

| <b>THURSDAY, SEPTEMBER 20</b> |  |   |  |
|-------------------------------|--|---|--|
| 8:30-9:00                     | <b>Opening</b>   |   |  |
| 9:00-10:00                    | <b>Keynote address</b><br>Chair: Natalia Juristo (Universidad Politécnica de Madrid)<br><br>A Critical Analysis of Empirical Research in Software Testing. <i>L. Briand</i>  |   |  |
| 10:00-10:30                   | Coffee break   |   |  |
| 10:30-12:30                   | <b>Experience Management</b><br>Chair: ()<br><br>Proposal of a Complete Life Cycle In-Process Measurement Model Based on Evaluation of an In-Process Measurement Experiment Using a Standardized Requirement Definition Process. <i>Y. Mitani, T. Matsumura, M. Barker, S. Tsuruho, K. Inoue, and K. Matsumoto</i><br><br>Observing Software Testing Practice from the Viewpoint of Organizations and Knowledge Management. <i>O. Taipale, K. Karhu, and K. Smolander</i><br><br>Relevant Information Sources for Successful Technology Transfer: A Survey using Inspections as Example. <i>A. Jedlitschka, M. Ciolkowski, C. Denger, B. Freimut, and A. Schlichting</i> | <b>Empirical Studies of Testing and Validation</b><br>Chair: ()<br><br>Assessing, Comparing, and Combining Statechart-based testing and Structural testing: An Experiment. <i>S. Mouchawrab, L.C. Briand, and Y. Labiche</i><br><br>Test Inspected Unit or Inspect Unit Tested Code? <i>A. Gupta, and P. Jalote</i><br><br>Defect Detection Efficiency: Test Case Based vs. Exploratory Testing. <i>J. Itkonen, M.V. Mäntylä, and C. Lassenius</i><br><br>Comparing Model Generated with Expert Generated IV&V Activity Plans. <i>H. Nakao, and D. Port</i> |  |
| 12:30-14:00                   | Lunch  |   |  |
| 14:00-15:30                   | <b>Experimental Techniques and Infrastructure</b><br>Chair: ()<br><br>Requirement and Design Trade-offs in Hackystat: An in-process software engineering measurement and analysis system. <i>P. Johnson</i><br><br>Tuning anonymity level for assuring high data quality: an empirical study. <i>G. Canfora, and C.A. Visaggio</i><br><br>Filtering, Robust Filtering, Polishing; Techniques for Addressing Quality in Software Data. <i>G. Liebchen, M. Shepperd, M. Cartwright, B. Twala, and M. Stephens</i>  | <b>Effort Estimation</b><br>Chair: ()<br><br>An Estimation Model for Test Execution Effort. <i>E. Aranha, and P. Borba</i><br><br>Cognitive Limits of Software Cost Estimation. <i>R. Valerdi</i><br><br>Impact Analysis of Missing Values on the Prediction Accuracy of Analogy-based Software Effort Estimation Method AQUA. <i>J. Li, A. Al-Emran, and G. Ruhe</i>   | <b>Empirical Studies of Software Products</b><br>Chair: ()<br><br>Static Members and Cycles in Java Software. <i>H. Melton, and E. Tempero</i><br><br>Usability Evaluation Based on Web Design Perspectives. <i>T. Conte, J. Massollar, E. Mendes, and G.H. Travassos</i><br><br>An Empirical Study of the Effects of Gestalt Principles on Diagram Understandability. <i>K. Lemon, E.B. Allen, J.C. Carver, and G.L. Bradshaw</i> |

