



**Association for
Computing Machinery**

Advancing Computing as a Science & Profession

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**ACM URGES OBAMA TO INCLUDE CS AS CORE COMPONENT OF SCIENCE, MATH
EDUCATION**

Statement Emphasizes Critical Role of Computer Science as 21st Century Skill

Washington, DC – December 16, 2008 – As Arne Duncan is announced as the next U.S. Secretary of Education, ACM (the Association for Computing Machinery) today issued a set of recommendations supporting the new Administration's stated goal of making science and mathematics education a national priority at the K-12 level, and urging the new Administration to include computer science as an integral part of the nation's education system. The ACM recommendations cite the strong outlook for computer science-related jobs despite extraordinary challenges confronting the nation, and highlight the role of computer science in driving the technology sector, which is expected to continue its ability to make substantial contributions to economic growth in the near future.

"Computing education benefits all students, not just those interested in pursuing computer science or information technology careers," said Bobby Schnabel, chair of ACM's [Education Policy Committee \(EPC\)](#). "But students often do not have many opportunities to engage in rigorous computer science study at the K-12 level," said Schnabel, dean of the Indiana University School of Informatics. "To meet the nation's educational and professional needs in the face of insufficient numbers of undergraduates majoring in computer science, we need to work harder to increase interest at the K-12 level, and to expand the pipeline supplying the necessary workforce for an information-based economy."

ACM CEO John R. White welcomed the Obama team's efforts to increase the pool of students in STEM (Science, Technology, Engineering and Mathematics) fields and identified key recommendations to address the particular challenges at the K-12 level. "The new Administration can play an important role in strengthening middle school education, where action can really make a difference, to introduce these students to computer science. They can also expand efforts to increase the number of females and underrepresented minorities in this field and expand professional development opportunities for high school computer science teachers."

Among the other recommendations are: a focus on research funding for K-12 computer science education to address many gaps in understanding how students engage with this critical field; and a review of how states can better coordinate and improve existing teacher certification requirements, particularly for

computer science teachers.

The ACM recommendations cite several challenges to computing education that inhibit students from experiencing the excitement and creativity of the discipline. For example, courses in the fundamentals of computer science often count only as a general elective, not as a college-preparatory elective, making it unlikely that college-bound high school students can afford to explore the field. In addition, as schools have increasingly stepped up the need to integrate, use, and teach information technology, the distinctions have blurred between what is called computer science and what is, in fact, information technology literacy and the use of technology to support literacy.

The ACM recommendations also urge action from federal, state and local policymakers as well as from the high-tech industry, and scientific and education societies to address these pressing issues. The entire statement is available at [Computing in K-12 STEM Education Critical for 21st Century Skills](#) (pdf).

About ACM

ACM, the Association for Computing Machinery www.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.

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