

Advances in Intelligent Systems and Computing

Volume 405

Series editor

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The series “Advances in Intelligent Systems and Computing” contains publications on theory, applications, and design methods of Intelligent Systems and Intelligent Computing. Virtually all disciplines such as engineering, natural sciences, computer and information science, ICT, economics, business, e-commerce, environment, healthcare, life science are covered. The list of topics spans all the areas of modern intelligent systems and computing.

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Trends and Applications in Software Engineering

Proceedings of the 4th International
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CIMPS'2015

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Preface

This book contains a selection of papers accepted for presentation and discussion at The 2015 International Conference on Software Process Improvement (CIMPS'15). This Conference had the support of the CIMAT A.C. (Mathematics Research Center/Centro de Investigación en Matemáticas), FIMAZ (Faculty of Informatic/Facultad de Informática Mazatlán, México), AISTI (Iberian Association for Information Systems and Technologies/Associação Ibérica de Sistemas e Tecnologias de Informação), ROOKBIZ Solutions, México, ReCIBE (Revista electrónica de Computación, Informática, Biomédica y Electrónica) and ROPRIN (Optimization Network of Industrial Processes/Red de Optimización de Procesos Industriales). It took place at Faculty of Informatic Mazatlán of the Autonomous University of Sinaloa, México, from 28 to 30 October 2015.

The International Conference on Software Process Improvement (CIMPS) is a global forum for researchers and practitioners that present and discuss the most recent innovations, trends, results, experiences, and concerns in the several perspectives of Software Engineering with a clear relationship but not limited to software processes, Security in Information and Communication Technology, and Big Data Field. One of its main aims is to strengthen the drive toward a holistic symbiosis among academy, society, industry, government, and the business community promoting the creation of networks by disseminating the results of recent research in order to align their needs. CIMPS'15 built on the successes of CIMPS'12, CIMPS'13, and CIMPS'14, which took place in Zacatecas, Zac, México.

The Program Committee of CIMPS'15 was composed of a multidisciplinary group of experts and those who are intimately concerned with Software Engineering and Information Systems and Technologies. They have had the responsibility for evaluating, in a 'blind review' process, the papers received for each of the main themes proposed for the Conference: Organizational Models, Standards and Methodologies, Knowledge Management, Software Systems, Applications and Tools, Information and Communication Technologies and Processes in non-software domains (Mining, automotive, aerospace, business,

health care, manufacturing, etc.) with a demonstrated relationship to software process challenges.

CIMPS'15 received contributions from several countries around the world. The papers accepted for presentation and discussion at the Conference are published by Springer (this book) and by another e-book. Extended versions of the best selected papers will be published in relevant journals, including SCI/SSCI and Scopus indexed journals.

We acknowledge all those who contributed to the staging of CIMPS'15 (authors, committees, and sponsors); their involvement and support is very much appreciated.

Mazatlán
Sinaloa
México
October 2015

Jezreel Mejia
Mirna Muñoz
Álvaro Rocha
Jose Calvo-Manzano

Organization

Conference

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Jezreel Mejia, Mathematics Research Center, Research Unit Zacatecas, MX

Mirna Muñoz, Mathematics Research Center, Research Unit Zacatecas, MX

The two general chairs are researchers in Computer Science at the Research Center in Mathematics, Zacatecas, México. Their research field is Software Engineering, which focuses on process improvement, multi-model environment, project management, acquisition and outsourcing process, solicitation and supplier agreement development, agile methodologies, metrics, validation and verification, and information technology security. They have published several technical papers on acquisition process improvement, project management, TSPi, CMMI, and multi-model environment. They have been members of the team that has translated CMMI-DEV v1.2 and v1.3 to Spanish.

General Support

CIMPS General Support represents centers, organizations, or networks. These members collaborate with different European, Latin America, and North America Organizations. The following people have been members of the CIMPS conference since its foundation for the last 4 years.

Cuahtemoc Lemus Olalde, Cimat Unit Zacatecas, MX

Angel Jordan, International Honorary, Software Engineering Institute, US

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CIMPS established an international committee of selected well-known experts in Software Engineering who are willing to be mentioned in the program and to review a set of papers each year. The list below comprises the Scientific Program Committee members.

