ali, Université Clermont Auvergne, France
Manuel Grand-Brochier, Université Clermont Auvergne, France
Hugo Rositi, Université Clermont Auvergne, France
Benoît Magnin, CHU Clermont-Ferrand, France
Armand Abergel, CHU Clermont-Ferrand, France
Pascal Chabrot, CHU Clermont-Ferrand, FR

3D Medical Objects Processing and Retrieval using Spherical Harmonics: A Case Study with Congestive Heart Failure MRI Exams
Leila Cristina C. Bergamasco, University of São Paulo, Brazil
Carlos E. Rochitte, University of São Paulo, Brazil
Fátima L.S. Nunes, University of São Paulo, Brazil

(NET) Networking
Session Chair: Steffen Haas,
University of Hamburg, Germany

On the Feasibility of 40 Gbps Network Data
Capture and Retention with General Purpose
Hardware
Guillermo Julián-Moreno, Universidad Autónoma de Madrid, Spain
Rafael Leira, Universidad Autónoma de Madrid, Spain
Jorge E. López de Vergara, Universidad Autónoma de Madrid, Spain
Francisco J. Gómez-Arribas, Universidad Autónoma de Madrid
Iván González, Universidad Autónoma de Madrid, Spain

GAC: Graph-Based Alert Correlation for the
Detection of Distributed Multi-Step Attacks
Steffen Haas, Universität Hamburg, Germany
Mathias Fischer, Universität Hamburg, Germany

A Flexible and Efficient Container-based NFV
Platform for Middlebox Networking
Chao Zheng, Chinese Academy of Sciences, China
Qiuwen Lu, Chinese Academy of Sciences, China
Jia Li, Chinese Academy of Sciences, China
Qingyun Liu, Chinese Academy of Sciences, China
Binxing Fang, UESTC in Guangdong, China

Scaling Topology Pattern Matching:
A Distributed Approach
Michael Stein, Technische Universität Darmstadt, Germany
Alexander Frömmgen, Technische Universität Darmstadt, Germany
Roland Kluge, Technische Universität Darmstadt, Germany
Lin Wang, Technische Universität Darmstadt, Germany
Augustin Wilberg, Technische Universität Darmstadt, Germany
Boris Koldehofe, Technische Universität Darmstadt, Germany
Max Mühlhäuser, Technische Universität Darmstadt, Germany

Efficient Feature Extraction for Internet
Data Analysis using AS2Vec
John Robert Mendoza, University of the Philippines Diliman
Roel Ocampo, University of the Philippines Diliman, Philippines
Isabel Montes, University of the Philippines Diliman, Philippines
Cedric Angelo Festin, University of the Philippines Diliman

(MCA) Mobile Computing and
Applications
Session Chair: Jorge Bernad, University of Zaragoza,

Deep Feature Learning and Selection for
Activity Recognition
Yasser Mohammad, KDDI Research Inc., Japan
Kazunori Matsumoto, KDDI Research Inc., Japan
Keiichiro Hoashi, KDDI Research Inc., Japan

Estimating Local Coverage Areas for
Location Dependent Queries

Jorge Bernad, University of Zaragoza, Spain
Carlos Bobed, Université de Rennes 1, France
Eduardo Mena, University of Zaragoza, Spain

Text Extraction and Retrieval from
Smartphone Screenshots: Building a
Repository for Life in Media
Agnese Chiatti, Pennsylvania State University, USA
Mu Jung Cho, Stanford University, USA
Anupriya Gagneja, Stanford University, USA
Xiao Yang, Pennsylvania State University, USA
Miriam Brinberg, Pennsylvania State University, USA
Katie Roehrick, Stanford University, USA
Sagnik Ray Choudhury, Pennsylvania State University, USA
Nilam Ram, Pennsylvania State University, USA
Byron Reeves, Stanford University, USA
C. Lee Giles, Pennsylvania State University, USA

A Smartphone Application to Measure the
Quality of Pest Control Spraying Machines via
Image Analysis
Bruno Brandoli Machado, University of Mato Grosso do Sul, Brazil
Gabriel Souza, University of São Paulo, Brazil
Mauro S. Arruda, Federal University of Mato Grosso do Sul, Brazil
Wesley N. Goncalves, University of Mato Grosso do Sul, Brazil
Andre C.P.L.F. Carvalho, University of São Paulo, Brazil
Jose F. Rodrigues Jr., University of São Paulo, Brazil

(OOPPS) Object Oriented and
Parallel Programming and Systems
Session Chair: Davide Ancona, University of Genova, Italy

OOlong: An Extensible Concurrent Object
Calculus
Elias Castegren, Uppsala University, Sweden
Tobias Wrigstad, Uppsala University, Sweden

Implementing Modular Class-based Reuse
Mechanisms on Top of a Single Inheritance VM
Pablo Tesone, Université de Lille, France
Guillermo Polito, Université de Lille, France
Luc Fabresse, Université de Lille, France
Noury Bouraqadi, Université de Lille, France
Stéphane Ducasse, Inria Lille-Nord Europe, France

A Type and Effect System for
Uniqueness and Immutability
Paola Giannini, Università del Piemonte Orientale, Italy
Marco Servetto, Victoria University of Wellington, New Zealand
Elena Zucca, Università di Genova, Italy

Textual Alignment in SPMD Programs
Frédéric Dabrowski, Université d'Orléans, France

Enabling Lock-free Concurrent Workers over
Temporal Graphs Composed of Multiple Time-
Series
Francois Fouquet, University of Luxembourg, Luxembourg
Thomas Hartmann, University of Luxembourg, Luxembourg
Sébastien Mosser, Université Côte d'Azur, I3S, France
Maxime Cordy, University of Luxembourg, Luxembourg

A Refinement-based approach for Specifying Multi-scale Software Architectures: Application to SoS
Ilhem Khlif, ReDCAD Research Laboratory, Tunisia
Imen Tounsi, ReDCAD Research Laboratory, Tunisia
Mohamed Hadj Kacem, ReDCAD Research Laboratory, Tunisia
Cédric Eichler, INSA Centre Val de Loire, France
Ahmed Hadj Kacem, ReDCAD Research Laboratory, Tunisia

A Decision Approach for Energy Distribution Management in Smart Cities
Imen Abdennadher, ReDCAD, University of Sfax, Tunisia
Ismael Bouassida Rodriguez, ReDCAD, University of Sfax, Tunisia
Mohamed Jmaiel, ReDCAD, University of Sfax, Tunisia

Formal Modeling of Systems-of-Systems Missions with mKAOS
Eduardo Silva, IRISA and University of South Britanny, France
Thais Batista, Federal University of Rio Grande do Norte, Brazil

Correctness by Construction and Style Preserving Reconfigurations of System of Systems
Cédric Eichler, INSA Centre Val de Loire-LIFO, France
Khalil Drira, LAAS-CNRS, France
Thierry Monteil, LAAS-CNRS, France
Patricia Stolf, Université Jean Jaurès, France

Externalizing Patterns for Simulation in Software Engineering of Systems-of-Systems
Valdemar V. Graciano Neto, University of São Paulo, Brazil
Wallace Manzano, University of São Paulo, Brazil
Adair José Rohling, INPE, Brazil
Mauricio Gonçalves Vieira Ferreira, INPE, Brazil
Tiago Volpato, University of São Paulo, Brazil
Elisa Yumi Nakagawa, University of São Paulo, Brazil

Wednesday April 11, 2018

WED 9:00 – 10:40
Room: Alphonse de Lamartine

(CIVIA-1) Computational Intelligence and Video & Image Analysis
Session Chair: Chih-Cheng Hung,
Kennesaw University, USA

Evaluation of Morphological Hierarchies for Supervised Video Segmentation
Filipe Tório. L.R. Nhimi, PUC Minas, Brazil
Zenilton Patrocínio Jr., PUC Minas, Brazil
Benjamin Perret, ESIEE Paris, France
Jean Cousty, ESIEE Paris, France
Silvio Jamil F. Guimaraes, PUC Minas, Brazil

Identification of Fruit Fly in Intelligent Traps using Techniques of Digital Image Processing and Machine Learning
Thainan B. Remboski, Universidade Federal de Pelotas, Brazil
William D. de Souza, Universidade Federal de Pelotas, Brazil
Marilton S. de Aguiar, Universidade Federal de Pelotas, Brazil
Paulo R. Ferreira Júnior, Universidade Federal de Pelotas, Brazil

A Low Cost VSLAM Prototype using Webcams and a Smartphone for Outdoor Application
Eduardo A. Speroni, Universidade Federal de Santa Maria, Brazil
Simone R. Ceolin, Universidade Federal de Santa Maria, Brazil
Osmar M. dos Santos, Universidade Federal de Santa Maria, Brazil
Andrei P. Legg, Universidade Federal de Santa Maria, Brazil

A Curve Completion Algorithm for Agricultural Planning
Iuri R. Souza, Sensix, Brazil
Mauricio C. Escarpinati, Universidade Federal Uberlândia, Brazil
Daniel D. Abdala, Universidade Federal de Uberlândia, Brazil

WED 9:00 – 10:40
Room: Adolphe Alphand

(EMBS-1) Embedded Systems
Session Chair: Yung-Feng Lu, National Taichung University of Science and Technology, Taiwan

Impact of Memory Frequency Scaling on User-centric Smartphone Workloads
H.R. Mendis, University of York, UK
Wei-Ming Chen, National Taiwan University, Taiwan
L.S. Indrusiak, University of York, UK
Tei-Wei Kuo, National Taiwan University, Taiwan
Pi-Cheng Hsiu, Academia Sinica, Taiwan

Assessing the Pessimism of Current Multicore Global Fixed-Priority Schedulability Analysis

Youcheng Sun, University of Oxford, UK
Marco Di Natale, Scuola Superiore Sant'Anna, Italy

Controller-Aware Memory Coloring for Multicore Real-Time Systems
Xing Pan, North Carolina State University, USA
Frank Mueller, North Carolina State University, USA