|             |   |  |  |
|-------------|---|--|--|
| 15:30-16:00 | Coffee break  |  |  |
| 16:00-17:30 | <p><b>Empirical Studies of Software Processes</b><br/>Chair: ()</p> <p>A Comparative Study of Aspect-Oriented Requirements Engineering Approaches. <i>A. Sampaio, P. Greenwood, A.F. Garcia, and A. Rashid</i></p> <p>Toward Reducing Fault Fix Time: Understanding Developer Behavior for the Design of Automated Fault Detection Tools. <i>L. Layman, L. Williams, and R. St. Amant</i></p> | <p><b>Quality and Defect Prediction</b><br/>Chair: ()</p> <p>Measuring Impact of Adaptive Maintenance Process on Quality of Open-Source Software. <i>D. Kozlov, J. Koskinen, J. Markkula, and M. Sakkinen</i></p> <p>The Effects of Over and Under Sampling on Fault-prone Module Detection. <i>Y. Kamei, A. Monden, S. Matsumoto, T. Kakimoto, and K. Matsumoto</i></p> <p>Generalizing fault contents from a few classes. <i>H. Scott, and P.M Johnson</i></p> | <p><b>Short Papers: Software quality</b><br/>Chair: ()</p> <p>An Approach to Global Sensitivity Analysis: FAST on COCOMO. <i>S. Wagner</i></p> <p>An Approach to Outlier Detection of Software Measurement Data using the K-means Clustering Method. <i>K. Yoon, O. Kwon, and D. Bae</i></p> <p>A cost effectiveness measure for software development. <i>H. Erdogmus</i></p> <p>How Software Designs Decay: A Pilot Study of Pattern Evolution. <i>C. Izurieta, and J.M. Bieman</i></p> <p>Estimating the Quality of Widely Used Software Products Using Software Reliability Growth Modeling: Case Study of an IBM Federated Database Project. <i>P.L. Li, R. Nakagawa, and R. Montroy</i></p> <p>Correlation between bug notifications, messages and participants in Debian's bug tracking system. <i>M. Pérez-Francisco, and P. Boronat-Pérez</i></p> <p>Investigating Test Teams' Defect Detection in Function Test. <i>C. Andersson</i></p> <p>Comparison of Outlier Detection Methods on Fault-proneness Models. <i>S. Matsumoto, Y. Kamei, A. Monden, and K. Matsumoto</i></p> <p>Talking tests: a Preliminary Experimental Study on Fit User Acceptance Tests. <i>M. Torchiano, F. Ricca, and M. Di Penta</i></p> |

| <b>FRIDAY, SEPTEMBER 21</b> |  |  |  |
|-----------------------------|--|--|--|
| 9:00-10:00                  | <b>Keynote address</b><br>Chair: Carolyn Seaman (University of Maryland-Baltimore County and Fraunhofer Center-Maryland, USA)<br><br>Helping End-User Programmers "Engineer" Software: an Opportunity for Empirical Researchers. <i>G. Rothermel</i>   |  |  |
| 10:00-10:30                 | Coffee break   |  |  |
| 10:30-12:30                 | <b>Performing Systematic Reviews</b><br>Chair: ()<br><br>Developing Search Strategies for Detecting Relevant Experiments for Systematic Reviews. <i>O. Dieste, and A. Griman</i><br><br>Applying Systematic Reviews to Diverse Study Types: An Experience Report. <i>T. Dybå, T. Dingsøy, and G.K. Hanssen</i><br><br>Using Context Distance Measurement to Analyze Results across Studies. <i>D. Cruzes, M. Mendonça, V. Basili, F. Shull, and M. Jino</i><br><br>A Visual Text Mining approach for Systematic Reviews. <i>V. Malheiros, E. Höhn, R. Pinho, M. Mendonça, and J.C. Maldonado</i> | <b>Empirical Studies of Agile Methods</b><br>Chair: ()<br><br>Usage and Perceptions of Agile Software Development in an Industrial Context: An Exploratory Study. <i>A. Begel, and N. Nagappan</i><br><br>A Replicate Empirical Comparison Between Software Development with Inspection and Pair Development. <i>M. Phongpaibul, and B. Boehm</i><br><br>A Comparative Case Study on the Impact of Test-Driven Development on . Program Design and Test Coverage. <i>M. Siniaalto, and P. Abrahamsson</i><br><br>An Experimental Evaluation of the Effectiveness and Efficiency of the Test-Driven Development. <i>A. Gupta, and P. Jalote</i> |  |
| 12:30-14:00                 | Lunch  |  |  |
| 14:00-15:30                 | <b>Software Metrics</b><br>Chair: ()<br><br>Fine-Grained Software Metrics in Practice. <i>M. English, J. Buckley, and T. Cahill</i><br><br>Conceptual Differences Between Functional Size Measurement Methods. <i>C. Gencel, and O. Demirors</i><br><br>Evaluating Software Project Control Centers in Industrial Environments. <i>M. Ciolkowski, J. Heidrich, J. Münch, F. Simon, and M. Radicke</i>  | <b>Effort Estimation in New Environments</b><br>Chair: ()<br><br>Comparing Size Measures for Predicting Web Application Development Effort: A Case Study. <i>S. Di Martino, F. Ferrucci, C. Gravino, and E. Mendes</i><br><br>A Comparison of Techniques for Web Effort Estimation. <i>E. Mendes</i><br><br>Effort Prediction in Iterative Software Development Processes – Incremental Versus Global Prediction Models. <i>P. Abrahamsson, R. Moser, W. Pedrycz, A. Sillitti, and G. Succi</i>  | <b>Short Papers: Empirical Research, Case Study Design and Surveys</b><br>Chair: ()<br><br>A Survey of the Practice of Design – Code Correspondence amongst Professional Software Engineers. <i>A. Nugroho, and M.R.V. Chaudron</i><br><br>Assessing the Quality Impact of Design Inspections. <i>C. Ackermann, F. Shull, R. Carbon, C. Denger, and M. Lindvall</i><br><br>A Controlled Experiment on the Effects of Synchronicity in Remote Inspection Meetings. <i>F. Calefato, F. Lanubile, and T. Mallardo</i> |

