



MEDIA ADVISORY

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**COMPUTING PIONEERS AND INNOVATORS TO EXPLORE THE FUTURE OF COMPUTING AT ACM'S
CELEBRATION OF 50 YEARS OF THE A.M. TURING AWARD**

Turing Laureates and Other Leading Experts to Discuss: Quantum Computing, Digital Privacy, Augmented Reality, Neural Networks and More...

NEW YORK, June 21, 2017 – In celebration of 50 years of the ACM A.M. Turing Award, the Association for Computing Machinery (ACM) has assembled many of the greatest minds in computing for a two-day conference that will explore how computing has evolved and where the field is headed. Session information is included below. Full program details, including discussion times, may be found at <http://www.acm.org/turing-award-50>.

WHO: ACM, the Association for Computing Machinery www.acm.org, is the premier global community of computing professionals and students with nearly 100,000 members in more than 170 countries.

WHAT: A conference celebrating 50 Years of the ACM Turing Award, featuring ACM Turing Laureates, ACM award recipients and other ACM experts in moderated panel discussions on the most pressing issues in computing today. Dame Wendy Hall, Regius Professor of Computer Science at the University of Southampton will act as Master of Ceremonies for the event. Nine Turing Laureates to speak and participate in panel discussions.

WHEN and WHERE: June 23-24, 2017 at the Westin St. Francis in San Francisco and via **live video streaming** at <http://www.acm.org/turing-award-50>. Photos from the event will be posted at <https://www.flickr.com/photos/theofficialacm>.

MEDIA REGISTRATION: Contact Jim Ormond at ormond@hq.acm.org

PROGRAM OVERVIEW:

Day 1, Friday, June 23

Impact of Turing Recipients' Work (8:55 – 9:15am PDT)

Speaker: Barbara Liskov (2008 Turing Laureate)

Advances in Deep Neural Networks (9:15 – 10:30am PDT)

How are deep neural networks changing our world and our jobs, and what breakthroughs may we imagine going forward?

Moderator: Judea Pearl (2011 Turing Laureate)

Panelists: Michael Jordan (UC Berkeley), Fei-Fei Li (Stanford), Ilya Sutskever (OpenAI) and Raquel Urtasun (University of Toronto)

Restoring Personal Privacy without Compromising National Security (11:10am – 12:25pm PDT)

Can computing technology promote both personal privacy and national security?

Moderator: Joan Feigenbaum (Yale)

Panelists: **Whitfield Diffie (2015 Turing Laureate)**, Bryan Ford (EPFL), Nadia Heninger (University of Pennsylvania), and Paul Syverson (NRL)

Preserving Our Past for the Future (1:45 – 3:00pm PDT)

How do we archive our electronic artifacts to ensure we can read data and documents in both the near and distant future?

Moderator: Craig Partridge (Raytheon)

Panelists: **Vint Cerf (2004 Turing Laureate)**, Brewster Kahle (Internet Archive), Natasa Milic-Frayling (University of Nottingham), Mahadev Satyanarayanan (Carnegie Mellon) and W. Brent Seales (University of Kentucky)

Moore's Law Is Really Dead: What's Next? (3:45 – 5:00pm PDT)

Moore's Law is finally over. What old doors will this seismic shift close and what new doors will it open?

Moderator: John Hennessy (Stanford)

Panelists: Doug Burger (Microsoft), Norm Jouppi (Google), **Butler Lampson (1992 Turing Laureate)** and Margaret Martonosi (Princeton)

Challenges in Ethics and Computing (5:00 – 6:15pm PDT)

How do we recognize and address ethical issues that arise with advances in technology?

Moderator: Deirdre Mulligan (UC Berkeley)

Panelists: Jennifer Chayes (Microsoft), Helen Nissenbaum (NYU), **Raj Reddy (1994 Turing Laureate)** and Noel Sharkey (University of Sheffield and Foundation for Responsible Robotics)

Day 2, Saturday, June 24

Computer Science as a Major Body of Accumulated Knowledge (9:05 – 9:20am PDT)

Speaker: **Donald Knuth (1974 Turing Laureate)**

Quantum Computing: Far Away? Around the Corner? Or, Maybe Both at the Same Time? (9:20 – 10:35am PDT)

Quantum computing hardware is maturing swiftly. In this discussion, we'll look at where we are in both theory and practice, where we are headed and what quantum skills the average computer scientist will eventually need.

Moderator: Umesh Vazirani (UC Berkeley)

Panelists: Dorit Aharonov (Hebrew University), Jay Gambetta (IBM Research), John Martinis (Google) and **Andrew Yao (2000 Turing Laureate)**

Augmented Reality: From Gaming to Cognitive Aids and Beyond (11:05am – 12:20pm PDT)

Augmented reality has captivated our imaginations both in fiction and in practice. In this panel, we explore how the sensing and sensory display technologies of augmented reality can empower individuals and communities.

Moderator: Blair MacIntyre (Georgia Tech)

Panelists: Fred Brooks (1999 Turing Laureate), Peter Lee (Microsoft Research), Yvonne Rogers (University College London) and Ivan Sutherland (1988 Turing Laureate)

PROGRAM COMMITTEE: Craig Partridge (Program Chair), Fahad Dogar (Deputy Program Chair), Karin Breitman, Vint Cerf (2004 Turing Laureate), Jeff Dean, Joan Feigenbaum, Wendy Hall, Joseph Konstan and David Patterson

About ACM and the ACM Turing Award

The ACM A.M. Turing Award, often referred to as the “Nobel Prize of Computing,” carries a \$1 million prize with financial support provided by Google, Inc. 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.

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