RPR: A Random Replacement Policy with Limited Pathological Replacements
Pedro Benedicte, Barcelona Supercomputing Center, Spain
Carles Hernandez, Barcelona Supercomputing Center, Spain
Jaume Abella, Barcelona Supercomputing Center, Spain
Francisco J. Cazorla, Barcelona Supercomputing Center, Spain

(SONAMA-1) Social Network and Media Analysis
Session Chair: Armanda Rodrigues, Universidade Nova de Lisboa, Portugal

Scalable and Timely Detection of Cyberbullying in Online Social Networks
Rahat Ibn Rafiq, University of Colorado Boulder, USA
Homa Hosseinmardi, University of Southern California, USA
Richard Han, University of Colorado Boulder, USA
Qin Lv, University of Colorado Boulder, USA
Shivakant Mishra, University of Colorado Boulder, USA

GreenShip: A Social Networking System for Combating Cyber-Bullying and Defending Personal Reputation
Hasan M. Jamil, University of Idaho, USA
Robert Breckenridge, University of Idaho, USA

Improving Sentiment Classification from High Volatility Financial News
Jenq-Haur Wang, National Taipei University of Technology, Taiwan
Shiang Huang, Chung-Hwa Telecom, Taiwan

A Multi-Task Neural Network for Multilingual Sentiment Classification and Language Detection on Twitter
Jônatas Wehrmann, PCURGS, Brazil
Willian E. Becker, PCURGS, Brazil
Rodrigo C. Barros, PCURGS, Brazil

WED 9:00 – 10:40
Room: Ernest Gabard

(CCS) Collective and Cooperative Systems
Session Chair: Danilo Planini, University of Bologna, Italy

Comparing Languages for Engineering Server Software: Erlang, Go, and Scala with Akka
Ivan Valkov, University of Glasgow, UK
Natalia Chechina, University of Glasgow, UK
Phil Trinder, University of Glasgow, UK

Coordinated Composition of Continuous Service Collaborations in Decentralized Smart Computing Environments
Markus Wutzler, Technische Universität Dresden, Germany
Thomas Springer, Technische Universität Dresden, Germany
Alexander Schill, Technische Universität Dresden, Germany

Online Team-Based Game Development Discussions Patterns Summarised using Probabilistic Models
Akiko Teranishi, New York University Abu Dhabi, UAE
Minoru Nakayama, Tokyo Institute of Technology, Japan
Theodor Wyeld, Flinders University, Australia
Eid A. Mohamad, New York University Abu Dhabi, UAE

No Longer Alone: Finding Common Ground in Collaborative Virtual Environments
Li Liu, California State University, Northridge, USA
Adam Kaplan, California State University, Northridge, USA

WED 9:00 – 10:40
Room: Gérard de Nerval

(CPS) Cyber-Physical Systems
Session Chair: Jason Xue, City University of Hong Kong

Boosting the Performance with a Data-backup-free Programming Scheme for TLC-based SSDs
Chin-Chiang Pan, National Taiwan University, Taiwan
Chien-Chung Ho, National Chung Cheng University, Taiwan
Yuan-Hao Chang, Academia Sinica, Taiwan
Tei-Wei Kuo, National Taiwan University, Taiwan
Yu-Ming Chang, National Taiwan University, Taiwan
Ming-Chang Yang, The Chinese University of Hong Kong, HK

Prediction of Abnormal Temporal Behavior in Real-Time Systems
Mohammad Hamad, Technische Universität Braunschweig
Zain A.H. Hammadeh, Technische Universität Braunschweig
Selma Saidi, Hamburg University of Technology, Germany
Vassilis Prevelakis, Technische Universität Braunschweig, Germany
Rolf Ernst, Technische Universität Braunschweig, Germany

Integrated Simulation Testbed for Security and Resilience of CPS
Himanshu Neema, Vanderbilt University, USA
Bradley Potteiger, Vanderbilt University, USA
Xenofon Koutsoukos, Vanderbilt University, USA
Gabor Karsai, Vanderbilt University, USA
Peter Volgyesi, Vanderbilt University, USA
Janos Sztipanovits, Vanderbilt University, USA

Low Power Driven and Multi-CLP aware Loop Tiling for RRAM Crossbar-based CNN
Yuanhui Ni, Capital Normal University, China
Keni Qiu, Capital Normal University, China
Weiwen Chen, Capital Normal University, China
Lixue Xia, Tsinghua University, China
Yu Wang, Tsinghua University, China

WED 10:40 – 11:10
Coffee Break

WED 11:10 – 12:50
Room: Alphonse de Lamartine

(CIVIA-2) Computational Intelligence and Video & Image Analysis
Session Chair: Mauricio C. Escarpinati, Brazil

A Deep-Learning-Based Approach for Automated Wagon Component Inspection

Rafael L. Rocha, Instituto Tecnológico Vale, Brazil
Ana Carolina Q. Siravenha, SESI, Brazil
Ana Cláudia S. Gomes, SESI, Brazil
Gerson L. Serejo, Instituto Tecnológico Vale, Brazil
Alexandre F.B. Silva, SENAI Institute of Innovation, Brazil
Luciano M. Rodrigues, Instituto Tecnológico Vale, Brazil
Júlio Braga, Vale S.A., Brazil
Giovanni Dias, Vale S.A., Brazil
Schubert R. Carvalho, Instituto Tecnológico Vale, Brazil
Cleidson R.B. de Souza, Universidade Federal do Pará, Brazil

Computer Vision System for Weld Bead Geometric Analysis

Luciane B. Soares, Universidade Federal do Rio Grande, Brazil
Átila A. Weis, Universidade Federal do Rio Grande, Brazil
Bruna de V. Guterres, Universidade Federal do Rio Grande, Brazil
Ricardo N. Rodrigues, Universidade Federal do Rio Grande, Brazil
Silvia S. da C. Botelho, Universidade Federal do Rio Grande, Brazil

Comparative Study of Genetic and Discrete Firefly Algorithm for Combinatorial Optimization

Willian Tessaro Lunardi, University of Luxembourg, Luxembourg
Holger Voos, University of Luxembourg, Luxembourg

WED 11:10 – 12:50
Room: Adolphe Alphand

(EMBS-2) Embedded Systems
Session Chair: Jen-Wei Hsieh,
National University of Science and Technology, Taiwan

Energy-Aware Real-Time Scheduling in the Linux Kernel

Claudio Scordino, Evidence Srl, Italy
Luca Abeni, Scuola Superiore S. Anna, Italy
Juri Lelli, Red Hat, Inc., USA

A Brute-Force Schedulability Analysis for Formal Model under Logical Execution Time Assumption

Pierre-Emmanuel Hladik, LAAS-CNRS, France

WED 11:10 – 12:50
Room: Aristide de Monpezat

(SONAMA-2) Social Network and Media Analysis
Session Chair: Jeng-Haur Wang,
National Taipei University of Technology, Taiwan

Towards an Approach to Elicit Domain Requirements from Social Networks: The Case of Emergency Systems

Cláudio Borges, Universidade NOVA de Lisboa, Portugal
João Araújo, Universidade NOVA de Lisboa, Portugal
Armanda Rodrigues, Universidade Nova de Lisboa, Portugal

A Preselection Algorithm for the Influence Maximization Problem in Power Law Graphs

Renato S. Melo, Federal University of Paraná, Brazil
Andre L. Vignatti, Federal University of Paraná, Brazil

Computational Advertising in Social Networks: An Opinion Mining-based Approach

Mauro Dragoni, Fondazione Bruno Kessler, Italy

Towards a Reputation Model applied to Geosocial Networks: A Case Study on Crowd4City

Ana Gabrielle Ramos Falcão, UFCG, Brazil
Cláudio de Souza Baptista, UFCG, Brazil
Maxwell Guimarães de Oliveira, Federal University of Cariri, Brazil
Júlio Henrique Rocha, UFCG, Brazil
Tiago Henrique da Silva Leite, UFCG, Brazil
José Eustáquio Rangel de Queiroz, UFCG, Brazil

WED 11:10 – 12:50
Room: Ernest Gabard

(SE-1) Software Engineering
Session Chair: Tao Zhang,
Harbin Engineering University, China

On the Use of Package Managers by the C++ Open-Source Community

André Miranda, University of Pernambuco, Brazil
João Pimentel, Universidade Federal Rural de Pernambuco, Brazil

A Model for Analysis and Presentation of Design Pattern Detection Results

Shouzheng Yang, York University, Canada
Vassilios Tzerpos, York University, Canada

A Systematic Literature Mapping on the Relationship Between Design Patterns and Bad Smells

Bruno L. Sousa, Federal University of Minas Gerais, Brazil
Mariza A.S. Bigonha, Federal University of Minas Gerais, Brazil
Kecia A.M. Ferreira, Federal Center of Technological Education of Minas Gerais, Brazil

Supporting Privacy Impact Assessment by Model-Based Privacy Analysis

Amir Shayan Ahmadian, University of Koblenz Landau, Germany
Daniel Strüber, University of Koblenz Landau, Germany
Volker Riediger, University of Koblenz Landau, Germany
Jan Jürjens, University of Koblenz Landau, Germany

WED 11:10 – 12:50
Room: Gérard de Nerval

(OS-1) Operating Systems
Session Chair: Dr Stelios Sotiriadis,
Birkbeck University of London, UK

Automatic Code Conversion for Non-Volatile Memory

Jinsoo Yoo, Hanyang University, South Korea
Yongjun Park, Hanyang University, South Korea
Seongjin Lee, Gyeongsang National University, South Korea
Youjip Won, Hanyang University, South Korea

Exploring OS-based Full-System Deterministic Replay
Hyunmin Yoon, Hanyang University, South Korea
Shakaiba Majeed, Hanyang University, South Korea
Minsoo Ryu, Hanyang University, South Korea

Monitoring-based Auto-Scalability Across Hybrid Clouds
Constantin-Cosmin Crecană, University Politehnica of Bucharest
Florin Pop, University Politehnica of Bucharest, Romania

Unified Hardware Abstraction Layer with Device Masquerade
Iori Yoneji, University of Tsukuba, Japan
Takaaki Fukai, University of Tsukuba, Japan
Takahiro Shinagawa, The University of Tokyo, Japan
Kazuhiko Kato, University of Tsukuba, Japan

