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Titolo	Guide to Teaching Computer Science : An Activity-Based Approach // by Orit Hazzan, Tami Lapidot, Noa Ragonis
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ISBN	1-4471-6630-2
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Descrizione fisica	1 online resource (XXIV, 296 p. 10 illus.)
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Soggetti	Education—Data processing Teaching Science education Computers and Education Teaching and Teacher Education Science Education
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Nota di contenuto	Introduction – What Is This Guide About? -- Active Learning and the Active-Learning-Based Teaching Model -- Overview of the Discipline of Computer Science -- Research in Computer Science Education -- Problem-Solving Strategies -- Learners' Alternative Conceptions -- Teaching Methods in Computer Science Education -- Lab-Based Teaching -- Types of Questions in Computer Science Education -- Assessment -- Teaching Planning -- Integrated View at the MTCS Course Organization: The Case of Recursion -- Getting Experience in Computer Science Education -- Design of Methods of Teaching Computer Science Course -- High School Computer Science Teacher Preparation Programs -- Epilogue.
Sommario/riassunto	Demonstrating that computer science learning and teaching processes can be fun, thought-provoking and stimulating, this unique textbook presents both a conceptual framework and detailed implementation guidelines for computer science (CS) teaching. This highly-anticipated new edition has been updated with the latest teaching approaches and trends, and includes 110 learning activities (of which 15 are new). The content is clearly written and structured to be applicable to all levels of

CS education and for any teaching organization, without limiting its focus to instruction of any specific institution, curriculum, programming language or paradigm. Topics and features: Provides 110 detailed learning activities to be facilitated in different class settings Reviews curriculum and cross-curriculum topics in CS Explores the benefits of CS education research Describes strategies for cultivating problem-solving skills, for assessing learning processes, and for dealing with pupils' misunderstandings Proposes active-learning-based classroom teaching methods, including lab-based teaching Discusses various types of questions that a CS instructor or trainer can use for a range of teaching situations in class, homework and tests Investigates thoroughly issues of lesson planning and course design Examines the first field teaching experiences gained by CS teachers across different training frameworks This preeminent textbook for CS teacher training programs draws on the authors' experience gained from three decades of teaching and training prospective and in-service CS teachers, as well as research in CS education. Concise, thorough and easy-to-follow, the book is also eminently suitable for use as a teaching guide for CS instructors at all levels.

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