

Empirical Software Engineering International Week

2016

**September 5-9
Ciudad Real, Spain**



Program

Welcome from ESEIW General Chair

Welcome to the 14th Empirical Software Engineering International Week (ESEIW 2016). This year, ESEIW 2016 will take place in Ciudad Real, Spain, at the University of Castilla-La Mancha from September 5 to 9, 2016.

As is traditional, ESEIW 2016 has a strong and intense program including several events celebrated throughout one week, with a broad appeal of researchers, practitioners and educators in the field of empirical software engineering and measurement.

ESEIW 2016 hosts TheACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM), which is one of the most important forums at which to present and discuss empirical research on software engineering and measurement.

ESEIW 2016 also includes the ISERN meeting (International Software Engineering Research Network), the International Doctoral Symposium on Empirical Software Engineering (IDoESE), the IASESE Advanced School (which this year will focus on the use of surveys in software engineering), and two co-located conferences/workshops (PROMISE and MeGSuS).

We are delighted to announce that several prestigious keynote speakers have been invited to participate in the different events celebrated within ESEIW 2016:

- ESEM: Prof. Claes Wohlin, from the Blekinge Institute of Technology (Karlskrona, Sweden), Prof. Joe Peppard, from the European School of Management and Technology (Berlin, Germany).
- IDoESE: Prof. Pekka Abrhamsom, from the University of Bolzano (Bolzano, Italy).
- PROMISE: Prof. Natalia Juristo, from the Polytechnic University of Madrid (Madrid, España).
- MeGSuS: Marco Bessi who is a Solutions Delivery Consultant at CAST, (Milan, Italy).

In addition to the scientific opportunities available this week at ESEIW 2016, we also invite you to take advantage of the social events prepared for you and many cultural activities that surround the venue.

Finally, we would like to express our gratitude to all the institutions and sponsors that have supported ESEIW 2016. We are also greatly indebted to all members of the Organizing Committee for their dedication and effort. Special thanks to the authors for submitting their papers, the members of the program committee for their important work as regards reviewing and evaluating the papers in addition to promoting the ESEIW 2016, and all the delegates. All of them have helped us to make ESEIW 2016 a success.

We hope you will find the ESEIW 2016 program enriching and stimulating. Please enjoy ESEIW 2016 and your stay in Ciudad Real, Spain.

Marcela Genero
University of Castilla-La Mancha, Spain

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Committees

ESEM Program Co-Chairs

Andreas Jedlitschka
Fraunhofer IESE, Germany
Magne Jørgensen
Simula Research Laboratory, Norway

ESEM Short Papers and Posters Co-Chairs

Giuseppe Scanniello
University of Basilicata, Italy
Sreedevi Sampath
University of Maryland Baltimore County, USA

ESEM Industrial Papers Co-Chairs

Danilo Caivano
SER&Practices, Italy
Daniel Port
University of Hawaii, USA

ESEM Publicity Co-Chairs

Europe: Ayse Tosun Misirli
Istanbul Technical University, Turkey
USA/Canada: Clemente Izurieta
Montana State University, USA

Rest of America: Marcos Kalinowski
Fluminense Federal University, Brazil

Asia/Australia: Guoping Rong
Nanjing University, China

ESEM Social Media Chair

Burak Turhan
University of Oulu, Finland

ESEM Proceedings Chair

Félix García
University of Castilla-La Mancha, Spain

ESEIW Organizing Chair

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University of Castilla-La Mancha, Spain

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University of Castilla-La Mancha, Spain

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University of Stuttgart, Germany
Teresa Baldassarre
Univesrity of Bari, Italy

IASESE Chair

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Politecnico di Torino, Italy

IDoESE Co-Chairs

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Coral Calero
University of Castilla-La Mancha, Spain
Alessandra Bagnato
SOFTEAM, France

PROMISE Chair

Ayse Bener
Ryerson University, Canada

Organizing Committee

Marisa Cimas, Fernando Gualo, Ismael Halioui,
Javier Mancebo, Julio Moreno,
Maria Isabel Ortega, Angel E. Prado,
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Eréndira M. Jiménez-Hernández
National Autonomous University of Mexico,
Mexico

Empirical Software Engineering International Week

September 5-9, 2016 - Ciudad Real, Spain

ESEIW 2016 Program at a Glance

Sunday 4 th	Monday 5 th	Tuesday 6 th	Wednesday 7 th			Thursday 8 th	Friday 9 th
	ISERN: 24 th International Software Engineering Research Network Annual Meeting	IDoESE: 14 th International Doctoral Symposium on Empirical Software Engineering	IASESE: 13 th International Advanced School on Empirical Software Engineering	PROMISE: 12 th International Conference on Predictive Models and Data Analytics for Software Engineering	MeGSuS: 3 rd International Workshop on Measurement and Metrics for Green and Sustainable Software	ESEM: 10 th International Symposium on Empirical Software Engineering and Measurement	
ISERN Reception	ISERN Banquet	Tapas Tour	ESEM Reception			ESEM Banquet	Toledo night tour

Registration Opening Hours

Monday, September 5th, 2016	8:30-18:00
Tuesday, September 6th, 2016	8:30-18:00
Wednesday, September 7th, 2016	8:30-18:00
Thursday, September 8th, 2016	8:00-18:00
Friday, September 9th, 2016	8:30-14:00

Internet Access

Wi-Fi is available for all ESEIW 2016 attendees. Connect to the “eduroam” network (if you are a member), or to the “UCLM eventos” network (obtain the daily password at the registration desk).