WED 10:40 – 12:50

Poster Session I

(WRIGHT OPEN SPACE)

Posters of the following Tracks: **ACMMIPH, BIO, CIVIA, CoCo, HCI, IRMAS, CC, CCS, DADS, IoT, MCA, NET, SONOMA, WCN** (*See page 26 for detailed list of Posters*)

WED 12:50 – 14:20

Lunch Break

(Henri Faisans Room)

WED 14:20 – 16:00
Room: Alphonse de Lamartine

(IRMAS) Intelligent Robotics and Multi-Agent Systems
Session Chair: Rui P. Rocha, Institute of Systems and Robotics, University of Coimbra, Portugal

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Distributed Optimization in Multi-Agent Robotics for Industry 4.0 Warehouses
Ajay Kattepur, Tata Consultancy Services, India
Hemant Kumar Rath, Tata Consultancy Services, India
Anantha Simha, Tata Consultancy Services, India
Arijit Mukherjee, Tata Consultancy Services, India

Declarative vs Rule-based Control for Flocking Dynamics
Usama Mehmood, Stony Brook University, USA
Nicola Paoletti, Stony Brook University, USA
Dung Phan, Stony Brook University, USA
Radu Grosu, Technische Universitat Wien, Austria
Shan Lin, Stony Brook University, USA
Scott D. Stoller, Stony Brook University, USA

Ashish Tiwari, SRI International, USA
Junxing Yang, Stony Brook University, USA
Scott A. Smolka, Stony Brook University, USA

Evolving Collective Behaviours in Simulated Kilobots
Jane Holland, National University of Ireland, Galway, Ireland
Josephine Griffith, National University of Ireland, Galway, Ireland
Colm O'Riordan, National University of Ireland, Galway, Ireland

Fast Consensus for Fully Distributed Multi-Agent Task Allocation
Joanna Turner, Loughborough University, UK
Qinggang Meng, Loughborough University, UK
Gerald Schaefer, Loughborough University, UK
Andrea Soltoggio, Loughborough University, UK

WED 14:20 – 16:00
Room: Adolphe Alphand

(DS) Data Streams
Session Chair: Joao Gama, University of Porto, Portugal

Iterative Subset Selection for Feature Drifting Data Streams
Lanqin Yuan, University of Waikato, New Zealand
Bernhard Pfahringer, University of Auckland, New Zealand
Jean Paul Barddal, Pontifícia Universidade Católica do Paraná, Brazil

Maximally Informative k-Itemset Mining from Massively Distributed Data Streams
Mehdi Zitouni, INRIA and University of Montpellier, France
Reza Akbarinia, INRIA and University of Montpellier, France
Sadok Ben Yahia, Université Tunis ElManar, Tunisia
Florent Masseglia, INRIA and University of Montpellier, France

Unsupervised Context Switch for Classification Tasks on Data Streams with Recurrent Concepts
Denis M. dos Reis, Universidade de São Paulo, Brazil
André G. Maletzke, Universidade de São Paulo, Brazil
Gustavo E.A.P.A. Batista, Universidade de São Paulo, Brazil

WED 14:20 – 16:00
Room: Aristide de Monpezat

(SONAMA-3) Social Network and Media Analysis
Session Chair: Richard Han, University of Colorado Boulder, USA

(IAR) Information Access and Retrieval
Session Chair: Grégory Smits,

(SONAMA) The Follower Count Fallacy: Detecting Twitter Users with Manipulated Follower Count
Anupama Aggarwal, IIIT-Delhi, India
Saravana Kumar, College of Engineering, Guindy, India
Kushagra Bhargava, IIIT-Delhi, India
Ponnurangam Kumaraguru, IIIT-Delhi, India

(SONAMA) Exploiting LinkedIn to Predict Employee Resignation Likelihood
Ana Carolina C. de Jesus, PUC Minas, Brazil
Márcio Enio G. Dutra Júnior, UFMG, Brazil
Wladmir C. Brandão, PUC Minas, Brazil

(IAR) Source Selection of Long Tail Sources for Federated Search in an Uncooperative Setting
Günter Urak, Know-Center GmbH, Austria
Hermann Ziak, Know-Center GmbH, Austria
Roman Kern, Know-Center GmbH, Austria

WED 14:20 – 16:00
Room: Ernest Gabard

(SE-2) Software Engineering
Session Chair: Byungjeong Lee,
University of Seoul, South Korea

An Experimental Evaluation of a De-biasing Intervention for Professional Software Developers
Martin Shepperd, Brunel University London, UK
Carolyn Mair, Fashion.Psychology, UK
Magne Jørgensen, Simula Research Laboratory, Norway

DEVA: Sensing Emotions in the Valence Arousal Space from Software Engineering Text
Md. Rakibul Islam, University of New Orleans, USA
Minhaz F. Zibran, University of New Orleans, USA

NewTL: Engineering an Extract, Transform, Load (ETL) Software System for Business on a Very Large Scale
Vidroha Debroy, Varidesk Inc., USA
Lance Brimble, Varidesk Inc., USA
Matt Yost, Varidesk Inc., USA

An Agile Process Supporting Software Reuse: An Industrial Experience
Luigi Cafaro, INDRA, Italy
Rita Francese, University of Salerno, Italy
Ciro Palumbo, INDRA, Italy
Michele Risi, University of Salerno, Italy
Genoveffa Tortora, University of Salerno, Italy

WED 14:20 – 16:00
Room: Gérard de Nerval

(OS-2) Operating Systems
Session Chair: Alexandre Beletti, FISP & FUP, Brazil

Analyzing and Modeling the Impact of Memory Latency and Bandwidth on Application Performance
Myunghoon Oh, Dankook University, South Korea
Jongmoo Choi, Dankook University, South Korea
Seong-je Cho, Dankook University, South Korea
Jeesoo Kim, Johns Hopkins University, USA
Changhwan Youn, SK Hynix Inc., South Korea
Woosuk Chung, SK Hynix Inc., South Korea

Efficient Page-cache Encryption for Smart Devices with Non-volatile Main Memory
Kenichi Kourai, Kyushu Institute of Technology, Japan
Naoto Fukuda, Kyushu Institute of Technology, Japan
Tomohiro Kodama, Kyushu Institute of Technology, Japan

Ethernet Bonding on a Bare PC Web Server with Dual NICs
Faris Almansour, Towson University, USA
Ramesh Karne, Towson University, USA
Alexander Wijesinha, Towson University, USA
Bharat Rawal, Pennsylvania State University Abington, USA

Kloadavg: A Load Index for the OS Kernel Level
Rivalino Matias Jr., Federal University of Uberlandia, Brazil
Alexandre Beletti Ferreira, Federal Institute of São Paulo and Federal University of Para, Brazil

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WED 16:00 – 16:30
Coffee Break

WED 16:00 – 18:10
Poster Session II

(WRIGHT OPEN SPACE)

Posters of the following Tracks: *BPMEA, DM, DS, IAR, SOAP, SWA, WT, RE, RS, SATTA, SE, SiSoS, SP, UE, ES, OOPS, OS, PDP, PL*
(*See page 27 for detailed list of Posters*)

WED **16:30 – 18:35**
Room: Alphonse de Lamartine

(KRR) Knowledge Representation and Reasoning
Session Chair: Martine Ceberio, UTEP, USA

Tractable Reasoning in Probabilistic OWL Profiles
Melisachew Wudage Chekol, University of Mannheim, Germany
Heiner Stuckenschmidt, University of Mannheim, Germany

A Preference-Based Approach to Backbone Computation with Application to Argumentation
Alessandro Previti, University of Helsinki, Finland
Matti Järvisalo, University of Helsinki, Finland

An Infinite-Valued Grounded Labelling for Abstract Argumentation Frameworks
João Alcântara, Universidade Federal do Ceará, Brazil
Samy Sá, Universidade Federal do Ceará, Brazil

Incremental Computation of Warranted Arguments in Dynamic Defeasible Argumentation: The Rule Addition Case

Gianvincenzo Alfano, University of Calabria, Italy
Sergio Greco, University of Calabria, Italy
Francesco Parisi, University of Calabria, Italy
Gerardo I. Simari, Universidad Nacional del Sur, Argentina
Guillermo R. Simari, Universidad Nacional del Sur, Argentina

In, Out and Through: Formalising some Dynamic Aspects of the Image Schema Containment

Maria M. Hedblom, Free University of Bozen-Bolzano, Italy
Dagmar Gromann, Technical University Dresden, Germany
Oliver Kutz, Free University of Bozen-Bolzano, Italy

WED 16:30 – 18:35
Room: Adolphe Alphand

(DADS) Dependable, Adaptive, and Secure Distributed Systems
Session Chair (TBA): Sana Belguith, University of Auckland, New Zealand

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Towards a Model for Comprehending and Reasoning about PoW-based Blockchain Network Sustainability

Sotirios Liaskos, York University, Canada
Bo Wang, York University, Canada

Secure Publish and Subscribe Systems with Efficient Revocation

Sana Belguith, The University of Auckland, New Zealand
Shujie Cui, The University of Auckland, New Zealand
Muhammad Rizwan Asghar, The University of Auckland
Giovanni Russello, The University of Auckland, New Zealand

Adaptive Information Distribution for Dynamic Sets

Matthias Prellwitz, University of Rostock, Germany
Helge Parzyjegla, University of Rostock, Germany
Steffen Steiner, University of Rostock, Germany
Gero Mühl, University of Rostock, Germany

EcoVMBroker: Energy-aware Scheduling for Multi-layer Datacenters

Rodrigo Fernandes, INESC-ID Lisboa, Portugal
José Simão, INESC-ID Lisboa, Portugal
Luís Veiga, INESC-ID Lisboa, Portugal

Dynamic Adaptation of Byzantine Consensus Protocols

Carlos Carvalho, INESC-ID, Portugal
Daniel Porto, INESC-ID, Portugal
Luís Rodrigues, INESC-ID, Portugal
Manuel Bravo, INESC-ID, Portugal
Alysson Bessani, LaSIGE, Portugal

