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For Immediate Release

ACM AND IEEE-CS LAUNCH INNOVATIVE COMPUTER SCIENCE CURRICULUM

New Approach Redefines Essential Computing Topics; Report Includes Examples of Flexible Courses and Curricula Models

NEW YORK, **January 16, 2014** – As unabated growth in the global computing field continues, ACM (the Association for Computing Machinery) and the IEEE Computer Society have jointly developed new curriculum guidelines for undergraduate degree programs that foster integration of computing with other disciplines. The report, Computer Science 2013, organizes computer science around 18 Knowledge Areas that reflect the application of computing tools in a wide array of disciplines. It also incorporates new areas of knowledge for computing skills that include information assurance and security, parallel and distributed computing, and platform-based applications. The report provides curricular models suitable to a broad range of higher education institutions worldwide. It is available to academic leaders, accrediting bodies, and college and university faculties from ACM http://www.acm.org/education/CS2013-final-report.pdf and IEEE-CS http://www.computer.org/portal/web/education/home.

"Computing is a critical 21st century skill and there is real need to include more computing in higher education," said Mehran Sahami, co-chair of the ACM/IEEE-CS 2013 Joint Task Force. "The CS2013 curricular guidelines reflect developments in computing in the past decade, including the pervasive use of parallel computing and the need to better understand computer security. Topics commonly covered in introductory programming courses have been updated and reorganized in a new area called Software Development Fundamentals. We have also created a Systems Fundamentals area that helps highlight more broadly applicable systems-level concepts," said Sahami of Stanford University, who is Associate Chair for Education in the university's Computer Science Department.

Steve Roach, who also co-chairs the ACM/IEEE-CS 2013 Joint Task Force, hailed the inclusion of actual courses and programs in the report. "The guidelines were written for a wide variety of institutions, each with its own needs and constraints. We created a tiered set of topics to be applicable in a broad range of settings rather than being prescriptive in how topics are presented," said Roach, a software engineer at Exelis Inc.

CS2013 includes examples of ways in which an undergraduate Computer Science program encourages the development of soft skills and personal attributes. These abilities include teamwork, verbal and written communication, time management, problem solving, and flexibility as well as risk tolerance, collegiality, patience, work ethic, and appreciation for diversity. They all play a critical role in the workplace and in promoting successful professional practice in a variety of career paths.

The guidelines are intended to help computer science students learn to integrate theory and practice and recognize the importance of abstraction. It also teaches them to appreciate the value of good engineering design in the rapidly changing computer field at a time when computer science impacts nearly every modern endeavor.

The CS2013 report benefitted from a broad engagement of members of the computing community, who reviewed and critiqued successive drafts of this document. It reflects the input of more than 100 contributors at global institutions of higher learning.

About ACM

*ACM, the Association for Computing Machinery **acm.org**, is the world's largest educational and scientific computing society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.*

About IEEE Computer Society

*IEEE Computer Society, **computer.org**, is one of the world's leading computing membership organizations and a trusted information and career-development source for a global workforce of technology leaders including: professors, researchers, software engineers, IT professionals, employers, and students. IEEE Computer Society provides high-quality, state-of-the-art information on an on-demand basis. The Computer Society provides a wide range of forums for top minds to come together, including technical conferences, publications, a comprehensive digital library, unique training webinars, and professional training. IEEE is the world's largest professional association for advancement of technology and the Computer Society is the largest society within IEEE.*

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