24th Annual Meeting of the International Software Engineering Research Network

September 5-6, 2016 - Ciudad Real, Spain

ISERN 2016 Program

Sunday, September 4th

20:00	ISERN Reception
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Monday, September 5th

TIME	ISERN rooms		
	SALÓN DE ACTOS	SALÓN DE GRADOS	PATIO/HALL
8:30-9:00			Registration
9:00-9:30	ESEIW 2016 opening ISERN opening		
9:30-11:00	Welcome and New Introductions Chair: Dieter Rombach		
11:00-11:30		Collaboration Posters	Morning break
11:30-13:00	Empirical Startup Software Engineering Chairs: Pekka Abrahamsson, Anh Nguyen Duc, Xiaofeng Wang, Marku Oivo	Naming the Pain in Requirements Engineering Chairs: Daniel Méndez Fernández, Stefan Wagner, Michael Felderer, Marcos Kalinowski	
13:00-14:30			Lunch
14:30-16:00	Model Quality Assurance Chairs: Stefan Biffel, Marcos Kalinowski	Population in Software Engineering Surveys Chairs: Per Runeson, Guilherme Travassos, Martin Höst	
16:00-16:30		Collaboration Posters	Afternoon break
16:30-18:00	Summaries, Wrap-up and Open Space		
18:00-19:00	ISERN Steering Committee Meeting (By Invitation)		

20:30	ISERN Banquet
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ISERN 2016 Program

Tuesday, September 6th

TIME	ISERN rooms		
	SALÓN DE ACTOS	SALÓN DE GRADOS	PATIO/HALL
9:00-9:30			Registration
9:30-11:00	History of ISERN Chairs: Mike Barker, Andreas Jedlitschka, Forrest Shull		
11:00-11:30		Collaboration Posters	Morning break
11:30-13:00	Software Maintainability Metrics Chairs: Barry Boehm, Xavier Franch	Open Space	
13:00-14:30			Lunch (Magisterio)
14:30-16:00	Digitalisation and What Does it Mean for ESE? Chairs: Andreas Jedlitschka		
16:00-16:30		Collaboration Posters	Afternoon break
16:30-17:30	Summaries and ISERN Business		

20:30	ISERN Tapas Tour
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ISERN 2016 Program Details

Sunday, September 4th

20:00 ISERN Reception

The ISERN Reception will take place at the Hotel Doña Carlota.

Monday, September 5th

9:00-9:20 ESEIW Opening (Salón de Actos)

ESEIW General Chair: Marcela Genero

Dean of "Escuela Superior de Informática": Eduardo Fernández-Medina

ESEIW Organizing Chair: José Antonio Cruz-Lemus

9:20-9:30 ISERN Opening (Salón de Actos)

ISERN Co-Chairs: Teresa Baldassarre and Stefan Wagner

20:30 ISERN Banquet

Meeting point at 20:15 at the Hotel Doña Carlota. Bus leaves Hotel Doña Carlota at 20:30 for the ISERN Banquet at La Noria restaurant (<http://www.lanoriarestaurante.es/>).

Tuesday, September 6th

20:30 ISERN Tapas Tour

We will meet at 20:15 in the lobby of the Hotel Doña Carlota to start the ISERN Tapas Tour.

14th International Doctoral Symposium on Empirical Software Engineering

September 7, 2016 - Ciudad Real, Spain

IDoESE 2016 Program

Wednesday, September 7 th			
TIME	IDoESE rooms		
	AULA 1.1	AULA 2.1	PATIO/HALL
8:30-9:00			Registration
9:00-10:00	Welcome, faculty introductions, and keynote		
10:00-10:30	Towards understanding work characteristics in Software Engineering. Cleyton V. C. de Magalhães. Universidade Federal de Pernambuco (UFPE), Brazil.	A Set of Artifacts and Models to Support Requirements Communication Based on Perspectives. Ana Carolina Oran. Federal University of Amazonas (UFAM), Brazil.	
10:30-11:00	Uses, Benefits, and Limitations of Job Rotation in Software Engineering. Ronnie E. S. Santos. Universidade Federal de Pernambuco (UFPE), Brazil.	Researching on Augmenting the MDD process with Variability Modeling. Jorge Echeverría. Universidad San Jorge, Spain.	
11:00-11:30			Morning break
11:30-12:00	Benchmarking and Comparison of Software Project Human Resource Allocation Optimization Approaches. Sultan Al Khatib. University of East Anglia, UK.	Why is programming so difficult to learn? Patterns of Difficulties Related to Programming Learning. Yorah Bosse. Federal University of Mato Grosso do Sul, Brazil.	
12:00-12:30	How to automate software testing? Developing empirically validated decision support. Päivi Raulamo-Jurvanen. University of Oulu, Finland.		
12:30-13:00	Closing		
13:00-14:30			Lunch (Magisterio)
19:30	ESEM Reception		

IDoESE 2016 Program Details

9:00-10:00 Keynote Speaker (Aula 1.1)

How to do research with a real impact?



Pekka Abrahamsson

Short bio: Dr. Pekka Abrahamsson is a professor of software engineering at the Norwegian University of Science and Technology in Trondheim, Norway. He was formerly the dean and a full professor of computer science at the Free University of Bozen-Bolzano in Italy. His background is in software process improvement, agile software development and empirical software engineering research. He is the originator of the Mobile-D development methodology for mobile applications. He is the chairman of the Global Software Startup Research Network and he was awarded the Nokia Foundation award in 2007 for his impacts in the field of software engineering research and practice. Today he actively launches new startups in various technology domains as a part of his empirical startup research roadmap

19:30 ESEM Reception

We will meet at 19:15 in the lobby of the Hotel Doña Carlota to start the tour around Ciudad Real. After the tour, there will be a reception at the Casa-Museo López-Villaseñor supported by Ciudad Real City Council.

14th International Advanced School of Empirical Software Engineering

September 7, 2016 - Ciudad Real, Spain

IASESE 2016 Program

Wednesday, September 7 th	
Time	IASESE room: SALA MÓNICO SÁNCHEZ
08:30-09:00	Registration
09:00-11:00	Session I - Introduction to surveys Where we will provide the basic theoretical concepts of population surveys: general method, source of errors, sampling, instrument design.
11:00-11:30	Morning break
11:30-13:00	Session II - Best practices Where we will focus on the key aspects of designing and conducting software engineering surveys and present issues and lessons learned based on actual case studies.
13:00-14:30	Lunch (Magisterio)
14:30-16:30	Session III - Hands-on (BYOL) During which the participants are expected to design and implement a simple survey on a real online tool. Bring Your Own Laptop, or tablet at least.
16:30-17:00	Afternoon break
17:00-18:30	Session IV-Q&A Where the participants will discuss the most important issues and come up with some general recommendation.
19:30	ESEM Reception

IASESE 2016 Program Details

19:30 ESEM Reception

We will meet at 19:15 in the lobby of the Hotel Doña Carlota to start the tour around Ciudad Real. After the tour, there will be a reception at the Casa-Museo López-Villaseñor supported by Ciudad Real City Council.