WED 16:30 – 18:35
Room: Aristide de Monpezat

(IAR-2) Information Access and Retrieval
Session Chair: Grégory Smits, Univ Rennes, CNRS, IRISA – UMR

LiMe: Linear Methods for Pseudo-Relevance Feedback

Daniel Valcarce, University of A Coruña, Spain
Javier Parapar, University of A Coruña, Spain
Álvaro Barreiro, University of A Coruña, Spain

Towards Coherent Single-Document Summarization: An Integer Linear Programming-based Approach

Rodrigo Garcia, Federal Rural University of Pernambuco, Brazil
Rinaldo Lima, Federal Rural University of Pernambuco, Brazil
Bernard Espinasse, Aix-Marseille Université, France
Hilário Oliveira, Federal University of Pernambuco, Brazil

Fuzzy Query by Example

Aurélien Moreau, University of Rennes 1 / IRISA, France
Olivier Pivert, University of Rennes 1 / IRISA, France
Grégory Smits, University of Rennes 1 / IRISA, France

CoRec: A Co-Training Approach for Recommender Systems

Arthur F. da Costa, University of São Paulo, Brazil
Marcelo G. Manzato, University of São Paulo, Brazil
Ricardo J.G.B. Campello, James Cook University, Australia

Optimization Framework Model for Retrospective Tweet Summarization

Abdelhamid Chellal, University of Toulouse III, France
Mohand Boughanem, University of Toulouse III, France

WED 16:30 – 18:35
Room: Ernest Gabard

(SE-3) Software Engineering
Session Chair: Eunjee Song, Baylor University, USA

Program Understanding using Ontologies and Dynamic Analysis

Javier Belmonte, eKlore Srl, Switzerland
Philippe Dugerdil, HES-SO, Switzerland

Formal Verification of Energy and Timed Requirements for a Cooperative Automotive System

Eun-Young Kang, Sun Yat-Sen University, China
Li Huang, Sun Yat-Sen University, China
Dongrui Mu, Sun Yat-Sen University, China

Improving Function Coverage with Munch: A Hybrid Fuzzing and Directed Symbolic Execution Approach

Saahil Ognawala, Technical University of Munich, Germany

Thomas Hutzelmann, Technical University of Munich, Germany
Eirini Psallida, Technical University of Munich, Germany
Alexander Pretschner, Technical University of Munich, Germany

Test-Case Generation for Web-Service Clients
Andreas Fuchs, University of Münster, Germany
Herbert Kuchen, University of Münster, Germany

A Collaborative Filtering Recommender System for Test Case Prioritization in Web Applications
Maral Azizi, University of North Texas, USA
Hyunsook Do, University of North Texas, USA

WED 16:30 – 18:35
Room: Gérard de Nerval

(VSPLE) Variability and Software Product Line Engineering
Session Chair: Abdelhak-Djamel Seriai,
Univeristy of Montpellier/CNRS, France

Towards a Fault-Detection Benchmark for Evaluating Software Product Line Testing Approaches
Stefan Fischer, Johannes Kepler University Linz, Austria
Roberto Erick Lopez-Herrejon, ETS Canada
Alexander Egyed, Johannes Kepler University Linz, Austria

Physical Separation of Features: A Survey with CPP Developers
Jacob Krüger, Harz University of Applied Sciences and Otto-von-Guericke Unviersity Magdeburg, Germany
Kai Ludwig, Harz University of Applied Sciences, Germany
Bernhard Zimmermann, Harz University of Applied Sciences
Thomas Leich, Harz University of Applied Sciences, Germany

Engineering Configurators for the Retail Industry: Experience Report and Challenges Ahead
Maxime Cordy, University of Namur, Belgium
Patrick Heymans, University of Namur, Belgium

Visual Guidance for Product Line Configuration using Recommendations and Non-Functional Properties
Juliana Alves Pereira, University of Magdeburg, Germany
Jabier Martinez, University Pierre et Marie Curie, France
Hari Kumar Gurudu, University of Magdeburg, Germany
Sebastian Krieter, University of Magdeburg, Germany
Gunter Saake, University of Magdeburg, Germany

Assessing the Functional Feasibility of Variability-Intensive Data Flow-Oriented Systems
Sami Lazreg, University Côte d'Azur, France
Philippe Collet, Université Cote d'Azur, France
Sébastien Mosser, Université Côte d'Azur, France

Thursday April 12, 2018

Thu 9:25–10:40
Room: Alfred de Vigny Auditorium

Keynote Address
Dr. Michael P. Papazoglouholds
See page 5 for details.

Thu 10:40 – 11:10
Coffee Break

THU 11:10 – 12:50
Room: Alphonse de Lamartine

(SVT-1) Software Verification and Testing
Session Chair: Ylìes Falcone, Univ. Grenoble Alpes, France

TwAS: Two-stage Shape Analysis for Speed and Precision
Amey Karkare, Indian Institute of Technology Kanpur, India

Verified Compilation of Linearizable Data Structures – Mechanizing Rely Guarantee for Semantic Refinement
Yannick Zakowski, University Rennes / Inria / CNRS / IRISA
David Cachera, University Rennes / Inria / CNRS / IRISA, France
Delphine Demange, University Rennes / Inria / CNRS / IRISA
David Pichardie, University Rennes / Inria / CNRS / IRISA, France

Qualitative and Quantitative Analysis with Scheduling Policies in Model Checking
Nhat-Hoa Tran, JAIST, Japan
Yuki Chiba, JAIST, Japan
Toshiaki Aoki, JAIST, Japan

Cycle-Bounded Model Checking of PLC Software via Dynamic Large-Block Encoding
Dimitri Bohlender, RWTH Aachen University, Germany
Daniel Hamm, RWTH Aachen University, Germany
Stefan Kowalewski, RWTH Aachen University, Germany

THU 11:10 – 12:50
Room: Adolphe Alphand

(DTTA) Database Theory, Technolgy, and Applications
Session Chair: Junping Sun

CURATOR – A Secure Shared Object Store:
Design, Implementation, and Evaluation of a
Manageable, Secure, and Performant Data
Exchange Mechanism for Smart Devices
Christoph Stach, University of Stuttgart, IPVS/AS, Germany
Bernhard Mitschang, University of Stuttgart, IPVS/AS, Germany

Data Modeling for Analytical Queries on
Document-Oriented DBMS
R.A.S.N. Soransso, Instituto Militar de Engenharia, Brazil
M.C. Cavalcanti, Instituto Militar de Engenharia, Brazil

Class-Constraint Similarity Queries
Jessica A. de Souza, Universidade de São Paulo, Brazil
Agma J.M. Traina, Universidade de São Paulo, Brazil
Sebastien Michel, University of Kaiserslautern, Germany

Blind Attribute Pairing for
Privacy-Preserving Record Linkage
Thiago Pereira da Nóbrega, UFCG, Brazil
Carlos Eduardo S. Pires, UFCG, Brazil
Tiago Brasileiro Araújo, UFCG, Brazil
Demetrio Gomes Mestre, UFCG, Brazil

THU 11:10 – 12:50
Room: Aristide de Monpezat

(RE-1) Requirement Engineering
Session Chair: Universidade Nova de Lisboa, Portugal

Comparing Alternative Goal Model
Visualizations for Decision Making: an
Exploratory Experiment
Sotirios Liaskos, York University, Canada
Teodora Dundjerovic, York University, Canada
Grace Gabriel, University of Toronto, Canada

Building a Software Requirements
Specification and Design for an Avionics
System:
An Experience Report
Andrés Paz, École de Technologie Supérieure, Canada
Ghizlane El Boussaidi, École de Technologie Supérieure, Canada

SafeTrace: A Safety-Driven Requirement
Traceability Framework on Device
Interaction Hazards for MD PnP
Andrew Yi-Zong Ou, UIUC, USA
Maryam Rahmaniheris, UIUC, USA
Yu Jiang, Tsinghua University, China
Lui Sha, UIUC, USA
Zhicheng Fu, Illinois Institute of Technology, USA
Shangping Ren, Illinois Institute of Technology, USA

A Gamified Requirements Inspection
Process for Goal Models
João Pimentel, Universidade Federal Rural de Pernambuco, Brazil
Emanuel Santos, Universidade Federal de Pernambuco, Brazil
Tarcisio Pereira, Universidade Federal de Pernambuco, Brazil
Daniel Ferreira, Universidade de Pernambuco, Brazil
Jaelson Castro, Universidade Federal de Pernambuco, Brazil

THU 11:10 – 12:50
Room: Ernest Gabard

(WT-1) Web Technologies
Session Chair: Francesco Poggi, University of Bologna,
Italy

A Quality Analysis of Facebook Messenger's
Most Popular Chatbots
Juanan Pereira, University of the Basque Country, Spain
Oscar Díaz, University of the Basque Country, Spain

Gesture4All: A Framework for 3D Gestural
Interaction to Improve Accessibility of Web
Videos
Marcio Maestrelo Funes, University of São Paulo, Brazil
Tiago Henrique Trojahn, University of São Paulo, Brazil
Renata Pontin Mattos Fortes, University of São Paulo, Brazil
Rudinei Goularte, University of São Paulo, Brazil

Layout Cross-Browser Incompatibility
Detection using Machine Learning and DOM
Segmentation
Fagner Christian Paes, BestCode, Brazil
Willian Massami Watanabe, UTFP, Brazil

A Web-based Approach using Reactive
Programming for Complex Event Processing
in Internet of Things Applications
Carlos Zimmerle, Universidade Federal de Pernambuco, Brazil
Kiev Gama, Universidade Federal de Pernambuco, Brazil

THU 11:10 – 12:50
Room: Gérard de Nerval

(PDP) Privacy by Design in Practice
Session Chair: Ronald Petrilic, CDP & PFIBW, Spain

Extending Model-based Privacy Analysis
for the Industrial Data Space by Exploiting
Privacy Level Agreements
Amir Shayan Ahmadian, University of Koblenz Landau, Germany
Jan Jürjens, University of Koblenz Landau, Germany
Daniel Strüber, University of Koblenz Landau, Germany

A System of Privacy Patterns for User Control
Michael Colesky, Radboud University, The Netherlands
Julio C. Caiza, Escuela Politécnica Nacional, Ecuador
José M. Del Álamo, Universidad Politénica de Madrid, Spain
Jaap-Henk Hoepman, Radboud University, The Netherlands
Yod-Samuel Martín, Universidad Politécnica de Madrid, Spain

To Reveal or Not To Reveal: Balancing User-
Centric Social Benefit and Privacy in Online
Social Networks
Sourya Joyee De, LORIA-INRIA Nancy Grand-Est, France
Abdessamad Imine, Lorraine University, LORIA-INRIA
Nancy Grand-Est, France

Helping John to Make Informed Decisions on
Using Social Login

Farzaneh Karegar, Karlstad University, Sweden
Nina Gerber, Technische Universität Darmstadt, Germany
Melanie Volkamer, Technische Universität Darmstadt, Sweden
Simone Fischer-Hübner, Karlstad University, Sweden

Thu 12:50 – 14:20
Lunch Break
(Henri Faisans Room)

THU 14:30 – 18:00
SRC Oral Presentation
WRIGHT OPEN SPACE
See page 28 for details.

