

# International Workshop on Principles of Software Evolution (IWPSE 2001)

September 10-11, 2001

Vienna University of Technology, Austria

In association with 8<sup>th</sup> ESEC/9<sup>th</sup> FSE

Sponsors: IPSJ-SIGSE, JSSST, and ACM SIGSOFT

Supported by the Scientific Research Network on Foundations of Software Evolution of the Fund for Scientific Research Flanders

<http://www.jaist.ac.jp/IWPSE2001/>

## Final Program

| Time                      | Room HS 6 for Single Sessions and Track A (Freihaus Bldg., 2F)  | Room HS 8 (Noebauer) for Track B (Freihaus Bldg., 2F)  |
|---------------------------|---|--|
| <b>September 10 (Mon)</b> |   |  |
| 9:00-10:30                | <b>Welcome</b> T. Tamai (U. Tokyo, Japan)<br><b>Session 1: Keynote 1:</b> Software Evolution, M. M. Lehman (Imperial College, UK)   | Chair M. Aoyama (Nanzan U., Japan)   |
| <b>Break</b>              |   |  |
| 11:00-12:30               | <b>Session 2: Techniques of Software Evolution</b><br>Trace Model for System Requirements Changes on Embedded Systems, A. von Knethen (Fraunhofer IESE, Germany)<br>Metrics for Applying GOF Design Patterns in Refactoring Processes, T. Muraki, M. Saeki (Tokyo Inst. of Tech., Japan)<br>The Evolution Matrix: Recovering Software Evolution using Software Visualization Techniques, M. Lanza (U. Bern, Switzerland)  | Chair: M. Jazayeri (Tech. U. of Vienna, Austria)   |
| <b>Lunch Break</b>        |   |  |
| 13:30-15:00               | <b>Session 3: Techniques and Applications of Software Evolution</b><br>Recycling Software Components Extracted from Legacy Programs, H. M. Sneed (CaseConsult, Germany)<br>Software Architecture Adaptability: An NFR Approach, N. Subramanian (Anritsu, USA), L. Chung (U. Texas, USA)<br>Evolutionary Modelling of Software Systems: Its Application to Agent-Based and Hypermedia Systems, M. J. Rodriguez-Fortiz, P. Paderewski-Rodriguez (Granada U., Spain), L. Garcia-Cabrera, J. Parets-Llorca (Jaén U., Spain)   | Chair: K. Ochimizu (JAIST, Japan)  |
| <b>Break</b>              |   |  |
| 15:30-17:00               | <b>Session 4A: Principles</b><br>Chair: H. M. Sneed (CaseConsult, Germany)<br>An Approach to a Theory of Software Evolution, M. M. Lehman, J. F. Ramil (Imperial College, UK)<br>Role of Concepts in Software Evolution, V. Rajlich (Wayne State U., USA)<br>Software Quark Model: An Elementary Particle Model for Measuring Software Evolution, T. Ajisaka (Wakayama U., Japan)<br>Evolution Metrics, T. Mens (Vrije U., Belgium), S. Demeyer (U. Antwerp, Belgium)<br>Continuous and Discontinuous Evolution: Aspects of Software Evolution across Multiple Product Lines, M. Aoyama (Nanzan U., Japan)  | <b>Session 4B: Emerging Architectures and Domains</b><br>Chair: J. Han (Monash U., Australia)<br>Achieving Ultra Rapid Evolution Using Service-Based Software, K. Bennett (U. Durham, UK), N. Gold (UMIST, UK)<br>Management of Script Evolution with Mobile Agent Technology, S. Nakajima (NEC, Japan)<br>Why is Distributed System Evolution Not Better Supported, H. Evans (U. Glasgow, UK)<br>Growth, Evolution, and Structural Change in Open Source Software, M. Godfrey, Q. Tu (U. Waterloo, Canada)  |
| <b>September 11 (Tue)</b> |   |  |
| 9:00-10:30                | <b>Session 5:</b><br><b>Keynote 2:</b> Evolutionary Domains: A Basis for Sound Software Evolution, T. Katayama (JAIST, Japan)<br>Software Evolution: Let's Sharpen the Terminology before Sharpening (Out-of-Scope) Tools, R. T. Mittermeir (Klagenfurt U., Austria)  | Chair: K. Bennett (U. Durham, UK)  |