PROMISE 2016 Program

Wednesday, September 7 th	
Time	PROMISE room: SALÓN DE ACTOS
08:30-09:00	Registration
09:00-11:00	Session I (Chair: Burak Turhan) <ul style="list-style-type: none"> Welcome Keynote: Natalia Juristo "Use and Misuse of the term experiment in the software repositories research" Jil Klünder, Oliver Karras, Fabian Kortum and Kurt Schneider. Forecasting Communication Behavior in Student Software Projects
11:00-11:30	Morning break
11:30-13:00	Session II (Chair: Ayse Bener) <ul style="list-style-type: none"> Simone Porru, Alessandro Murgia, Serge Demeyer, Michele Marchesi and Roberto Tonelli. Estimating Story Points from Issue Reports Seyedrebar Hosseini, Burak Turhan and Mika Mäntylä. Search Based Training Data Selection For Cross Project Defect Prediction Leandro Minku. On the Terms Within- and Cross-Company in Software Effort Estimation
13:00-14:30	Lunch (Magisterio)
14:30-16:30	Session III (Chair: Leandro Minku) <ul style="list-style-type: none"> Qing Mi, Jacky Keung and Yang Yu. Measuring the Stylistic Inconsistency in Software Projects using Hierarchical Agglomerative Clustering Luigi Lavazza and Sandro Morasca. An Empirical Evaluation of Distribution-based Thresholds for Internal Software Measures Gernot Liebchen and Martin Shepperd. Data Sets and Data Quality in Software Engineering: Eight Years On Verena Honsel, Steffen Herbold and Jens Grabowski. Hidden Markov Models for the Prediction of Developer Involvement Dynamics and Workload

16:30-17:00	Afternoon break
17:00-18:30	Session IV (Chair: Ayse Bener) <ul style="list-style-type: none"> Hudson Borges, Andre Hora and Marco Tulio Valente. Predicting the Popularity of GitHub Repositories István Kádár, Péter Hegedús, Rudolf Ferenc and Tibor Gyimóthy. A Manually Validated Code Refactoring Dataset and Its Assessment Regarding Software Maintainability Closing Discussion and Q&A
19:30	ESEM Reception

PROMISE 2016 Program Details

8:30-9:00 Registration (Sala Polivalente)

9:00-10:00 Keynote Speaker (Salón de Actos)

Use and Misuse of the term experiment in the software repositories research (Chair: Burak Turhan)



Natalia Juristo

Short bio: Dr. Natalia Juristo (<http://www.grise.upm.es/htdocs/miembros/natalia/index.php>) is full professor of software engineering with the Computing School at the Technical University of Madrid (UPM) since 1997 and holds a FiDiPro (Finland Distinguish Professor) research grant since 2013. She was the Director of the UPM MSc in Software Engineering from 1992 to 2002 and the coordinator of the Erasmus Mundus European Master on SE (with the participation of the University of Bolzano, the University of Kaiserslautern and the University of Blekinge) from 2007 to 2012. Natalia has served in several Program Committees ICSE, RE, REFSQ, ESEM, ISESE and others. She has been Program Chair EASE13, ISESE04 and SEKE97 and General Chair for ESEM07, SNPD02 and SEKE01. She has been member of several Editorial Boards, including Transactions on SE, Journal of Empirical Software Engineering and Software magazine. Dr. Juristo has been Guest Editor of special issues in several journals, including Journal of Empirical

Software Engineering, IEEE Software, Journal of Software and Systems, Data and Knowledge Engineering and the International Journal of Software Engineering and Knowledge Engineering.

Abstract: Today empiricism is everywhere in SE research. But this does not imply that SE is empirically mature. Conducting empirical studies does not mean they are carried out and used properly.

In this talk I focus on a methodological issue regarding research on mining software repositories (MSR). MSR is an extremely active area of research these days, but a young one that I believe still lacks rigor.

I have observed that the term experiment is misused very often in MSR works. We have conducted a small-scale literature review to understand the level of misuse and it is broad. The results of such review are shown in the talk.

I will discuss about the essential features that make an experiment an experiment and allows discovering causality. Most MSR works lack the manipulation required to an empirical study to be an experiment. To me most MSR studies are observational studies. (Although there are some type of experiments that can be conducted with repositories). To get reliable results it is critical that the researchers understand the type of study they are conducting as well as the type of evidence that every type of study generates.

I see MSR research as epidemiologic research in medicine. If properly conducted, epidemiologic studies can catch a glimpse of causality. Epidemiology has developed types of empirical studies that make evidence stronger (as control-case studies or cohort studies). MSR could learn from them and apply strategies, as random selection of data from the repository, that makes decrease bias in results.

19:30 ESEM Reception

We will meet at 19:15 in the lobby of the Hotel Doña Carlota to start the tour around Ciudad Real. After the tour, there will be a reception at the Casa-Museo López-Villaseñor supported by Ciudad Real City Council.

3rd International Workshop on Measurement and Metrics for Green and Sustainable Software Systems (MeGSuS'16)

Celebrated within ESEIW 2016

September 7, 2016 - Ciudad Real, Spain

MeGSuS 2016 Program

Wednesday, September 7 th	
Time	MeGSuS room: SALÓN DE GRADOS
08:30-09:00	Registration
09:00-09:10	Welcome and Introduction: Coral Calero Giuseppe Procaccianti Nelly Condori-Fernandez Alessandra Bagnato
9:10-10:00	Keynote talk: Green Indexes Used in CAST to Measure the Energy Consumption in Code, by Marco Bessi
10:00-10:20	Indicators for Green in IT Audits: A Systematic Mapping Study, by J. David Patón-Romero and Mario Piattini
10:20-10:40	A Learning based approach for Green Software Measurements, by Sarah Dahab, Stephane Maag, Alessandra Bagnato and Marcos Aurélio Almeida Da Silva
10:40-11:00	Discussion
11:00-11:30	Morning break
11:30-11:50	An effort allocation method to optimal code sanitization for quality-aware energy efficiency improvement, by Roberto Pietrantuono, Gabriella Carrozza, Stefano Russo and Marco Bessi
11:50-12:10	Measuring Green Software Engineering In the MEASURE ITEA 3 Project, by Alessandra Bagnato, Marcos Aurélio Almeida Da Silva, Antonin Abherve, Jérôme Rocheteau, Claire-Lise Pihery and Pierre Mabit
12:10-12:30	How sustainable are model software artifacts in the context of Model Driven Software Engineering, by Damiano Torre and Coral Calero
12:30-12:50	Discussion
13:00-14:30	Lunch (Magisterio)
14:30-16:00	Panel: Sustainability & Green Metrics: what, when and how to measure?
16:00-16:30	Sum-up and closing.
16:30-17:00	Afternoon break
19:30	ESEM Reception