|             |   |   |   |
|-------------|---|---|---|
|             |   |   | <p>A Survey of Enterprise Software Development Risks in a Global World. <i>J.I Bhuta, S. Mallick, and S.V. Subrahmanya</i></p> <p>Checklists for Software Engineering Case Study Research. <i>M. Höst, and P. Runeson</i></p> <p>Evidence relating to Object-Oriented software design: A survey. <i>J. Bailey, D. Budgen, M. Turner, B. Kitchenham, P. Brereton, and S. Linkman</i></p> <p>A Snapshot of the State of Practice in Software Development for Medical Devices. <i>C. Denger, R.L. Feldmann, M. Höst, C. Lindholm, and F. Shull</i></p> <p>GQM+Strategies – Aligning Business Strategies with Software Measurement. <i>V. Basili, J. Heidrich, M. Lindvall, J. Munch, M. Regardie, and A. Trendowicz</i></p> <p>Automated Information Extraction from Empirical Software Engineering Literature: Is that possible? <i>D. Cruzes, M. Mendonça, V. Basili, F. Shull and M. Jino</i></p> |
| 15:30-16:00 | Coffee break  |   |   |
| 16:00-17:30 | <p><b>Software Data Mining</b><br/>Chair: ()</p> <p>Mining Software Evolution to Predict Refactoring. <i>J. Ratzinger, T. Sigmund, P. Vorburger, and H. Gall</i></p> <p>Using Software Dependencies and Churn Metrics to Predict Field Failures: An Empirical Case Study. <i>N. Nagappan, and T. Ball</i></p> | <p><b>Homogeneity in Effort Estimation</b><br/>Chair: ()</p> <p>Is This Cost Estimate Reliable? - The Relationship between Homogeneity of Analogues and Estimation Reliability. <i>N. Ohsugi, A. Monden, N. Kikuchi, M.D. Barker, M. Tsunoda, T. Kakimoto, and K. Matsumoto</i></p> <p>Building Software Cost Estimation Models using Homogenous Data. <i>R. Premraj, and T. Zimmermann</i></p> <p>Comparing Local and Global Software Effort Estimation Models – Reflections on a Systematic Review. <i>S. G. MacDonell, and M.J. Shepperd</i></p> | <p><b>Empirical Studies of Architecture</b><br/>Chair: ()</p> <p>Characterizing Software Architecture Changes: An Initial Study. <i>B.J. Williams, and J.C. Carver</i></p> <p>The Impact of Group Size on Software Architecture Evaluation: A Controlled Experiment. <i>M. Ali Babar, and B. Kitchenham</i></p> <p>Evaluating the Usefulness and Ease of Use of a Groupware Tool for the Software Architecture Evaluation Process. <i>M. Ali Babar, D. Winkler, and S. Biffl</i></p>  |

|  |  |  |  |
|--|--|--|--|
|  | Fault-Prone Filtering: Detection of Fault-Prone Modules Using Spam Filtering Technique. <i>O. Mizuno, S. Ikami, S. Nakaichi, and T. Kikuno</i> |  |  |
|--|--|--|--|