THU 14:20 – 16:00
Room: Alphonse de Lamartine
(SVT-2) Software Verification and Testing
Session Chair: Gwen Salaün, Univ. Grenoble Alpes, France

LOCKS: A Property Specification Language for Security Goals
Rajesh Kumar, University of Twente, The Netherlands
Arend Rensink, University of Twente, The Netherlands
Mariëlle Stoelinga, University of Twente, The Netherlands

TeSSLa: Runtime Verification of Non-Synchronized Real-Time Streams
Martin Leucker, University of Lübeck, Germany
César Sánchez, IMDEA Software Institute, Spain
Torben Scheffel, University of Lübeck, Germany
Malte Schmitz, University of Lübeck, Germany
Alexander Schramm, IMDEA Software Institute, Spain

A Web-Based Tool for Analysing Normative Documents in English
John J. Camilleri, CUT and UG, Sweden
Mohammad Reza Haghshenas, CUT and UG, Sweden
Gerardo Schneider, CUT and UG, Sweden

On the Use of Sequence Mining within Spectrum based Fault Localisation
Gulsher Laghari, University of Antwerp, Belgium
Serge Demeyer, University of Antwerp, Belgium

THU 14:20 – 16:00
Room: Adolphe Alphand
(IoT-1) Internet of Things
Session Chair: Seong-je Cho, Dankook University, Korea

Energy Efficient Scheduling in IoT Networks
Smruti R. Sarangi, Indian Institute of Technology Delhi, India
Sakshi Goel, Indian Institute of Technology Delhi, India
Bhumika Singh, Indian Institute of Technology Delhi, India

Leaking Data from Enterprise Networks using a Compromised Smartwatch Device
Shachar Siboni, Ben-Gurion University of the Negev, Israel
Asaf Shabtai, Ben-Gurion University of the Negev, Israel
Yuval Elovici, Ben-Gurion University of the Negev, Israel

Combining Hardware Nodes and Software Components Ordering-based Heuristics for Optimizing the Placement of Distributed IoT Applications in the Fog
Ye Xia, Orange Labs, France
Xavier Etchevers, Orange Labs, France
Loïc Letondeur, Orange Labs, France
Thierry Coupaye, Orange Labs, France
Frédéric Desprez, Université Grenoble Alpes, Inria, CNRS, LIG, France

Fuzzy Logic and MCDA in IoT Resources Classification
Renato Dilli, Federal University of Pelotas, Brazil
Amanda Argou, Federal University of Pelotas, Brazil
Mauricio Pilla, Federal University of Pelotas, Brazil
Ana Marilza Pernas, Federal University of Pelotas, Brazil
Renata Reiser, Federal University of Pelotas, Brazil
Adenauer Yamin, Federal University of Pelotas, Brazil

THU 14:20 – 16:00
Room: Aristide de Monpezat
(RE-2) Requirement Engineering
Session Chair: Sotirios Liaskos, York University, Canada
(SATTA-1) Software Architecture: Theory, Technology, $ Applications
Session Chair: Patrizia Scandurra, University of Bergamo, Italy

(RE) Deriving Services from KAOS Models
Eric Souza, Universidade NOVA de Lisboa, Portugal
Ana Moreira, Universidade NOVA de Lisboa, Portugal

(RE) Improving Self-Adaptive Systems Conceptual Modeling
João Pablo S. da Silva, Federal University of Pampa, Brazil
Miguel Ecar, Federal University of Pampa, Brazil
Marcelo S. Pimenta, Federal University of Rio Grande do Sul, Brazil
Fabio Natanael Kepler, Federal University of Pampa, Brazil
Gilleanes T.A. Guedes, Federal University of Pampa, Brazil
Carlos Michel Betemps, Federal University of Pampa, Brazil

(SATTA) An Ocarina Extension for AADL Formal Semantics Generation
Hana Mkaouar, ReDCAD Laboratory, University of Sfax, Tunisia
Bechir Zalila, ReDCAD Laboratory, University of Sfax, Tunisia
Jérôme Hugues, Institut Supérieur de l'Aéronautique et de l'Espace
Mohamed Jmaiel, Digital Research Center of Sfax, Tunisia

(SATTA) Solution-aware Data Flow Diagrams for Security Threat Modeling
Laurens Sion, KU Leuven, Belgium

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Koen Yskout, KU Leuven, Belgium
Dimitri Van Landuyt, KU Leuven, Belgium
Wouter Joosen, KU Leuven, Belgium

THU 14:20 – 16:00
Room: Ernest Gabard

(WT-2) Web Technologies
Session Chair: Francesco Poggi, University of Bologna, Italy

(SWA-1) Semantic Web and Applications
Session Chair: Seon Ae Chun

(WT) browserCloud.js - A Distributed Computing Fabric Powered by a P2P Overlay Network on top of the Web Platform
David Dias, INESC-ID Lisboa, Portugal
Luís Veiga, INESC-ID Lisboa, Portugal

(WT) Customising LOD Views: A Declarative Approach
Alice Graziosi, University of Bologna, Italy
Angelo Di Iorio, University of Bologna, Italy
Francesco Poggi, University of Bologna, Italy
Silvio Peroni, University of Bologna, Italy
Luca Bonini, University of Bologna, Italy

(SWA) Fuzzy Ontologies for Search Results Diversification: Application to Medical Data
Ghada Besbes, University of Manouba, Tunisia
Hajer Baazaoui-Zghal, University of Manouba, Tunisia

(SWA) Knowledge Base Completion using Distinct Subgraph Paths
Sameh K. Mohamed, National University of Ireland, Galway
Vit Nováček, National University of Ireland, Galway, Ireland
Pierre-Yves Vandenbussche, Fujitsu Ireland Ltd., Ireland

THU 14:20 – 16:00
Room: Gérard de Nerval

(RS-1) Recommender Systems
Session Chair: Yong Zheng, IIT, USA

Investigating Serendipity in Recommender Systems based on Real User Feedback
Denis Kotkov, University of Jyväskylä, Finland
Joseph A. Konstan, University of Minnesota, USA
Qian Zhao, University of Minnesota, USA
Jari Veijalainen, University of Jyväskylä, Finland

What to Write and Why: A Recommender for News Media
Alessandro Cucchiarelli, Università Politecnica delle Marche, Italy
Christian Morbidoni, Università Politecnica delle Marche, Italy
Giovanni Stilo, Sapienza University of Rome, Italy
Paola Velardi, Sapienza University of Rome, Italy

A Hybrid Approach to Music Playlist Continuation based on Playlist-Song Membership

Andreu Vall, Johannes Kepler University, Austria
Matthias Dorfer, Johannes Kepler University, Austria
Markus Schedl, Johannes Kepler University, Austria
Gerhard Widmer, Johannes Kepler University, Austria

Explicit or Implicit Feedback? Engagement or Satisfaction? A Field Experiment on Machine-Learning-Based Recommender Systems
Qian Zhao, University of Minnesota, USA
F. Maxwell Harper, University of Minnesota, USA
Gediminas Adomavicius, University of Minnesota, USA
Joseph A. Konstan, University of Minnesota, USA

THU 16:00 – 16:30
Coffee Break

THU 16:30 – 18:10
Room: Alphonse de Lamartine

(SVT-3) Software Verification and Testing
Session Chair: Leonardo Mariani.

Generating Minimal Test Set Satisfying MC/DC Criterion via SAT based Approach
Ling Yang, Chinese Academy of Sciences, China
Jun Yan, Chinese Academy of Sciences, China
Jian Zhang, Chinese Academy of Sciences, China

Korat-API: A Framework to Enhance Korat to Better Support Testing and Reliability Techniques
Nima Dini, University of Texas at Austin, USA
Cagdas Yelen, University of Texas at Austin, USA
Zakaria Alrmaih, University of Texas at Austin, USA
Amresh Kulkarni, University of Texas at Austin, USA
Sarfraz Khurshid, University of Texas at Austin, USA

AutoPUT: An Automated Technique for Retrofitting Closed Unit Tests into Parameterized Unit Tests
Keita Tsukamoto, The University of Tokyo, Japan
Yuta Maezawa, National Institute of Informatics, Japan
Shinichi Honiden, The University of Tokyo, Japan

THU 16:30 – 18:10
Room: Adolphe Alphand

(IoT-2) Internet of Things
Session Chair: Smruti R. Sarangi, IIT Delhi, India

A Graph Partitioning-based Heuristic for Runtime IoT Data Placement Strategies in a Fog Infrastructure
Mohammed Islam Naas, Orange Labs, France
Laurent Lemarchand, Université de Bretagne Occidentale, France
Jalil Boukhobza, Université de Bretagne Occidentale, France
Philippe Raipin, Orange Labs, France

Lightweight Secure Bootstrap and Message Attestation in the Internet of Things
Clémentine Gritti, EURECOM Sophia Antipolis, France
Refik Molva, EURECOM Sophia Antipolis, France
Melek Önen, EURECOM Sophia Antipolis, France