MeGSuS 2016 Program Details

9:10-10:00 Keynote Speaker (Salón de Actos)

Green Indexes Used in CAST to Measure the Energy Consumption in Code.



Marco Bessi

Short bio: Marco Bessi is a Solutions Delivery Consultant at CAST. He is member of the delivery organization in the implementation of the CAST technology with various commercial/government customers. With the re-engineering of their SDCL, he introduces the source code quality assessment and the action plan phase to define the list of mitigation of the vulnerabilities in source code. During his Phd, his research focused on the definition of new methodologies and implement tools to measure and improve the energy efficiency of software. In particular, the project focused on the intelligent use of memory to reduce energy consumption.

Abstract: While hardware consistently evolves to become more energy efficient and support green IT strategies, the technology that companies currently use may be optimized to avoid excessive expenses as well as prevent further power consumption.

Substandard software programming can consume more hardware resources than necessary. Excessive calls and code that causes the system to crash can quickly increase a company's carbon footprint. By focusing on the structural quality of software, companies can find and improve the efficiency of their applications' underlying code, as well as reduce defects that cause outages.

CAST's Green IT Index is a composite of selected programming best practices that significantly impact the efficiency and robustness of your applications.

Integrated as part of CAST's Application Analytics Dashboard, you can quickly drill down to analyze specific best practice violations for all your applications.

The Green IT Index helps IT leaders: reduce costs associated with wasted hardware resources; improve overall software quality; promote an environmentally conscious culture within the development team.

19:30 ESEM Reception

We will meet at 19:15 in the lobby of the Hotel Doña Carlota to start the tour around Ciudad Real. After the tour, there will be a reception at the Casa-Museo López-Villaseñor supported by Ciudad Real City Council.

10th International Symposium on Empirical Software Engineering and Measurement

September 8-9, 2016 - Ciudad Real, Spain

ESEM 2016 Program

Wednesday, September 7th

19:30	ESEM Reception
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Thursday, September 8th

TIME	ESEM rooms		
	SALÓN DE ACTOS	SALÓN DE GRADOS	PATIO/HALL
8:00-8:30			Registration
8:30-9:00	Opening		
9:00-10:00	Keynote		
10:00-11:00	SESSION A1 - Agile	SESSION B1 - Testing	
11:00-11:30			Morning break
11:30-13:00	SESSION A2 - Behavioral Studies	SESSION B2 - Repository Mining	
13:00-14:30			Lunch
14:30-16:30	SESSION A3 - Project and Team Productivity	SESSION B3 - Defects	
16:30-17:00			Afternoon break
17:00-18:30	SESSION A4 - Prediction Models I	SESSION B4 - Software Quality & Safety	

19:30	Tour Almagro and ESEM Banquet
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Friday, September 9th

TIME	ESEM rooms		
	SALÓN DE ACTOS	SALÓN DE GRADOS	PATIO/HALL
8:30-9:00			Registration
9:00-10:00	Keynote		
10:00-11:00	SESSION A5 - Requirement Engineering	SESSION B5 - Energy	
11:00-11:30			Morning break
11:30-13:00	SESSION A6 - Data Analytics	SESSION B6 - Continuous Delivery	
13:00-14:30			Lunch
14:30-16:45	SESSION A7 - Prediction Models and Measurement	SESSION B7 - Empirical Methods in Software Engineering	
16:45-17:15	Closing		
17:15-17:45			Afternoon break

18:00	Toledo Night Tour
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10th International Symposium on Empirical Software Engineering and Measurement

September 8-9, 2016 - Ciudad Real, Spain

ESEM 2016 Program Details

Legend of Acronyms

IP = Industrial Paper

FP = Full Paper

SP = Short Paper

Wednesday, September 7th

19:30 ESEM Reception

We will meet at 19:15 in the lobby of the Hotel Doña Carlota to start the tour around Ciudad Real. After the tour, there will be a reception at the Casa-Museo López-Villaseñor supported by the Town Hall of Ciudad Real City Council.

Thursday, September 8th

8:00-8:30 Registration (Sala Polivalente)

8:30-9:00 Opening (Salón de Actos)

ESEIW General Chair: Marcela Genero

Rector of the University of Castilla-La Mancha: Miguel Ángel Collado Zurita (or someone on his behalf)

Mayor of Ciudad Real: Pilar Zamora (or someone on her behalf)

ESEM Program Co-Chairs: Andreas Jedlitschka and Magne Jørgensen

9:00-10:00 Keynote Speaker (Salón de Actos)

Is there a Future for Empirical Software Engineering? (Chair: Andreas Jedlitschka)



Claes Wohlin

Short bio: Claes Wohlin is a Professor of Software Engineering and Dean of the Faculty of Computing at the Blekinge Institute of Technology, Sweden. He has previously held professor chairs at the universities in Lund and Linköping. Claes Wohlin received a PhD in Communication Systems from Lund University in 1991. His research interests include empirical methods in software engineering, software process improvement, software quality, and global software engineering. He was the recipient of Telenor's Nordic Research Prize in 2004, and elected as a member of the Royal Swedish Academy of Engineering Sciences in 2011. Contact him at claes.wohlin@bth.se or visit his website at <http://www.wohlin.eu>.

