

# Thinking Machines in the Physical World

## 2016 IEEE Conference on Norbert Wiener in the 21st Century

### Key dates

- 28 Feb 2016: Deadline for special session proposals
- 28 Feb 2016: Deadline for full papers for peer review (6 pages, IEEE format), Abstract only (2 pages), confirmation of acceptance 28 March.
- 30 Apr 2016: Deadline for final camera-ready copy of full papers.

We invite you to participate in the 2nd IEEE Conference on Norbert Wiener in the 21st Century. The conference will focus on opportunities and threats presented by advances in cognitive computing, in the context of Wiener's technical work and his concerns regarding technology and society.

Norbert Wiener was a mathematician, philosopher, scientist and engineer whose pioneering work in mathematics, computer science, systems control, biology and engineering led to cybernetics (the origin of "cyberspace" and "cyborgs"). This conference follows the successful inaugural conference in Boston, June 2014.

We invite paper submissions that consider Wiener's work from perspectives across applied, hard, and social sciences, as well as the humanities, fine arts, and professional/industry practice. Conference topics will include:

- Cognitive computing in theory and practice.
- Wiener's fields of work (cybernetics, information theory, philosophy, life sciences, interval computation, fuzzy sets, Brownian motion, analysis under uncertainty...).
- Wiener's societal concerns (information ethics, innovation and economic development, robots and work, cyber warfare and crime, science fiction as social commentary, cybernetics and literature, art and design...)



### Professor Graeme Clark, AC Laureate Professor Emeritus

"It gives me great pleasure to have the opportunity to welcome your interest in the work of Norbert Wiener and invite you to Melbourne to participate in this important conference." Professor Graeme Clark, AC Laureate Professor Emeritus, leader in pioneering cochlear implant research, the winner of numerous awards and honours and who continues to research the convergence between engineering and biology at the University of Melbourne.

### Paper Submissions

All submissions will be online via the conference web site (below)

- Full papers (up to 6 pages, due 28 Feb 2016) will be peer reviewed. Accepted, presented papers will be provided for publication to IEEEExplore. Authors must prepare papers in the IEEE conference style (available on the website).
- Abstracts (up to 500 words) for research-in-progress and practitioner presentations will be assessed for relevance to the conference (not published in IEEEExplore), as will student posters (A2).
- If you require confirmation of acceptance earlier than the dates above, please contact us at [NorbertWiener-2016@unimelb.edu.au](mailto:NorbertWiener-2016@unimelb.edu.au)

### Student Papers:

Student research papers and posters are strongly encouraged.

### Special Sessions:

Proposals for creative/experimental session formats are welcome.

### Conference Chairs

General chair: Dr Greg Adamson, University of Melbourne  
Technical Program: Prof Iven Mareels, University of Melbourne  
Keynote Speakers: Prof Rob Evans, University of Melbourne  
Sponsorships: Prof Saeid Nahavandi, Deakin University  
Publications: Dr Valery Ugrinovskii, UNSW Canberra at ADFA  
Related events: Philip Hall, University of Melbourne  
Facilities: Kerry Ellen Beachen, University of Melbourne  
Finances: Jennifer Nguyen, Conference Treasurer