



**The 17th International Conference on
Software Process Improvement
and Capability dEtermination**

**Palma (Majorca), Spain
4 – 5 October 2017**

**Preliminary
Conference Program**

www.spiceconference.com



Program Overview



Conference Day 1 - Wednesday 4 October 2017

8.30 – 9.00	Registration	
9.00 – 9.30	Conference Opening and Welcome Address	
9.30 – 10.30	Keynote 1: Håkan Jegebo	
10.30 – 11.00	Coffee Break	
11.00 – 12.15	Technical Session 1	Technical Session 2
12.15 – 12.45	Spanish <i>tapas</i>	
12.45 – 14.00	Technical Session 3	Technical Session 4
14.00 – 15.30	Lunch	
15.30 – 17.10	Technical Session 5	Technical Session 6
19.30 - late	Conference Banquet and Social Event	

Conference Day 2 – Thursday 5 October 2017

9.00 – 9.15 Registration

9.15 – 10.30 Technical Session 7 Technical Session 8

10.30 – 11.00 Coffee Break

11.00 – 12.00 Keynote 2: Ricardo Colomo-Palacios

12.00 – 13.15 Technical Session 9 Technical Session 10

13.15 – 15.00 Lunch

15.00 – 16.15 Technical Session 11 Technical Session 12

16.15 – 16.45 Panel Session

16.45 – 17.00 Conference Close

Technical Session 1: SPI in Agile Approaches

NDT-Agile: An Agile, CMMI-Compatible Framework for Web Engineering
Carlos Torrecilla-Salinas, Tatiana Guardia, Olga De Troyer, Manuel Mejías and Jorge Sedeño

DevSecOps: A Multivocal Literature Review
Håvard Myrbakken and Ricardo Colomo-Palacios

Towards the Development of a sequential Framework for Agile Adoption
Miloš Jovanović, Antoni-Lluís Mesquida, Antònia Mas and Bojan Lalić

Technical Session 2: SPI in Small Settings

Comparing SPI survival studies in small settings
Xabier Larrucea and Izaskun Santamaria

Assessment Model for HCI Practice Maturity in Small and Medium Sized Software Development Companies
Abiodun Ogunyemi, David Lamas, Jan Stage and Marta Lárusdóttir

Cultural Issues and Impacts of Software Process in Very Small Entities (VSEs)
Tatsuya Nonoyama, Lian Wen, David Tuffley and Terry Rout

Technical Session 3: SPI and Assessment I

The Maturity of Usability Maturity Models
Carmen Carvajal and Ana María Moreno

Comparative study of cybersecurity capability maturity models
Angel Marcelo Rea-Guaman, Tomás San Feliu, Jose A. Calvo-Manzano and Isaac Daniel Sánchez-García

The Evolution of the TIPa Framework: Towards the Automation of the Assessment Process in a Design Science Research Project
Beatrix Barafort, Anup Shrestha and Stéphane Cortina

Technical Session 4: SPI and Models I

Applying Agent-based Simulation to the Improvement of Agile Software Management
Nuria Hurtado, Mercedes Ruiz, Cristina Capitas and Elena Orta

An Exploratory Study on Usage of Process Mining in Agile Software Development
Sezen Erdem and Onur Demirörs

A Formalization of the ISO/IEC 15504 - Enabling Automatic Inference of Capability Levels
Diogo Proença and Jose Borbinha

Technical Session 5: SPI and Functional Safety

How does Scrum Conform to the Regulatory Requirements Defined in MDevSPICE?
Özden Özcan - Top and Fergal Mc Caffery

Testing in Automotive SPICE and TestSPICE - synergies and benefits
Tomas Schweigert and Klaudia Dussa-Zieger

Deep Learning in Automotive: Challenges and Opportunities
Fabio Falcini and Giuseppe Lami

A Proposed Approach to the Revision of IEC 80001-1 following Annex SL
Silvana Togneri Macmahon, Todd Cooper and Fergal Mc Caffery