Abstract: Empirical studies of different kinds are nowadays regularly published in software engineering journals and conferences. Evidence-based software engineering through the use of systematic literature studies (reviews and maps) has emerged. Methodological support and guidelines for empirical studies and systematic studies have been documented. However, more is needed! We still need to improve! The keynote is focused on the needs for the future as seen by the presenter. Synthesis has proven hard, and improvements are needed when it comes to both primary studies and secondary studies. Thus, software engineering decisions in industry are mostly not made based on empirical evidence. Furthermore, theories are needed in software engineering, but it comes with requirements on the empirical researchers. The points made are highlighted through examples from systematic literature studies, industry collaboration and research on developing empirically based software engineering theories.

10:00-11:00 Session A1 - Agile (Chair: Stefan Wagner) (Salón de Actos)

1. An External Replication on the Effects of Test-driven Development Using Blind Analysis. Davide Fucci, Giuseppe Scanniello, Simone Romano, Martin Shepperd, Boyce Sigweni, Fernando Uyaguari, Burak Turhan, Natalia Juristo and Markku Oivo. (FP).
2. A Study of Documentation in Agile Software Projects. Stefan Voigt, Joerg von Garrel, Julia Müller and Dominic Wirth. (SP).
3. Strategies for being Agile in a non-Agile Environment. Kati Kuusinen, Peggy Gregory, Helen Sharp and Leonor Barroca. (SP).

10:30-11:00 Session B1 - Testing (Chair: Fabio Da Silva) (Salón de Grados)

1. Towards Effectively Test Report Classification to Assist Crowdsourced Testing. Junjie Wang, Qiang Cui, Qing Wang and Song Wang. (FP).

11:00-11:30 Morning Break

11:30-13:00 Session A2 - Behavioral studies (Chair: Teresa Baldassarre) (Salón de Actos)

1. Innovative Behaviour of Software Engineers: Findings from a Pilot Case Study. Cleviton Monteiro, Fabio Q. B. Da Silva and Luiz Fernando Capretz. (FP).
2. Who Should Take This Task? Dynamic Decision Support for Crowd Workers. Ye Yang, Mohammad Rezaul Karim, Raziheh Saremi and Guenther Ruhe. (FP).
3. A Pilot Case Study on Innovative Behaviour: Lessons Learned and Directions for Future Work. Cleviton Monteiro, Fabio Q. B. Da Silva and Luiz Fernando Capretz. (SP).
4. Preliminary Findings about the Nature of Work in Software Engineering: An Exploratory Survey. Fabio Q. B. Da Silva, A. César C. França, Cleyton Vanut C. de Magalhães and Ronnie E. S. Santos. (SP).

11:30-13:00 Session B2 - Repository mining (Chair: Filippo Lanubile) (Salón de Grados)

1. Monitoring Software Quality by Means of Simulation Methods. Daniel Honsel, Verena Honsel, Marlon Welter, Jens Grabowski and Stephan Waack. (SP).
2. So You Need More Method Level Datasets for Your Software Defect Prediction? Voilà! Thomas Shippey, Tracy Hall, David Bowes and Steve Counsell. (SP).
3. Moving to Stack Overflow: Best-Answer Prediction in Legacy Developer Forums. Fabio Calefato, Filippo Lanubile and Nicole Novielli. (FP).
4. Mining Technology Landscape from Stack Overflow. Chunyang Chen and Zhenchang Xing. (FP).

13:00-14:30 Lunch (Doña Carlota Hotel)

14:30-16:30 Session A3 - Project and team productivity (Chair: Guilherme Travassos) (Salón de Actos)

1. Software Project Managers' Perceptions of Productivity Factors: Findings from a Qualitative Study. Edson Oliveira, Tayana Conte, Marco Cristo and Emilia Mendes. (SP).
2. Software Development Practices, Barriers in the Field and the Relationship to Software Quality. Beth Yost, Michael Coblenz, Brad Myers, Joshua Sunshine, Jonathan Aldrich, Sam Weber, Matthew Patron, Melissa Heeren, Shelley Krueger and Mark Pfaff. (SP).
3. Experiences from Measuring Learning Potential and Performance in Large-Scale Distributed Software Development. Ricardo Britto, Darja Smite and Lars-Ola Damm. (IP).
4. Virtual Team Configurations that Promote Better Product Quality. Rafael Prikładnicki, Marcelo Perin and Sabrina Marczak. (IP).
5. Sustainable Software Development through Overlapping Pair Rotation. Todd Sedano, Paul Ralph and Cecile Peraire. (FP).
6. Towards a Substantive Theory of Decision-Making in Software Project Management: Preliminary Findings from a Qualitative Study. José Adson Da Cunha, Fabio Q. B. Da Silva, Hermano de Moura and Francisco Vasconcellos. (FP).

14:30-16:30 Session B3 - Defects (Chair: Sandro Morasca) (Salón de Grados)

1. How Are Discussions Associated with Bug Reworking? An Empirical Study on Open Source Projects. Yu Zhao, Feng Zhang, Emad Shihab, Ying Zou and Ahmed E. Hassan. (FP).
2. Predicting Defectiveness of Software Patches. Behjat Soltanifar, Atakan Erdem and Ayse Bener. (FP).
3. An Empirical Study on Performance Bugs for Highly Configurable Software Systems. Xue Han and Tingting Yu. (FP).
4. Evaluating Bug-Fixing in Software Product Lines: an Industrial Case Study. Jorge Echeverría, Francisca Pérez, Andrés Abellanas, Jose Ignacio Panach, Carlos Cetina and Óscar Pastor. (IP).
5. Static Analysis and Penetration Testing from the Perspective of Maintenance Teams. Mariano Ceccato and Riccardo Scandariato. (SP).

16:30-17:00 Afternoon Break

17:00-18:30 Session A4 - Prediction models I (Chair: Davide Fucci) (Salón de Actos)

1. Is Newer Always Better? The Case of Vulnerability Prediction Models. Aram Hovsepian, Riccardo Scandariato and Wouter Joosen. (SP).
2. Release Readiness Classification - An Explorative Case Study. S. M. Didar Al Alam, Dietmar Pfahl and Guenther Ruhe. (SP).
3. Identifying Thresholds for Software Faultiness via Optimistic and Pessimistic Estimations. Luigi Lavazza and Sandro Morasca. (FP).
4. Predicting Crashing Releases of Mobile Applications. Xin Xia, Emad Shihab, Yasutaka Kamei, David Lo and Xinyu Wang. (FP).

