Contents

Keynote Address Some Hard Questions for Software Engineering Educators
Session 1: Goals - What Should We Be Teaching 3
Essential Knowledge for the Practising Software Engineer and he Responsibilities of University and Industry for Her Education
Computer Productivity Initiative: Past, Present, and Future
Software Engineering Education: A Dragging-Through Approach 31 Vanusz Górski, The Franco-Polish School of New Information and Communication Technologies, Poznan, Poland
Session 2: Panel Discussion
Establishing Software Engineering as a Profession
Session 3: Curriculum Issues
ndustry Involvement in Undergraduate Curricula: Reinforcing Learning by Applying the Principles



David Garlan, Alan Brown, Daniel Jackson, Jim Tomayko, and Jeannette Wing, Carnegie Mellon University, Pittsburgh, Pennsylvania
The Integration of Software Engineering into a Computer Science Curriculum
An Evolution of a Software Engineering Curriculum
Session 4: Workshop and Roundtable Evening Sessions
Object-Oriented Technology Education and Training: Bridging the Gap Between Academia and Industry
CMM-Based Software Process Improvement Training: The First Year
Keynote Address Education - The World's Best Investmen
Session 5: Process Issues
Process Improvement in the Classroom
Personal Software Process: An Experiential Report
The Process of Teaching Process

Session 6: Panel Discussion
Managing Software Engineering Education in Diverse Environments 159 Panel Moderator: Nancy R. Mead, Carnegie Mellon University, Pittsburgh, Pennsylvania Panelists: Miriam F. Browning, Office of the Secretary of the Army, Washington, D.C.; David Carter, Texas Instruments, Dallas, Texas; Norman Gibbs, Carnegie Mellon University, Pittsburgh, Pennsylvania; and Iraj Hirmanpour, Embry-Riddle Aeronautical University, Daytona Beach, Florida
Session 7: Software Engineering in Special Domains
The Role of the Software Engineer in Real-Time Software Development: An Introductory Course
Parallel and Distributed Computing Education: A Software Engineering Approach
Session 8: Requirements and Design
Understanding the Role of Formal Specification Techniques in Requirements Engineering
An Integrated Approach to Teaching Requirements Modelling
Is Teaching Software Design a 'Wicked' Problem Too?
Session 9: Tutorial Presentation
Software Engineering Curriculum Development Model

Session 10: Evening Sessions
The Software Process Improvement Game
Academic Freedom versus Quality Assurance
Keynote Address Endangered Species? The Single-Skilled Information Worker
Session 11: People, Management, and Leadership Skills 27'
Experience in Teaching a Management-Oriented Capstone Software Engineering Course
Team Selection Methods for Student Programming Projects
Developing Leadership Skills in Software Engineering Students Through an Undergraduate Research Program
Session 12: Technology Issues
CARDS Training: Transferring Reuse Knowledge
Teaching More Comprehensive Model-Based Software Engineering: Experience with Objectory's Use Case Approach
On Teaching Software Verification and Validation

Session 13: Education/Training - Needs and Trends 3	38 7
The Delphi Survey Methodology: An Approach to Determine Training Needs	389
A Skills-Driven Process for Training Computer Professionals	103
Is this Training? A Unique Approach to Software Process Training in Industry	109
Education Trends and Their Impact on Management of Software Engineering Education4 Nancy R. Mead, Carnegie Mellon University, Pittsburgh, Pennsylvania	119
Session 14: Tutorial Presentations	429
Understanding, Using and Designing for Educational Uses of the World-Wide Web	131
From TRAINING to LEARNING: The Reengineering of Training at DMR Group Inc4 Isabelle Mahy, DMR Group, Inc., Montréal, Canada	43 3
Session 15: Evening Tutorial Presentations	435
Managing Quality in Course Staging - A Working Paper	137
A Russian Software Center Ascends the SEI Maturity: Education by Motorola University	139

Session 16: Half-Day Tutorial Presentations	441
Teaching Practical Principles of Software Measurement David N. Card, Software Productivity Solutions, Incorporated, Indialantic, Florida	443
Teaching Object Oriented Programming and Design with Eiffel James C. McKim, Jr., Hartford Graduate Center, Hartford, Connecticut	445
The Personal Process in Software Engineering	447
Research Methods in Computer Science Education	449