Technical Session 6: SPI in Various Settings

Enterprise SPICE Extension for Smart Specialization Based Regional Innovation Strategy
Michael Boronowsky, Ieva Mitasiunaite-Besson, Antanas Mitasiunas, David Wewetzer and Tanja Woronowicz

Developing an Integrated Risk Management Process Model for IT Settings in an ISO Multi-Standards Context
Béatrix Barafort, Antoni Lluís Mesquida and Antonia Mas

A Framework for Assessing Organisational IT Governance, Risk and Compliance
Mikhel Vunk, Nicolas Mayer and Raimundas Matulevicius

A Process Reference Model and a Process Assessment Model to Foster R&D&I Management in Organizations: MGPDI
Kival Weber, Cristina Machado, Renato Machado, Ana Liddy Magalhães, Ana Marcia Duarte, Maria Teresa Villalobos-Aguayo, Cristiano Schwening, Rosane Melchiona and Jose Antonio Antonioni

Technical Session 7: SPI and Assessment II

Development of an Assessment Model for Industry 4.0: Industry 4.0-MM
Ebru Gökalp, Umut Şener and P. Erhan Eren

A SPICE-based Maturity Model for the Governance and Management of Green IT
J. David Patón-Romero, Moisés Rodríguez and Mario Piattini

A Multi-layer Representation Model for the ISO/IEC 33000 Assessment Framework:
Analysing composition and behaviour
Alvaro Fernández Del Carpio

Technical Session 8: SPI and Models II

A model-driven proposal to execute and orchestrate processes: PLM4BS
Julián Alberto García García, Ayman Meidan, Antonio Vázquez Carreño and Manuel Mejías Risoto

An Axiom based Metamodel for Software Process Formalisation: An Ontology
Approach
Edward Kabaale, Lian Wen, Zhe Wang and Terry Rout

Towards a semi-automated tool for interoperability assessment: an ontology-based
approach
Gabriel Leal, Wided Guédria, Hervé Panetto and Erik Proper

Technical Session 9: SPI and Gamification

Gamification for Improving IT Service Incident Management
Elena Orta, Mercedes Ruiz, Alejandro Calderón and Nuria Hurtado

A systematic investigation into the use of game elements in the context of software
business landscapes: A Systematic Literature Review
Serhan Olgun, Murat Yilmaz, Paul Clarke and Rory O'Connor

Coverage of the ISO 21500 Standard for Project Management by a Simulation-based
Serious Game
Alejandro Calderón Sánchez, Mercedes Ruiz and Rory O'Connor

Technical Session 10: SPI Case Studies

Exploration of a Practical Approach for Assessing the Measurement Capability of
Software Organizations
Murat Salmanoglu, Onur Demirörs, Ali Yildiz and Ahmet Coşkunçay

SPICE in the Real World: Success for Large Infrastructural Projects with ISO/IEC
15504 Part 6
Dirk Pfaunder, Tomas Schweigert and Paul Hendriks

The Role of International Standards to Corroborate Artefact Development and
Evaluation: Experiences from a Design Science Research Project in Process
Assessment
Anup Shrestha, Aileen Cater-Steel, Mark Toleman and Terry Rout

Technical Session 11: Strategic and Knowledge Issues in SPI

The impact of situational context on the software development process – A case study of a highly innovative start-up organization

Gerard Marks, Rory O'Connor and Paul Clarke

Aspects you should consider in your action plan when implementing an improvement strategy

Peter H. Carstensen and Otto Vinter

Exploring Knowledge Loss in Open Source Software (OSS) Projects

Mehvish Rashid, Paul Clarke and Rory O'Connor

Technical Session 12: Education Issues in SPI

Relating Student, Teacher and Third-Party Assessments in a Bachelor Capstone Project

Vincent Ribaud and Leilde Vincent

Evaluation Model of PRO2PI-WORK4E Method for teaching Software Process Improvement

Clenio F. Salviano

Towards a Strategy for Process Improvement Education and Training

Linda Ibrahim and Antanas Mitasiunas



Universitat
de les Illes Balears



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