17:00-18:30 Session B4 - Software quality & safety (Chair: Michael Felderer) (Salón de Grados)

1. Detection of Requirement Errors and Faults via a Human Error Taxonomy: A Feasibility Study. Wenhua Hu, Jeffrey Carver, Vaibhav Anu, Gursimran Walia and Gary Bradshaw. (FP).
2. Diagram Size vs. Layout Flaws: Understanding Quality Factors of UML Diagrams. Harald Störrle. (FP).
3. Do Models Improve the Understanding of Safety Compliance Needs? Insights from a Pilot Experiment. Jose Luis de La Vara, Beatriz Marín, Giovanni Giachetti and Clara Ayora. (SP).
4. Advantages and Disadvantages of using Shared code from the Developers Perspective: A qualitative study. Danilo Ribeiro, Elyda Xavier, Fabio Q. B. Da Silva, Diana Valença and César França. (SP).

19:30 Tour Almagro and ESEM Banquet

Meeting point at 19:15 at Hotel Doña Carlota. Bus leaves Doña Carlota at 19:30 for the tour of Almagro and the ESEM Banquet at the Torreón de Fuensanta restaurant (<http://www.torreondofuensanta.com/>).

Friday, September 9th

8:30-9:00 Registration (Sala Polivalente)

9:00-10:00 Keynote Speaker (Salón de Actos)

What about the Benefits? A Missing Perspective in Software Engineering (Chair: Magne Jørgensen)



Joe Peppard

Short bio: Joe Peppard is a Professor at the European School of Management and Technology in Berlin Germany and an Adjunct Professor at the University of South Australia. He has formerly held academic appointments at Cranfield School of Management (UK), Loughborough University (UK), Trinity College, Dublin (Ireland), Groningen University (the Netherlands), Politecnico di Milano (Italy), and University of Sydney (Australia). In 2011 he was Dean's Distinguished Scholar at the University of Southern Queensland (Australia). The focus of Professor Peppard's research and teaching is on the area of information, information systems and information technology, primarily focusing on the domains of leadership, strategy, innovation and value realization. Through his research he seeks to challenge dominant orthodoxies as he believes that these are making a significant contribution to the problems that organizations have as regards leveraging information technologies, both operationally and strategically.

Abstract: The software engineering community has always sought to build great software and continues to seek out ways and approaches for doing this. The UX movement emphasizes the usability of the developed product. Agile approaches like scrum focus on aligning the functionality and features of the final product more closely with requirements. The recent interest in DevOps has brought to the fore the need to address the challenges once software goes into production. Despite this, in an organizational environment, great software does not necessarily translate into real business benefits; few projects fail because the software didn't work. This presentation will introduce the concepts and practices of benefits management and benefits realization that have emerged over the last 20 years. It highlights the issues and challenges in deploying software to deliver expected business outcomes. It suggests that this is a missing perspective in software engineering. Suggestions for how this perspective might be more closely integrated with software engineering are proposed.

10:00-11:00 Session A5 - Requirement Engineering (Chair: Jeffery Carver) (Salón de Actos)

1. Using Eye Tracking to Investigate Reading Patterns and Learning Styles of Software Requirement Inspectors to Enhance Inspection Team Outcomes. Anurag Goswami, Gursimran Walia, Mark McCourt and Ganesh Padmanabhan. (FP).
2. DIGS - A Framework for Discovering Goals for Security Requirements Engineering. Maria Riaz, Jonathan Stallings, Munindar Singh, John Slankas and Laurie Williams. (FP).

10:00-11:00 Session B5 - Energy (Chair: Ayse Bener)(Salón de Grados)

1. Empirical Evaluation of Energy Efficiency in ORM Approaches. Giuseppe Procaccianti, Patricia Lago and Wouter Diesveld. (FP).
2. A Study on the Influence of Software and Hardware Features on Program Energy. Ajitha Rajan, Adel Nouredine and Panagiotis Stratis. (FP).

11:00-11:30 Morning Break

11:30-13:00 Session A6 - Data analytics (Chair: Oscar Dieste) (Salón de Actos)

1. Clustering Mobile Apps Based on Mined Textual Descriptions. Afnan Al-Subaih, Federica Sarro, Sue Black, Licia Capra, Mark Harman, Yue Jia and Yuanyuan Zhang. (FP).
2. Understanding the Contribution of Non-source Documents in Improving Missing Link Recovery: An Empirical Study. Yan Sun and Qing Wang. (FP).
3. Semantic Coupling Between Classes: Corpora or Identifiers? Nemitari Ajenka and Andrea Capiluppi. (SP).
4. Social Diversity and Activity Levels of Open Source Software Projects on GitHub. Joop Aué, Michiel Haisma, Kristin Fjola Tomasdottir and Alberto Bacchelli. (SP).

11:30-13:00 Session B6 - Continuous Delivery (Chair: Per Runeson) (Salón de Grados)

1. Perceived Benefits of Adopting Continuous Delivery Practices. Juha Itkonen, Raoul Udd, Casper Lassenius and Timo Lehtonen. (SP).
2. Challenges of Adopting Continuous Integration and Delivery in the Automotive Industry: A Tool Perspective. Eric Knauss, Patrizio Pelliccione, Rogardt Heldal, Magnus Ågren, Sofia Hellman and Daniel Maniette. (IP).
3. The Intersection of Continuous Deployment and Architecting Process: Practitioners' Perspectives. Mojtaba Shahin, Muhammad Ali Babar and Liming Zhu. (FP).
4. Bottom-up Adoption of Continuous Delivery in a Stage-gate Managed Software Organization. Eero Laukkanen, Timo O.A. Lehtinen, Juha Itkonen, Maria Paasivaara and Casper Lassenius. (FP).