Hybrid Controller Synthesis for the IoT
Arthur Gatouillat, INSA-Lyon, France
Youakim Badr, INSA-Lyon, France
Bertrand Massot, INSA-Lyon, France

FI-MApp: A Web Application for Managing FI-WARE Environments in Internet of Things
Phelipe Feio, Federal University of Pará, Brazil
José Neto, Federal University of Pará, Brazil
Vagner Nascimento, Federal University of Pará, Brazil
Antônio Abelém, Federal University of Pará, Brazil

THU 16:30 – 18:10
Room: Aristide de Monpezat

(SATTA-2) Software Architecture: Theory, Technology, $ Applications
Session Chair: Patrizia Scandurra,
University of Bergamo, Italy

Model-Driven Adaptation of Service Choreographies
Marco Autili, University of L'Aquila, Italy
Amleto Di Salle, University of L'Aquila, Italy
Francesco Gallo, University of L'Aquila, Italy
Claudio Pompilio, University of L'Aquila, Italy
Massimo Tivoli, University of L'Aquila, Italy

Improving the Detection of Architectural Evolutionary Coupling: An Approach Considering Sliding Verification
Marcelo Machado, Military Engineering Institute, Brazil
Ricardo Choren, Military Engineering Institute, Brazil

Reconstruction of Execution Architecture View using Dependency Relationships and Execution Traces
Hwi Ahn, KAIST, South Korea
Sungwon Kang, KAIST, South Korea
Seonah Lee, Gyeongsang National University, South Korea

Enabling Temporal-Aware Contexts for Adaptative Distributed Systems
Ludovic Mouline, University of Luxembourg, Luxembourg
Amine Benelallam, INRIA Rennes, France
Thomas Hartmann, University of Luxembourg, Luxembourg
François Fouquet, University of Luxembourg, Luxembourg
Johann Bourcier, INRIA Rennes, France
Brice Morin, SINTEF, Norway
Olivier Barais, INRIA Rennes, France

THU 16:30 – 18:10
Room: Ernest Gabard

(SWA-2) Semantic Web and Applications
Session Chair: Soon Ae Chun,
City University of New York, USA

RDF Shape Induction using Knowledge Base Profiling
Nandana Mihindukulasooriya, Universidad Politécnica de Madrid
Mohammad Rifat Ahmmad Rashid, Politecnico di Torino, Italy, Italy
Giuseppe Rizzo, Instituto Superiore Mario Boella, Italy
Raúl García-Castro, Universidad Politecnica de Madrid, Spain
Oscar Corcho, Universidad Politécnica de Madrid, Spain
Marco Torchiano, Politecnico di Torino, Italy

Measuring Structural Similarity between RDF Graphs
Pierre Maillot, IRISA/Université Rennes 1, France
Carlos Bobed, IRISA/Université Rennes 1, France

EffTE: A Dependency-aware Approach for Test-Driven Ontology Development
Lavdim Halilaj, University of Bonn and Fraunhofer IAIS, Germany
Irlán Grangel-González, University of Bonn and Fraunhofer IAIS
Steffen Lohmann, Fraunhofer IAIS, Germany
Maria-Esther Vidal, Fraunhofer IAIS, Germany
Sören Auer, National Library of Science and Technology, Germany

Predicting the Possibilistic Score of OWL Axioms through Modified Support Vector Clustering
Dario Malchiodi, Università degli Studi di Milano, Italy
Andrea G.B. Tettamanzi, University of Côte d'Azur, France

THU 16:30 – 18:10
Room: Gérard de Nerval

(RS-2) Recommender Systems
Session Chair: Yong Zheng, IIT, USA

Human Uncertainty and Ranking Error – Fallacies in Metric-Based Evaluation of Recommender Systems
Kevin Jasberg, University of Duesseldorf, Germany
Sergej Sizov, University of Duesseldorf, Germany

Situation-Dependent Combination of Long-Term and Session-Based Preferences in Group Recommendations: An Experimental Analysis
Thuy Ngoc Nguyen, Free University of Bozen-Bolzano, Italy
Francesco Ricci, Free University of Bozen-Bolzano, Italy

Active Learning in Multi-Domain Collaborative Filtering Recommender Systems
Xin Guan, University of Warwick, UK
Chang-Tsun Li, Charles Sturt University, Australia
Yu Guan, Newcastle University, UK

MovieExplorer: Building an Interactive Exploration Tool from Ratings and Latent Taste Spaces
Taavi T. Taijala, University of Minnesota, USA
Martijn C. Willemsen, EUT, The Netherlands
Joseph A. Konstan, University of Minnesota, USA

Friday April 13, 2018

FRI 9:00 – 10:40
Room: Alphonse de Lamartine

(HCI-1) Smart Human Computer Interaction
Session Chair: Ganesh Kumar P., Anna Univerisity, India

Accelerated Exhaustive Eye Glints Localization Method for Infrared Video Oculography
Zihan Ding, University of Science and Technology of China, China
Jiayi Luo, University of Science and Technology of China, China
Hongping Deng, University of Science and Technology of China

IoT based Monitoring of Container Vehicle for Secure and Reliable Delivery of Goods
Sathish Kumar R, Government College of Engineering Salem, India
Rani C, Government College of Engineering Salem, India
Ganesh Kumar P, Anna University Regional Campus, India

Segmentation of Affected Skin Lesion with Blind Deconvolution and L*a*b Colour Space
Imran Ahmed, Institute of Management Sciences, Pakistan
Qazi Nida ur Rehman, Institute of Management Sciences, Pakistan
Ghulam Masood, Institute of Management Sciences, Pakistan
Awais Adnan, Institute of Management Sciences, Pakistan
Awais Ahmad, Yeungnam University, South Korea
Seungmin Rho, Sungkyul University, South Korea

Understanding Data Dimensions by Cluster Visualization using Edge Bundling in Parallel Coordinates
Rodrigo Santos do Amor Divino Lima, FUP, Brazil
Carlos Gustavo Resque dos Santos, FUP, Brazil
Sandro de Paula Mendonça, Federal University of Pará, Brazil
Jefferson Magalhães de Morais, Federal University of Pará, Brazil
Bianchi Serique Meiguins, Federal University of Pará, Brazil

FRI 9:00 – 10:40
Room: Adolphe Alphand

(KEGeoD) Knowledge Extraction from Geographical Data
Session Chair: Christian Sallaberry, University of Pau and Pays Adour, France

MOVELETS: Exploring Relevant Subtrajectories for Robust Trajectory Classification
Carlos Andres Ferrero, UFSC, Brazil

Luis Otavio Alvares, UFSC, Brazil
Willian Zalewski, UFIAL, Brazil
Vania Bogorny, UFSC, Brazil

Adaptive kNN using Expected Accuracy for Classification of Geo-Spatial Data
Mark Kibanov, University of Kassel, Germany
Martin Becker, University of Würzburg, Germany
Juergen Mueller, University of Kassel, Germany
Martin Atzmueller, Tilburg University, The Netherlands
Andreas Hotho, University of Würzburg, Germany
Gerd Stumme, University of Kassel, Germany

Modeling changes in Territorial Partitions Over Time: Ontologies TSN and TSN-Change
Camille Bernard, Université Grenoble Alpes, France
Marlène Villanova-Oliver, Université Grenoble Alpes, France
Jérôme Gensel, Université Grenoble Alpes, France
Hy Dao, University of Geneva, Switzerland

Assessing the Planimetric Accuracy of Paris Atlases from the late 18th and 19th Centuries
Bertrand Duménieu, Ecole des Hautes Etudes, France
Nathalie Abadie, Université Paris-Est, France
Julien Perret, Université Paris-Est, France

FRI 9:00 – 10:40
Room: Aristide de Monpezat

(UE) Usability Engineering
Session Chair: Eduardo Mosqueira Rey, University of A Coruna, Spain

Educational Environments
Ana Carolina Tomé Klock, Federal University of Rio Grande Sul
Aline Nunes Ogawa, Santa Catarina State University, Brazil
Isabela Gasparini, Santa Catarina State University, Brazil
Marcelo Soares Pimenta, Federal University of Rio Grande do Sul

Usa-DSL: Usability Evaluation Framework for Domain-Specific Languages
Ildevana Poltronieri, PCURGS, Brazil
Avelino Francisco Zorzo, PCURGS, Brazil
Maicon Bernardino, Federal University of Pampa, Brazil
Marcia de Borba Campos, PCURGS, Brazil

Accessibility and Usability Problems Encountered on Websites and Applications in Mobile Devices by Blind and Normal-Vision Users
Michael Crystian Nepomuceno Carvalho, UFL, Brazil
Felipe Silva Dias, UFL, Brazil
Aline Grazielle Silva Reis, UFL, Brazil
André Pimenta Freire, UFL, Brazil

FRI 9:00 – 10:40
Room: Ernest Gabard

(DM-1) Data Mining
Session Chair: Luigi Di Caro, University of Torino, Italy

An Efficient Hybrid SVDD/Clustering approach for Anomaly-based Intrusion Detection
Tayeb Kenaza, Ecole Militaire Polytechnique, Algeria
Khadija Benaceur, Ecole Nationale Préparatoire aux Etudes d'Ingéniorat, Algeria
Abdenour Labed, Ecole Militaire Polytechnique, Algeria

Vehicle Emission Prediction using Remote Sensing Data and Machine Learning Techniques
Jiazhen Chen, University of Auckland, New Zealand
Gillian Dobbie, University of Auckland, New Zealand
Yun Sing Koh, University of Auckland, New Zealand
Elizabeth Somervell, NIWAR, New Zealand
Gustavo Olivares, NIWAR, New Zealand

Sentiment Phrase Generation using Statistical Methods
Dirk Reinel, Hof University of Applied Sciences, Germany
Jörg Scheidt, Hof University of Applied Sciences, Germany
Andreas Henrich, University of Bamberg, Germany
Niko Brucker, Hof University of Applied Sciences, Germany

On the Behavior of the Infinite Restricted Boltzmann Machine for Clustering
Nikolas A. Huhnstock, University of Skövde, Sweden
Alexander Karlsson, University of Skövde, Sweden
Maria Riveiro, University of Skövde, Sweden
H. Joe Steinhauer, University of Skövde, Sweden

