

# **2015 IEEE 10th International Conference on Global Software Engineering**

**(ICGSE 2015)**

**Ciudad Real, Spain  
13-16 July 2015**



**IEEE Catalog Number: CFP15ICG-POD  
ISBN: 978-1-4799-8410-7**

# 2015 IEEE 10th International Conference on Global Software Engineering

## ICGSE 2015

### Table of Contents

|                                          |      |
|------------------------------------------|------|
| Message from the General Chair.....      | vii  |
| Message from the Program Chairs.....     | viii |
| Message from the Tutorial Co-Chairs..... | ix   |
| Organizing Committee.....                | xi   |
| Program Committee.....                   | xii  |
| Steering Committee.....                  | xiv  |

---

#### **Session 1: Research — Models for GSE**

|                                                                                                                                                             |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Modeling a Global Software Development Project as a Complex Socio-Technical<br>System to Facilitate Risk Management and Improve the Project Structure ..... | 1  |
| <i>Ilia Bider and Henning Otto</i>                                                                                                                          |    |
| Cultural Models and their Interplay in Global Software-Engineering Practice .....                                                                           | 13 |
| <i>Hina Shah and Nancy J. Nersessian</i>                                                                                                                    |    |
| Extending Survivability Models for Global Software Development with Media<br>Synchronicity Theory .....                                                     | 23 |
| <i>Alberto Avritzer, Sarah Beecham, Ricardo Britto, Josiane Kroll,<br/>Daniel Sadoc Menasche, John Noll, and Maria Paasivaara</i>                           |    |

#### **Session 2: Practice — Agile for GSE**

|                                                                                               |    |
|-----------------------------------------------------------------------------------------------|----|
| Coaching a Global Agile Virtual Team .....                                                    | 33 |
| <i>Nils Brede Moe, Daniela S. Cruzes, Tore Dybå, and Ellen Engebretsen</i>                    |    |
| An Empirical Investigation on Effort Estimation in Agile Global Software<br>Development ..... | 38 |
| <i>Ricardo Britto, Emilia Mendes, and Jürgen Börstler</i>                                     |    |
| Challenges in Adapting Scrum in Legacy Global Configurator Project .....                      | 46 |
| <i>Rajeev Kumar Gupta and Prabhulinga Manikreddy</i>                                          |    |

### **Session 3: Research — Studies for GSE**

|                                                                                              |    |
|----------------------------------------------------------------------------------------------|----|
| Systematic Software Development: A State of the Practice Report from Germany .....           | 51 |
| <i>Marco Kuhrmann and Daniel Méndez Fernández</i>                                            |    |
| Preparing the Global Software Engineer .....                                                 | 61 |
| <i>Anne-Kathrin Peters, Waqar Hussain, Asa Cajander, Tony Clear, and Mats Daniels</i>        |    |
| Reporting Empirical Evidence in Distributed Software Development: An Extended Taxonomy ..... | 71 |
| <i>Antônio Rafael Da Rosa Techio, Rafael Prikladnicki, and Sabrina Marczak</i>               |    |

### **Session 4: Research and Practice — Tools and Knowledge Management Strategies from GSE**

|                                                                                                                             |     |
|-----------------------------------------------------------------------------------------------------------------------------|-----|
| Knowledge Management in Globally Distributed Agile Projects—Lesson Learned .....                                            | 81  |
| <i>Mohammad Abdur Razzak and Darja Šmite</i>                                                                                |     |
| Approximator: Predicting Interruptibility in Software Development with Commodity Computers .....                            | 90  |
| <i>Paolo Tell, Shahram Jalaliniya, Kristian S.M. Andersen, Mads D. Christensen, Anders B. Mellson, and Jakob E. Bardram</i> |     |
| Assessing the Effectiveness of Static Analysis through Defect Correlation Analysis .....                                    | 100 |
| <i>Radhika D. Venkatasubramanyam, Shrinath Gupta, and Umesh Uppili</i>                                                      |     |

### **Session 5: Research — Distribution and Education for GSE**

|                                                                                        |     |
|----------------------------------------------------------------------------------------|-----|
| Distributed Software Engineering in Collaborative Research Projects .....              | 105 |
| <i>Michael Derntl, Dominik Renzel, Petru Nicolaescu, István Koren, and Ralf Klamma</i> |     |
| Assessing the Strength of Global Teaming Practices: A Pilot Study .....                | 110 |
| <i>Sarah Beecham, Ita Richardson, and John Noll</i>                                    |     |
| Virtual Teams and Employability in Global Software Engineering Education .....         | 115 |
| <i>Julian M. Bass, Roger McDermott, and J.T. Lalchandani</i>                           |     |

### **Session 6: Practice — Agile Practices for GSE and Offshore Supplier**

|                                                                                                      |     |
|------------------------------------------------------------------------------------------------------|-----|
| Offshore Supplier to Preferred Partner: A Journey .....                                              | 125 |
| <i>Nikhil Mokashi, Debi Prasad Mahapatra, and Madan Mohan Jha</i>                                    |     |
| Continuous Software Testing in a Globally Distributed Project .....                                  | 130 |
| <i>Nils Brede Moe, Daniela Cruzes, Tore Dybå, and Edda Mikkelsen</i>                                 |     |
| Successfully Transforming to Lean by Changing the Mindset in a Global Product Development Team ..... | 135 |
| <i>Utpal Samanta and V.S. Mani</i>                                                                   |     |

|                           |     |
|---------------------------|-----|
| <b>Author Index</b> ..... | 140 |
|---------------------------|-----|