| <b>Break</b>              |   |  |
| 11:00-12:30               | <b>Session 6A: Architectures</b><br>Chair: G. Heineman (Worcester Polytechnic Inst., USA)<br>Practical Perspectives on Software Evolution and Architectures, T. Mikkonen (Tampere U of Tech, Finland), P. Pruuden (Nokia Networks, Finland)<br>Aspect-Oriented Analysis for Architecture Design, T. Kishi, N. Noda (NEC, Japan)<br>Facilitating System-of-Systems Evolution with Architecture Support, P. Chen (DoD, Australia), J. Han (Monash U., Australia)<br>The Evolution of Software Evolvability, C. Lüer, D. S. Rosenblum, A. van der Hoek (U. California, Irvine, USA)<br>An Evolutive Architecture Reasons as a Semiotic, Hermeneutic and Autopoietic Entity, A. Lourenci (U. Sao Paulo, Brazil)   | <b>Session 6B: Experiments and Case Studies</b><br>Chair: B. Paech (Fraunhofer IESE., Germany)<br>Conducting Experiments on Software Evolution, D. I. K. Sjøberg, E. Arisholm, M. Jørgensen (Simula Research Lab., Norway)<br>Clustering and Concept Analysis for Software Evolution, J. Davey, E. Burd (U. Durham, UK)<br>Organisational Trails through Software Systems, C. Knight, M. Munro (U. Durham, UK)<br>Quantitative Observations on Object Evolution, T. Nakatani (SLagoon, Japan)<br>Changes and Versioning in Complex Objects, M. Oussalah (IRIN, France)   |
| <b>Lunch Break</b>        |   |  |
| 13:30-15:00               | <b>Session 7A: Patterns and Evolution Structures</b> Chair: T. Ajisaka (Wakayama U., Japan), T. Mikkonen (Tampere U of Tech, Finland)<br>Design Pattern Concerns for Software Evolution, N. Noda, T. Kishi (NEC, Japan)<br>Automated Software Evolution Towards Design Patterns, M. Ó Cinnéide (U. College Dublin, Ireland), P. Nixon (U. Strathclyde, UK)<br>Scenario Evolution in Requirements Elicitation Processes: Scenario Pattern and Framework Approach, K. Watahiki, M. Saeki (Tokyo Inst. of Tech., Japan)<br>Evolution Mechanism of Reactive System Programs, N. Yoshiura (Gunma U., Japan)<br>Towards a Software Evolution Benchmark, S. Demeyer (U. Antwerp, Belgium), T. Mens (Vrije U., Belgium), M. Wermelinger (U. Nova de Lisboa, Portugal) | <b>Session 7B: Verification, Validation and Testing</b><br>Chair: R. T. Mittermeir (Klagenfurt U., Austria), T. Watanabe (Tokyo Inst. of Tech., Japan)<br>Towards Constructing Component-Based Software Systems with Safe Dynamic Adaptability, N. Amano (JAIST, Japan), T. Watanabe (Tokyo Inst. of Tech., Japan)<br>An Efficient Verification Procedure Supporting Evolution of Reactive System Specifications, T. Aoshima, K. Sakuma, N. Yonezaki (Tokyo Inst. of Tech., Japan)<br>An Experience on Verification of Aspect Properties, G. Denaro, M. Monga (Politecnico di Milano, Italy)<br>Evolving Legacy System Features using Regression Test Cases and Components, A. Mehta (American Financial Systems, USA), G. Heineman (Worcester Polytechnic Inst., USA)<br>Support for Business-Driven Evolution with Coordination Technologies, L. Andrade, J. L. Fiadeiro (ATX Software, Portugal), J. Gouveia, G. Koutsoukos (Oblog Software, Portugal), M. Wermelinger (ATX Software, Portugal) |
| <b>Break</b>              |   |  |
| 15:30-17:00               | <b>Session Summary and Wrap up</b><br><b>Closing:</b> T. Tamai (U. Tokyo, Japan)  | Chair: M. Aoyama (Nanzan U., Japan), K. Bennett (U. Durham, UK)  |
| 18:00-21:00               | <b>Welcome Reception</b>  |  |