FRI 9:00 – 10:40
Room: Gérard de Nerval
(WCN-1) Wireless Communications and Networking
Session Chair: Dongkyun Kim,
Kyungpook National University, South Korea

BIRD: Bio-InspiRed Distributed Interest Forwarding in Vehicular Named-Data Networks
Muhammad Azfar Yaqub, Kyungpook National University, Korea
Syed Hassan Ahmed, University of Central Florida, USA
Dongkyun Kim, Kyungpook National University, Korea

Dynamic Control of Beacon Transmission Rate and Power with Position Error Constraint in Cooperative Vehicular Networks
Sandy Bolufé, Universidad de Chile, Chile
Samuel Montejo-Sánchez, Universidad de Chile, Chile
Cesar A. Azurdia-Meza, Universidad de Chile, Chile
Sandra Céspedes, Universidad de Chile, Chile
Richard Demo Souza, Federal University of Santa Catarina, Brazil
Evelio M.G. Fernandez, Federal University of Parana, Brazil

A Centralized Channelization Scheme for Wireless LANs Exploiting Channel Bonding
Made Harta Dwijaksara, Seoul National University, Korea
Wha Sook Jeon, Seoul National University, Korea
Dong Geun Jeong, Hankuk University of Foreign Studies, Korea

A Distributed Online Certificate Status Protocol for Named Data Networks
Daniel Rezende, Federal University of Paraná, Brazil
Carlos Maziero, Federal University of Paraná, Brazil
Elisa Mannes, Santa Catarina State University, Brazil

FRI 10:40 – 11:10
Coffee Break

FRI **11:10 – 12:25**
Room: Alphonse de Lamartine
(HCI-2) Smart Human Computer Interaction
Session Chair: Ganesh Kumar P., Anna Univerisity, India

A Heuristic Evaluation of the User and Programming Interfaces of a Sleep Medicine Application
Eduardo Mosqueira-Rey, University of A Coruña, Spain
David Alonso-Ríos, University of A Coruña, Spain
Vicente Moret-Bonillo, University of A Coruña, Spain

Impact of Web Design Features on Irritation for E-commerce Websites
C.M. Nadeem Faisal, National Textile University, Pakistan
Javier de Andres-Suarez, University of Oviedo, Spain
Martin Gonzalez-Rodriguez, University of Oviedo, Spain
Daniel Fernandez-Lanvin, University of Oviedo, Spain
Mudassar Ahmad, National Textile University, Pakistan
Muhammad Asif Habib, National Textile University, Pakistan

IoT based Smart Interaction Framework for eLearning
Sohail Jabbar, National Textile University, Pakistan
Muhammad Farhan, COMSATS IIT, Pakistan
Jin Li, Guangzhou University, China
Haseeb Ahmad, National Textile University, Pakistan
Awais Ahmad, Yeungnum University, South Korea

FRI 11:10 – 12:25
Room: Adolphe Alphand
(SOAP) Service-Oriented Architecture and Programming
Session Chair: Gwen Salaun,
Universite Grenoble Alpes, France

Supporting Micro-services Deployment in a Safer Way: a Static Analysis and Automated Rewriting Approach
Benjamin Benni, Université Côte d'Azur, France
Sébastien Mosser, Université Côte d'Azur, France
Philippe Collet, Université Côte d'Azur, France
Michel Riveill, Université Côte d'Azue, France

On the Structure and Authorization Management of RESTful Web Services
Bojan Suzic, Graz University of Technology, Austria
Bernd Prünster, Graz University of Technology, Austria
Dominik Ziegler, Know-Center GmbH, Austria

**Query Strategies on Polyglot
Persistence in Microservices**
Luis H.N. Villaça, UFERJ, Brazil
Leonardo G. Azevedo, UFERJ, Brazil
Fernanda Baião, UFERJ, Brazil

FRI 11:10 – 12:25
Room: Aristide de Monpezat

(SP) Software Platforms
Session Chair: Jinman Jung, Hannam University, Korea

**A New Architecture and Implementation
Strategy for Non-Invasive Software
Measurement Systems**
Anton Bykov, Innopolis University, Russia
Vladimir Ivanov, Innopolis University, Russia
Alan Rogers, Innopolis University, Russia
Alexandr Shunevich, Innopolis University, Russia
Alberto Sillitti, Innopolis University, Russia
Giancarlo Succi, Innopolis University, Russia
Alexander Tormasov, Innopolis University, Russia
Jooyong Yi, Innopolis University, Russia
Albert Zabirov, Innopolis University, Russia
Denis Zaplatnikov, Innopolis University, Russia

**Development of a Plugin based Extensible
Feature Extraction Framework**
Vikas Malviya, IIITDM, Jabalpur, India
Sawan Rai, IIITDM, Jabalpur, India
Atul Gupta, IIITDM, Jabalpur, India

**Smart IoT Monitoring Framework based on
One M2M for Fog Computing**
Jeongwoo Choi, Soongsil University, South Korea
Yongmin Kim, Soongsil University, South Korea
Sung-Y. Shin, South Dakota State University, USA
Jiman Hong, Soongsil University, South Korea

FRI 11:10 – 12:25
Room: Ernest Gabard

(DM-2) Data Mining
Session Chair: Tayeb Kenaza,
Polytechnic Military School, Algeria

**Weight-based Search to Find Clusters
around Medians in Subspaces**
Sergio Peignier, INSA/LIRIS/INRIA, France
Christophe Rigotti, INSA/LIRIS, France
Anthony Rossi, INRIA, France
Guillaume Beslon, INSA/LIRIS/INRIA, France

**A Novel Join Technique for Similar-Trend
Searches Supporting Normalization on Time-
Series Databases**
Junho Song, Hanyang University, South Korea
Sungchae Lim, Dongduk Women's University, South Korea
Sang-Wook Kim, Hanyang University, South Korea

**Error Analysis and Topology Modifications of a
Self-Organizing Incremental Neural Network**

Xiaoyu Wang, Tokyo Institute of Technology, Japan

Osamu Hasegawa, Tokyo Institute of Technology, Japan
Shiming Ge, Chinese Academy of Sciences, China

FRI 11:10 – 12:25
Room: Gérard de Nerval

(WCN-2) Wireless Communications
and Networking
Session Chair: Dongkyun Kim,
Kyungpook National University, South Korea

Cooperative Neighborhood Map in VANETs
Hermes Pimenta de Moraes Júnior, UTC, France
Bertrand Doucourthial, UTC, France

**Identification of Anchor Zones for Floating
Content in VaNETs based on Centrality
Measures**
Fábio Massalino, Federal University of Alagoas, Brazil
André L.L. Aquino, Federal University of Alagoas, Brazil

**Energy-Efficient Unequal Chain Length
Clustering for WSN**
Mhanwoo Heo, Soongsil University, South Korea
Mohammad Baniata, Soongsil University, South Korea
Jinwoo Lee, Soongsil University, South Korea
Juw Won Park, University of Louisville, USA
Jiman Hong, Soongsil University, South Korea

POSTERS LISTING

WED 10:40 - 12:50
Poster Session I
(Wright Open Space)

**(ACMMIPH) Deep Metric Learning for
Multi-Labelled Radiographs**
Mauro Annarumma and Giovanni Montana

**(ACMMIPH) An Adaptive Neuro-Fuzzy
Inference System for Improving
Data Quality in Disease Registries**
Hatem Bellaaj, Afef Mdhaffar, Mohamed Jmaiel, Sondes Hdiji Mseddi,
and Bernd Freisleben

**(BIO) Evaluation of Inductive and Transductive
Inference in the context of Translation
Initiation Site**
Wallison W. Guimarães, Cristiano L.N. Pinto,
Cristiane N. Nobre, and Luis E. Zárate

**(CIVIA) BoSS: Image Retrieval using Bag-of-
Superpixel Signatures**
Daniel Y.T. Chino, Lucas C. Scabora, Caetano Traina Jr.,
and Agma J.M. Traina

(CoCo) Applying Machine Learning Algorithms for Deriving Personality Traits in Social Network
Eric F.M. Araújo, Bojan Simoski, and Michel Klein

(HCI) Visual Design Checklist for Graphical User Interface (GUI) Evaluation
Murilo C. Camargo, Rodolfo M. Barros, and Vanessa T.O. Barros

(IRMAS) Unsupervised Activity Recognition for Autonomous Water Drones
Alberto Castellini, Giovanni Beltrame, Manuele Bicego, Jason Blum, Matteo Denitto, and Alessandro Farinelli

(IRMAS) MiMicS: A Multi-robot Simulator for Teaching, Rapid Prototyping and Large Scale Evaluations
Eduardo Ferrera, Jesús Capitán, Merlin Stampa, and Pedro J. Marrón

(CC) Efficient Distributed of MapReduce Jobs for Maximizing Profit on Federated Cloud
Thouraya Gouasmi, Wajdi Louati, and Ahmed Hadj Kacem

(CC) Performance Optimization of Heterogeneous Cloud Storage with Bandwidth & Capacity Considerations
Po-Chun Huang, Yuan-Hao Chang, Tseng-Yi Chen, Chia-Heng Tu, Chun Chen, Hsin-Wen Wei, and Wei-Kuan Shih

(CCS) A Pipelining-based Framework for Processing Events in Multimedia Sensor Networks
Chinnapong Angsuchotmetee, Richard Chbeir, Yudith Cardinale, and Shohei Yokoyama

(DADS) Modeling and Verifying SDN with Multiple Controllers
Lili Xiao, Shuangqing Xiang, and Huibiao Zhu

(DADS) Safe and Efficient Fleet Operation for Autonomous Machines: An Actor-based Approach
Ali Jafari, Jayasoorya Jayanthi Surendran Nair, Stephan Baumgart, and Marjan Sirjani

(DADS) Trigger Correlation for Dynamic System Reconfiguration
Mahin Abbasipour, Ferhat Khendek, and Maria Toeroe

(IoT) AffectiveROAD System and Database to Assess Driver's Attention
Neska El Haouij, Jean-Michel Poggi, Sylvie Sevestre-Ghalila, Raja Ghozi, and Mériem Jaïdane