13:00-14:30 Lunch (Doña Carlota Hotel)

14:30-16:45 Session A7 - Prediction models and measurement (Chair: Sílvia Abrahão) (Salón de Actos)

1. Building an Ensemble for Software Defect Prediction Based on Diversity Selection. Jean Petric, David Bowes, Tracy Hall, Bruce Christianson and Nathan Baddoo. (FP).
2. The Impact of Task Granularity on Co-evolution Analyses. Keisuke Miura, Shane Mcintosh, Yasutaka Kamei, Ahmed E. Hassan and Naoyasu Ubayashi. (FP).
3. Function Point Analysis for Software Maintenance. Anandi Hira and Barry Boehm. (SP).

4. Staffing Strategies for Maintenance of Critical Software Systems at the Jet Propulsion Laboratory. William Taber and Dan Port. (IP).
5. Using Software Non-Functional Assessment Process to Complement Function Points for Software Maintenance. Anandi Hira and Barry Boehm. (SP).
6. The Obscure Process of Innovation Assessment: A Report of an Industrial Survey. César França, Eduardo Peixoto, Bruno Falcão and Cleviton Monteiro. (IP).

14:30-16:45 Session B7 - Empirical methods in software engineering (Chair: Sira Vegas) (Salón de Grados)

1. Worse than Spam: Issues In Sampling Software Developers. Sebastian Baltes and Stephan Diehl. (SP).
2. Using Forward Snowballing to update Systematic Reviews in Software Engineering. Katia Romero Felizardo, Emilia Mendes, Marcos Kalinowski, Érica Ferreira Souza and Nandamudi Vijaykumar. (SP).
3. Is effectiveness sufficient to choose an intervention? Considering resource use in empirical research. Nauman Bin Ali. (SP).
4. Surveys in Software Engineering: Identifying Representative Samples. Rafael de Mello and Guilherme Travassos. (SP).
5. How Practitioners Perceive the Relevance of ESEM Research. Jeffrey Carver, Oscar Dieste, Nicholas A. Kraft, David Lo and Thomas Zimmerman. (FP).
6. Evidence Briefings: Towards a Medium to Transfer Knowledge from Systematic Reviews to Practitioners. Bruno Cartaxo, Gustavo Pinto, Elton Vieira and Sergio Soares. (FP).
7. Survey Guidelines in Software Engineering: An Annotated Review. Jefferson Molléri, Kai Petersen and Emilia Mendes. (SP).

16:45-17:15 Afternoon Break

17:15-17:45 Close (Salón de Actos)

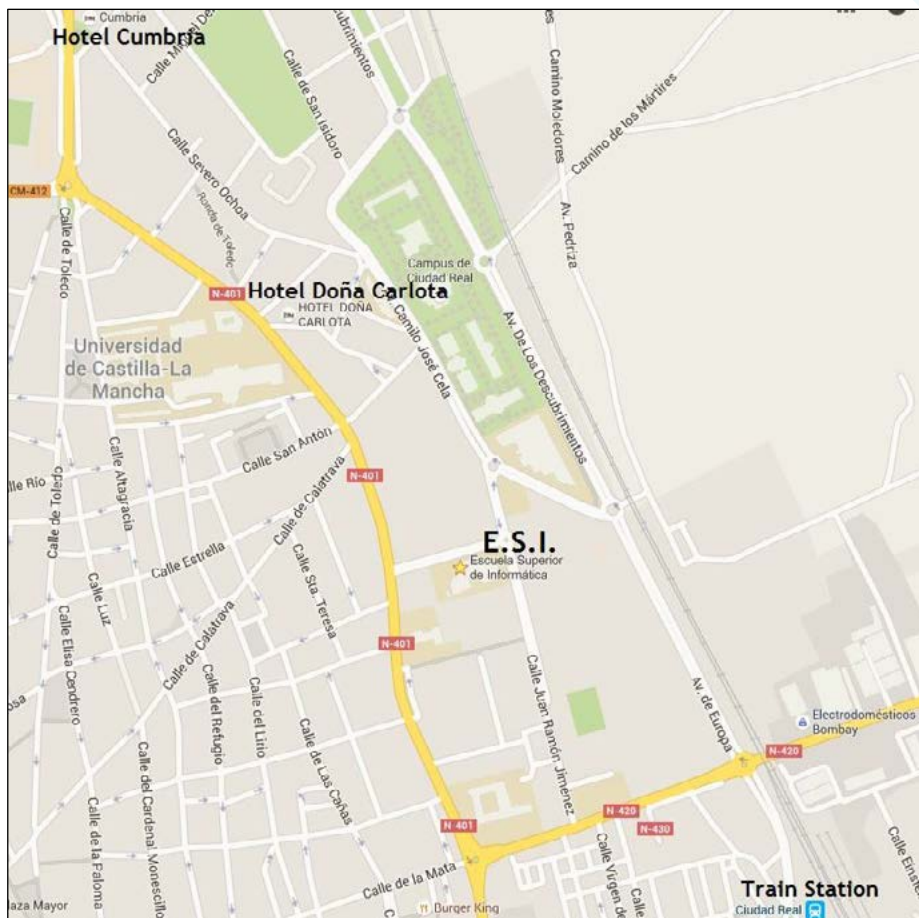
18:00 Toledo Night Tour

Bus leaves Hotel Doña Carlota at 18:00 for Toledo Night Tour.

General Information

Venue

ESEIW 2016 (5-9 September) will take place at the Escuela Superior de Informática (the Computer Science Faculty) of the University of Castilla-La Mancha, in Ciudad Real, Spain.



Address

Escuela Superior de Informática -Paseo de la Universidad, 4
13071 Ciudad Real - Spain - P: +34 926 29 53 00
Website: <http://webpub.esi.uclm.es/eng>



Social Events and Travel Suggestions

Sunday 4th, 2016

ISERN Reception (included in ISERN registration).

Monday 5th, 2016

ISERN Banquet (included in ISERN registration).

Tuesday 6th, 2016

ISERN Tapas Tour (included in ISERN registration).

Wednesday 7th, 2016

ESEM Reception (included in IDOESE, IASESE, MEGSUS, PROMISE, ESEM registration).

Thursday 8th, 2016

ESEM Banquet (included in ESEM registration (not student registration)).

Friday 9th, 2016

ESEM Toledo Night Tour (included in ESEM registration (not student registration)).

