FOR IMMEDIATE RELEASE

Contacts: **Virginia Gold**
212-626-0505
vgold@acm.org

Margo McCall
714-816-2182
mmccall@computer.org

ACM AND IEEE COMPUTER SOCIETY RECOGNIZE CHARLES E. LEISERSON FOR ADVANCES IN PARALLEL COMPUTING SYSTEMS

MIT Professor Developed Cilk Multithreaded Programming Technology

NEW YORK, September 12, 2014 -- Charles E. Leiserson of Massachusetts Institute of Technology (MIT) will receive the 2014 ACM-IEEE Computer Society Ken Kennedy Award for his influence on parallel computing systems and their adoption into mainstream use through scholarly research and development. He was also cited for his mentoring of computer science leaders and students. Leiserson introduced the notion of cache-oblivious algorithms, which can exploit the memory hierarchy near optimally despite having no tuning parameters for cache size or cache-line length. He also developed the Cilk multithreaded programming technology, and led the development of several Cilk-based parallel chess-playing programs which won numerous prizes in international competition. The award will be presented at the SC14 supercomputing conference on Tuesday, November 18 in New Orleans.

The coauthor of "Introduction to Algorithms," one of computer science's most cited publications, Leiserson is also the creator of MIT undergraduate courses on algorithms and on discrete mathematics for computer science. He headed the computer science program for the pioneering Singapore-MIT Alliance distance-education program and developed MIT's undergraduate class on software performance engineering, which teaches parallel programming as one of several techniques for writing fast code.

Leiserson's annual workshop on Leadership Skills for Engineering and Science Faculty has educated hundreds of faculty at MIT and around the world in the human issues involved in leading technical teams in academia. He was the founding Workshop Chair for the MIT Undergraduate Practice Opportunities Program (UPOP), which teaches MIT Engineering sophomores how leadership skills can leverage their technical skills in professional environments. He is a Margaret MacVicar Faculty Fellow at MIT, the highest recognition at MIT for undergraduate teaching.

Leiserson's research centers on the theory of parallel computing, especially as it relates to engineering reality. His PhD thesis, "Area-Efficient VLSI Computation," won the 1982 ACM Doctoral Dissertation Award, as well as the Fannie and John Hertz Foundation's Doctoral Thesis Award.

A coauthor of the first paper on systolic architectures, Leiserson invented the retiming method of digital-circuit optimization, and developed the algorithmic theory behind it. On leave from MIT at Thinking Machines Corp., he designed and led the implementation of the network architecture for the Connection Machine Model CM-5 Supercomputer, which incorporated the fat-tree interconnection network he developed at MIT.

As Director of System Architecture at Akamai Technologies, he led the engineering team that developed a worldwide content distribution network numbering over 20,000 servers. He also founded Cilk Arts Inc., which produced the Cilk++ multicore concurrency platform and was acquired by Intel in 2009.

Leiserson joined the MIT faculty in 1981, where he heads the Supertech research group in MIT's Computer Science and Artificial Intelligence Laboratory. He received a BS degree from Yale University and a Ph.D. degree from Carnegie Mellon University. He is an ACM Fellow, a Fellow of the American Association for the Advancement of Science (AAAS), and a Senior Member of IEEE and the Society for Industrial and Applied Mathematics (SIAM).

Earlier this year, he was recognized with an IEEE Computer Society Taylor L. Booth Education Award for his contributions to computer science education. He is also a co-recipient of the 2013 ACM Paris Kanellakis Theory and Practice Award for contributions to efficient and robust parallel and distributed computing.

ACM and the Computer Society co-sponsor the Kennedy Award, which was established in 2009 to recognize substantial contributions to programmability and productivity in computing and significant community service or mentoring contributions. It was named for the late Ken Kennedy, founder of Rice University's computer science program and a world expert on high performance computing. The Kennedy Award carries a US $5,000 honorarium endowed by the ACM Special Interest Group on Computer Architecture (SIGARCH) and the Computer Society.

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.

About IEEE Computer Society

IEEE Computer Society, www.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.

# # #