(MCA) On the I/O Characteristics of the Mobile Web Browsers
Taeho Hwang, Myungsik Kim, Seongjin Lee, and Youjip Won

(MCA) MaE! A Service for Supporting People Meeting at Events
Wender Z. Xavier, Mateus P. Silveira, Josemar A. Caetano, and Humberto T. Marques-Neto

(NET) Topology Resilience Enhancement for Software Defined Networks
Pedro Montibeler, Fernando Farias, and Antônio Abelém

(NET) Investigation of Priority Queueing Systems with Peaked Traffic Flows
Seferin Mirtchev, Rossitza Goleva, Dimitar Atamian, and Ivan Ganchev

(SONAMA) Emoji Recommendation in Private Instant Messages
Gaël Guibon, Magalie Ochs, and Patrice Bellot

(SONAMA) Unsupervised Translated Word Sense Disambiguation in Constructing Bilingual Lexical Database
Htet Myet Lynn, Chang Choi, and Pankoo Kim

(SONAMA) Using an Agent-based Model to Measure the Message Repetition Effect on Twitter
Paul Leger, Carmen Hidalgo-Alcázar, and Manuela López

(WCN) Energy Saving on DTNs using Trajectory Inference Model
Antônio Rodrigo D. De Vit, César Marcon, Raul Ceretta Nunes, Thais Webber, Gustavo Sanchez, and Carlos Oberdan Rolim

(WCN) SDN for QUIC: An Enhanced Architecture with Improved Connection Establishment
Ali Hussein, Ayman Kayssi, Imad H. Elhajj, and Ali Chehab

WED 16:00 - 18:10

Poster Session II

(Wright Open Space)

(BPMEA) A Method for Developing Model to Text Transformations
Alessandro Tiso, Gianna Reggio, Maurizio Leotta, and Filippo Ricca

(DM) A Quality Control Method for Fraud Detection on Utility Customers without an Active Contract
Bernat Coma-Puig and Josep Carmona

(DS) Predicting Polarities of Entity-Centered Documents without Reading their Contents
Christian Beyer, Uli Niemann, Vishnu Unnikrishnan, Eirini Ntoutsi, and Myra Spiliopoulou

(DS) Co-training Study for Online Regression
Ricardo Sousa and João Gama

(IAR) Automatic Keyphrase Extraction using Graph-based Methods
Josiane Mothe, Faneva Ramiandrisoa, and Michael Rasolomanana

(SOAP) From the Decorator Pattern to
Circuit Breakers in Microservices
Fabrizio Montesi and Janine Weber

(SWA) Seamless Integration of Cyber-Physical
Systems in Knowledge Graphs
Irlán Grangel-González, Lavdim Halilaj, Maria-Esther Vidal,
Steffen Lohmann, Sören Auer, and Andreas W. Mueller

(WT) Hiphop.js: A Language to
Orchestrate Web Applications
Colin Vidal, Gérard Berry, and Manuel Serrano

(RE) Applying a Requirement Engineering
based Approach to Evaluate the Security
Requirements Engineering Methodologies
Sravani Teja Bulusu, Romain Laborde, Ahmad Samer Wazan,
Francois Barrere, and Abdelmalek Benzekri

(RS) A Label Ranking Approach for Selecting
Rankings of Collaborative Filtering Algorithms
Tiago Cunha, Carlos Soares, and André C.P.L.F. de Carvalho

(RS) Knowing the Unknown: Visualising
Consumption Blind-Spots in Recommender
Systems
Nava Tintarev, Shahin Rostami, and Barry Smyth

(SATTA) A Hybrid Architecture to Enrich
Context Awareness through Data Correlation
Roger Machado, Felipe Rosa, Ricardo Almeida, Tiago Primo,
Mauricio Pilla, Ana Pernas, and Adenauer Yamin

(SATTA) Recovering Runtime Architecture
Models and Managing their Complexity using
Dynamic
Information and Composite Structures
Soumia Zellagui, Chouki Tibermacine, Ghizlane El Boussaidi,
Abdelhak-Djamel Seriai, Hinde-Lilia Bouziane, and Christophe Dony

(SATTA) Lessons Learned from Adapting
"Things" to IoT Platforms in Research and
Teaching
Ulrik Ekedahl, Radu-Casian Mihailescu, and Zhizhong Ma

(SATTA) Back-SoS: Towards a Model-based
Approach to Address Architectural Drift in
Systems-of-Systems
Valdemar V. Graciano Neto, Wallace Manzano, Lina Garcés,
Milena Guessi, Brauner Oliveira, Tiago Volpato,
and Elisa Yumi Nakagawa

(SE) FancyMock: Creating Virtual
Services from Transactions
Hasan Ferit Eniser, Alper Sen, and Süleyman Olcay Polat

(SiSoS) Heterogeneous Design Models
Alignment: From Matching to Consistency
Management
Mahmoud El Hamlaoui, Saloua Bennani, Mahmoud Nassar,
Sophie Ebersold, and Bernard Coulette

(SiSoS) ABC+: Extended Action-
Benefit-Cost Modeling with Knowledge-based
Decision-Making and Interaction Model for
System of Systems Simulation
Mingyu Jin, Donghwan Shin, and Doo-Hwan Bae

(SP) Role-based Automatic Programming
Framework for Interworking a Drone and
Wireless Sensor Networks
Hong Min, Jinman Jung, Seoyeon Kim, Bongjae Kim, and
Junyoung Heo

(UE) Experience Report: Studying the
Readability
of a Domain Specific Language
Johann Thor Mogensen Ingibergsson, Stefan Hanenberg,
Joshua Sunshine, and Ulrik Pagh Schultz

(EMBS) A Partnership-Based Approach to
Minimize the Maximal Response Time of
Flash-Memory Storage Systems
Tse-Yuan Wang, Che-Wei Tsao, Yuan-Hao Chang,
Tei-Wei Kuo, and Hsiang-Pang Li

(OOPPS) Automatic Scalable Parallel Test Case
Execution, Introducing the Münster
DiStributed Test Case Runner for Java
(MiDSTR)
Vincent von Hof and Andreas Fuchs

(OOPPS) CBM: A Compact Representation and
its Parallel Search for Query Processing on
GPU
Chidchanok Choksuchat, Sergei Gorlatch, and
Chantana Chantrapornchai

(OS) A Cost-Aware Object Management Method
for In-Memory Computing Frameworks
Chin-Hsien Wu, Chien-Wei Chen, and Kai-Chun Wang

(OS) UFLRU: Unmapped File First LRU
Scheme for Non-Volatile Memory
Yeonjin Noh, Jinsoo Yoo, Seongjin Lee, and Youjip Won

(OS) Investigating the Performance Impacts of
I/O Operations and Disk Cache on
Operating Systems for Wearables
Vicente J.P. Amorim, Saul E. Delabrida, and Ricardo A.O. Oliveira

(PDP) Effective and Efficient Privacy Threat
Modeling through Domain Refinements
Kim Wuyts, Dimitri Van Landuyt, Aram Hovespyan,
and Wouter Joosen

(PDP) AppPETs: A Framework for
Privacy-Preserving Apps
Erik Sy, Tobias Mueller, Matthias Marx, and Dominik Herrmann

(PL) Buffered Garbage Collection for
Self-Reflective Customization
Tetsuro Yamazaki and Shigeru Chiba

Student Research Competition Program

(BIO) Student Research Abstract: Estimating the Impacts of HIV Intervention Programs among Females Who Sell Sex in Nigeria: A Modelling Approach
Sampson Akwafuo

(BIO) Student Research Abstract: Simulation Study of Transient Receptor Potential Current in Urinary Bladder over Activity
Chitaranjan Mahapatra

(CC) Student Research Abstract: Curtailing the Cost of Virtual Machine Migrations in Cloud Data Centers
M.P. Gilesh

(DADS) Student Research Abstract: IT-Security in Self-Organizing Decentralized Virtual Power Plants
Marius Stübs

(DM) Student Research Abstract: On Improving ROCK-based Clustering for Categorical Data
Riccardo Cappuzzo

(DTTA) Student Research Abstract: A Clustering-based Sales Forecast for Fashion Retailing
Graziele Marques Mazuco dos Santos

(HCI) Student Research Abstract: Human Behavior Analysis based on Big Data Analytics in Cyber-Physical System
Sadia Din

(IoT) Student Research Abstract: A Novel Low Power Brain Electrical Activity Monitor using IoT
Alexandre Tessier

(IRMAS) Student Research Abstract: Cooperative Routing with Refueling for Aerial and Ground Vehicles for Large Scale Surveillance
Parikshit Maini

(KEGeoD) Student Research Abstract: Quantifying Walkability of Roads using Digital Elevation Models
Faris Hawamdeh

(KRR) Student Research Abstract: Concept Maps Construction using Natural Language Processing to Support Studies Selection
Vinicius dos Santos

(OOPPS) Student Research Abstract: Node-Level Optimization by Caching Data and Choosing the Optimal Tile Size for Parallel Dense Linear Algebra on Distributed Systems
Yonghyun Ryu

(SATTA) Student Research Abstract: A Liquid Software-driven Semantic Complex Event Processing-based Platform for Health Monitoring
Francesco Nocera

(SE) Student Research Abstract: Leveraging Project-Specificity to Find Suitable Specifications
Robert Heumüller

(SE) Student Research Abstract: A Formally Assured Intelligent Ecosystem for Enhanced Ambient Assisted Living Support
Ashalatha Kunnappilly

(SiSoS) Student Research Abstract: Collaborative Processes Behavioral Modeling
Mamadou Lakhassane Cissé

(VSPLE) Student Research Abstract: Separation of Concerns: Experiences of the Crowd
Jacob Krüger

(WCN) Student Research Abstract: Energy Efficient Topology Management Scheme from Wireless Sensor and Ad-hoc Network
Muhammad Diyan

(WT) Student Research Abstract: Classification Pipeline for Automatic Identification of Widgets and its Parts
Eduardo Henrique Rizo

SAC 2019 INVITATION

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End of Program