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| Nota di contenuto | Informatics, a Challenging Topic -- The Challenging Face of Informatics Education in Poland -- Bebras International Contest on Informatics and Computer Literacy: Criteria for Good Tasks -- From Top Coders to Top IT Professionals -- Didactical Merits of Robot-Based Instruction -- Integrating Mathematical Analysis of Sensors and Motion in a Mobile Robotics Course -- Visualization of Program Behaviors: Physical Robots Versus Robot Simulators -- Development of an Educational System to Control Robots for All Students -- Proposal for Teaching Manufacturing and Control Programming Using Autonomous Mobile Robots with an Arm -- Transfer of Knowledge and Concept Formation -- Design Disciplines and Non-specific Transfer -- Like a (School of) Fish in Water (or ICT-Enhanced Skills in Action) -- Duality Reconstruction – Teaching Digital Artifacts from a Socio-technical Perspective -- What's My Challenge? The Forgotten Part of Problem Solving in Computer Science Education -- Bringing Abstract Concepts Alive. How to Base Learning |

Success on the Principles of Playing, Curiosity and In-Classroom Differentiation -- Working with Objects and Programming -- Analysis of Learning Objectives in Object Oriented Programming -- To Have or to Be? Possessing Data Versus Being in a State – Two Different Intuitive Concepts Used in Informatics -- Understanding Object Oriented Programming Concepts in an Advanced Programming Course -- Spiral Teaching of Programming to 10–11 Year-Old Pupils After Passed First Training (Based on the Language C++) -- Multi-facet Problem Comprehension: Utilizing an Algorithmic Idea in Different Contexts -- VIPER, a Student-Friendly Visual Interpreter of Pascal -- Analysis of Students' Developed Programs at the Maturity Exams in Information Technologies -- Strategies for Writing Textbooks and Teacher Education -- Creating and Testing Textbooks for Secondary Schools -- Informatics as a Contribution to the Modern Constructivist Education -- New Methodology of Information Education with “Computer Science Unplugged” -- Disciplinary-Pedagogical Teacher Preparation for Pre-service Computer Science Teachers: Rational and Implementation -- Algorithm – Fundamental Concept in Preparing Informatics Teachers -- Computer Science Teacher Training at the University of Groningen -- Distance Learning Course for Training Teachers' ICT Competence -- National and International perspectives on ICT Education -- Teaching Information Technology and Elements of Informatics in Lower Secondary Schools: Curricula, Didactic Provision and Implementation -- Spreadsheet Knowledge and Skills of French Secondary School Students -- Harmonization of Informatics Education – Science Fiction or Prospective Reality? -- E-Learning -- Development of E-Learning Design Criteria with Secure Realization Concepts -- On the Technological Aspects of Generative Learning Object Development -- Informational Technologies for Further Education of Latvian Province Teachers of Informatics.

Sommario/riassunto

Informatics Education – Supporting Computational Thinking contains papers presented at the Third International Conference on Informatics in Secondary Schools – Evolution and Perspective, ISSEP 2008, held in July 2008 in Torun, Poland. As with the proceedings of the two previous ISSEP conferences (2005 in Klagenfurt, Austria, and 2006 in Vilnius, Lithuania), the papers presented in this volume address issues of informatics education transcending national boundaries and, therefore, transcending differences in the various national legislation and organization of the educational system. Observing these issues, one might notice a trend. The proceedings of the First ISSEP were termed From Computer Literacy to Informatics Fundamentals [1]. There, broad room was given to general education in ICT. The ECDL, the European Computer Driving License, propagated since the late 1990s, had penetrated school at this time already on a broad scale and teachers, parents, as well as pupils were rather happy with this situation. Teachers had material that had a clear scope, was relatively easy to teach, and especially easy to examine. Parents had the assurance that their children learn “modern and relevant stuff,” and for kids the computer was sufficiently modern so that anything that had to do with computers was considered to be attractive. Moreover, the difficulties of programming marking the early days of informatics education in school seemed no longer relevant. Some colleagues had a more distant vision though.
