Celebrating 50 Years of the ACM Turing Award

By Vicki L. Hanson, ACM President

I was delighted to learn that the IPSJ would feature a special issue devoted to ACM's celebration of 50 years of the A.M. Turing Award. And I am honored to be invited to write an introductory article for this issue.

In total, 64 men and women from around the world have received the Turing Award, recognizing work laying down the foundations of modern computing. The prominence of the ACM Turing Award matches the impact of the contributions it honors. In the 50 years since its inception, the Award has become known as the "Nobel Prize of Computing," and thanks to the generous support of Google, the award currently carries a $1 million prize.

To celebrate the first 50 years of the Turing Award, ACM has sponsored a year-long series of programs, highlighted on the Turing 50th website, http://www.acm.org/turing-award-50. This site also provides information about the Turing Laureates, Alan Turing himself, and information about a very special upcoming Turing 50th conference.

The culminating event of this anniversary year will be ACM's Celebration of 50 Years of the Turing Award conference that will take place June 23-24, 2017 in San Francisco. This event will recognize achievements in computing and will honor the Turing Laureates, providing opportunities to hear from many of them. For students and early career members of the computing community there also will be opportunities to meet and converse with the Turing Laureates.

The conference program will consist of seven moderated panel discussions designed to span a range of computing areas. The goal is to review topics of current interest to both those in the profession and to society at large. Panelists will include Turing Laureates, ACM award winners, and others involved in shaping the direction of computing. Panel topics include:

- *Advances in Deep Neural Networks*: How are deep neural networks changing our world and our jobs and what breakthroughs may we imagine going forward?
- *Restoring Personal Privacy without Compromising National Security*: Can computing technology promote *both* personal privacy and national security?
- *Moore's Law is Really Dead: What's Next?* What old doors will this seismic change close and what new doors will it open?
- *Quantum Computing: Far Away? Around the Corner? Or Maybe Both at the Same Time?* For both theory and practice, where are we headed, and what quantum skills might be needed by future computing professionals?
- *Challenges in Ethics and Computing:* How do we recognize and address ethical issues that arise with advances in technology?
- *Preserving our Past for the Future:* How do we archive our electronic artifacts to ensure we can read data and documents in both the near and distant future?
- *Augmented Reality: From Gaming to Cognitive Aids and Beyond:* How can the sensing and sensory display technologies of augmented reality empower individuals and communities?

There will be multiple opportunities to experience ACM's Turing 50th Celebration event. If you can attend in person you may register at https://www.regonline.com/acmturing50thcelebration. There is no registration fee for ACM members to attend, but space will be limited, so early registration is essential.

If you are not able to attend the event in person, the panel discussions will be streamed live on the ACM website, and will also be recorded (with captions) for later viewing.

We hope that you are able to experience this special ACM activity highlighting the range and impact of Turing Award-winning work.