Travel Suggestions

Ciudad Real's railway network is connected by train with:

- Toledo (<http://www.toledo-turismo.com/en/>);
- Cordoba (<http://english.turismodecordoba.org/>);
- Sevilla (<http://www.visitasevilla.es/en>).

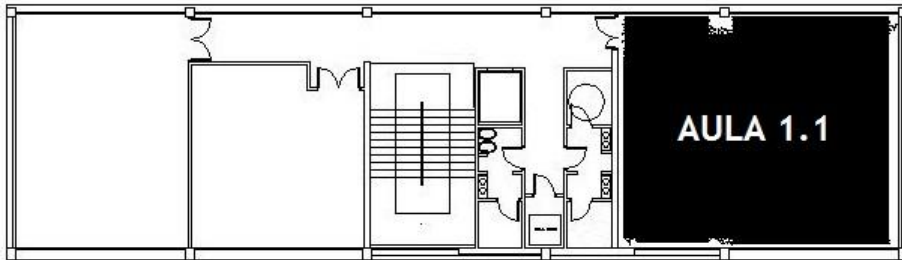
If you are planning to spend some extra time in Spain, we would like to suggest that you visit these three amazing cities. You can find more information about your trip on the RENFE website (<http://www.renfe.com>) or by calling +34 902320320, where your questions will be answered in English, French or Spanish. For further information, you can also contact Creotour Viajes by email (info@creoviajes.com) or visit them in Calle Calatrava, 25, 13003 Ciudad Real (Tlf: +34 926 92 09 18, +34 926 92 09 28), or visit their website <http://www.creoviajes.com>.

ESEIW Rooms

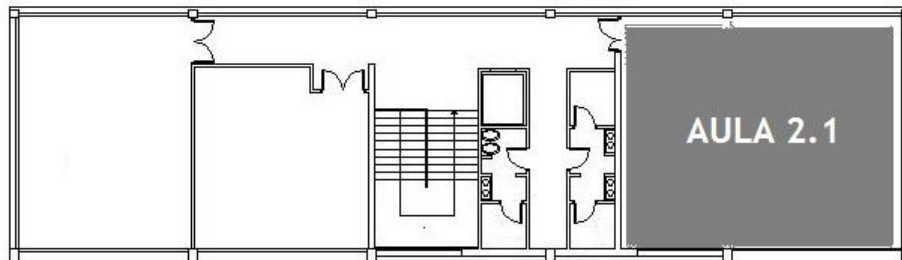
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E.S.I. MODULE B (PARKING)

FIRST FLOOR

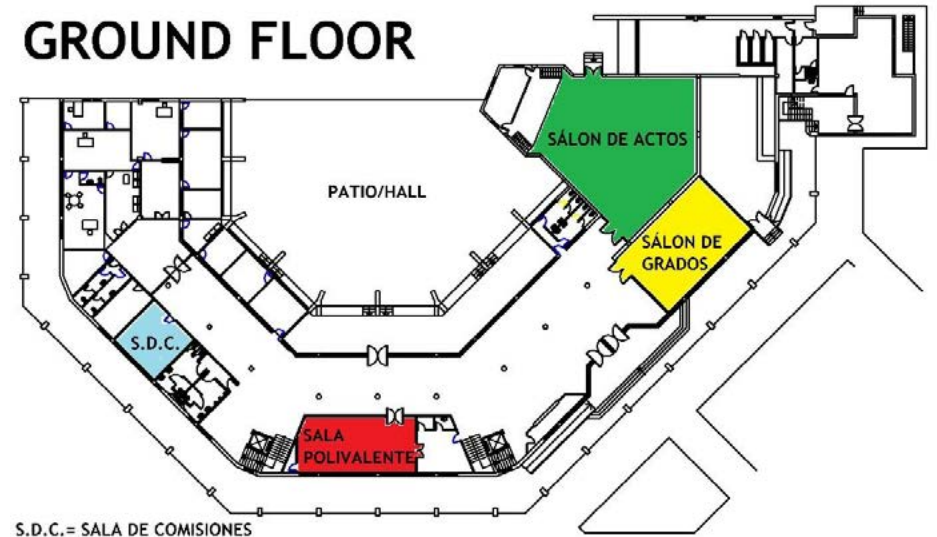


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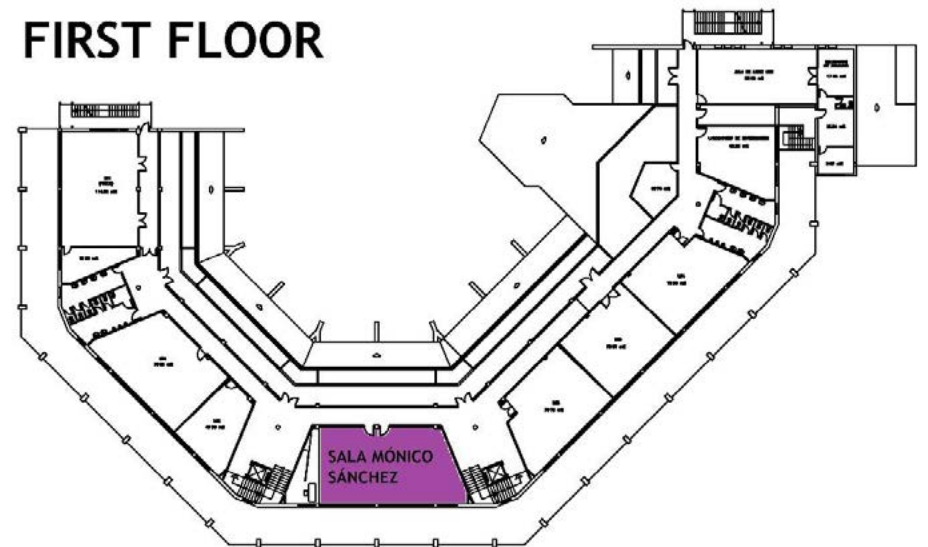
E.S.I.

GROUND FLOOR



S.D.C. = SALA DE COMISIONES

FIRST FLOOR



Supported By:



Association for
Computing Machinery



IEEE

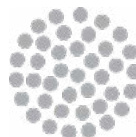
SIGSOFT
SPECIAL INTEREST GROUP ON SOFTWARE ENGINEERING



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