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Contents

Part I Organizational Models, Standards and Methodologies

Project Management in Small-Sized Software Enterprises: A Metamodeling-Based Approach	3
I. Garcia, C. Pacheco, M. Arcilla and N. Sanchez	
Can User Stories and Use Cases Be Used in Combination in a Same Project? A Systematic Review	15
Dennis Cohn-Muroy and José Antonio Pow-Sang	
Addressing Product Quality Characteristics Using the ISO/IEC 29110.	25
Gabriel Alberto García-Mireles	
Analysis of Coverage of Moprosoft Practices in Curricula Programs Related to Computer Science and Informatics	35
Mirna Muñoz, Adriana Peña Pérez Negrón, Jezreel Mejía and Graciela Lara Lopez	
ProPAM/Static: A Static View of a Methodology for Process and Project Alignment.	47
Paula Ventura Martins and Alberto Rodrigues da Silva	
Proposal of a Hybrid Process to Manage Vulnerabilities in Web Applications	59
Ana L. Hernández-Saucedo and Jezreel Mejía	

Establishing the State of the Art of Frameworks, Methods and Methodologies Focused on Lightening Software Process: A Systematic Literature Review 71
 Juan Miramontes, Mirna Muñoz, Jose A. Calvo-Manzano and Brisia Corona

Structure of a Multi-model Catalog for Software Projects Management Including Agile and Traditional Practices. 87
 Andrés Felipe Bustamante, Jesús Andrés Hincapié and Gloria Piedad Gasca-Hurtado

Situational Factors Which Have an Impact on the Successful Usage of an Agile Methodology for Software Maintenance: An Empirical Study 99
 Lourdes Hernández, Nahum Vite, Francisco Alvarez and Alma-Rosa García

Definition and Implementation of the Enterprise Business Layer Through a Business Reference Model, Using the Architecture Development Method ADM-TOGAF 111
 Armando Cabrera, Marco Abad, Danilo Jaramillo, Jefferson Gómez and José Carrillo Verdum

Part II Knowledge Management

Towards the Creation of a Semantic Repository of iStar-Based Context Models 125
 Karina Abad, Juan Pablo Carvallo, Mauricio Espinoza and Victor Saquicela

Operations Research Ontology for the Integration of Analytic Methods and Transactional Data 139
 Edrisi Muñoz, Elisabet Capón-García, Jose M. Laínez-Aguirre, Antonio España and Luis Puigjaner

How to Think Like a Data Scientist: Application of a Variable Order Markov Model to Indicators Management 153
 Gustavo Illescas, Mariano Martínez, Arturo Mora-Soto and Jose Roberto Cantú-González

Defect Prediction in Software Repositories with Artificial Neural Networks 165
 Ana M. Bautista and Tomas San Feliu

Part III Software Systems, Applications and Tools

Reverse Engineering Process for the Generation of UML Diagrams in Web Services Composition. 177
 Isaac Machorro-Cano, Yaralitsset López-Ramírez, Mónica Guadalupe Segura-Ozuna, Giner Alor-Hernández and Lisbeth Rodríguez-Mazahua

Evaluating and Comparing Perceptions Between Undergraduate Students and Practitioners in Controlled Experiments for Requirements Prioritization 189
 José Antonio Pow-Sang

Search-Based Software Engineering to Construct Binary Test-Suites 201
 Jose Torres-Jimenez and Himer Avila-George

The Use of Simulation Software for the Improving the Supply Chain: The Case of Automotive Sector 213
 Cuauhtémoc Sánchez Ramírez, Giner Alor Hernández, Jorge Luis García Alcaraz and Diego Alfredo Tlapa Mendoza

App Reviews: Breaking the User and Developer Language Barrier . . . 223
 Leonard Hoon, Miguel Angel Rodriguez-García, Rajesh Vasa, Rafael Valencia-García and Jean-Guy Schneider

A Computational Measure of Saliency of the Shape of 3D Objects. . . . 235
 Graciela Lara, Angélica De Antonio and Adriana Peña

Part IV Information and Communication Technologies

An Open Cloud-Based Platform for Multi-device Educational Software Generation 249
 Raquel Vásquez-Ramírez, Maritza Bustos-Lopez, Agustín Job Hernández Montes, Giner Alor-Hernández and Cuauhtemoc Sanchez-Ramirez

Promoting e-Commerce Software Platforms Adoption as a Means to Overcome Domestic Crises: The Cases of Portugal and Spain Approached from a Focus-Group Perspective. 259
 Ramiro Gonçalves, José Martins, Jorge Pereira, Manuel Cota and Frederico Branco

Multi-tabletop System to Support Collaborative Design Assessment . . . 271
Gonzalo Luzardo, Vanessa Echeverría, Yadira Quiñonez
and Roger Granda

Creativity as a Key Ingredient of Information Systems 283
Vitor Santos, Jorge Pereira, José Martins, Ramiro Gonçalves
and Frederico Branco

**Part V Organizational Models, Standards and Methodologies,
Processes in Non-software Domains**

**Decreasing Rework in Video Games Development from a Software
Engineering Perspective** 295
Hugo A. Mitre-Hernández, Carlos Lara-Alvarez,
Mario González-Salazar and Diego Martín

**Emerging Industrial Visualization Systems: The Challenges
and Opportunities of Virtual and Immersive Reality Technologies . . .** 305
Miguel Cota, Miguel González-Castro, Frederico Branco,
Ramiro Gonçalves and José Martins

Author Index 317