



## Introducing the IEEE Society on Social Implications of Technology: Engagement Opportunities for Student and Young Professionals

*Central European Student and Young Professionals Congress (CEuSYP)  
Heather A. Love, 28 November 2021*





**Who we are. What we care about.**

*Our history within the IEEE organization.*

# SSIT's Core Premises & Concerns

*What are the impacts of technology on society?*



- ▶ Technology is a fundamental resource for human development.
- ▶ Technological change has intended and unintended consequences.
- ▶ Technology ought to be harnessed for the good of humanity and the planet.
- ▶ How can we influence the development of technology?

# SSIT's Origins

*SSIT began in 1972 as "CSIT": an IEEE Technical Committee with a big picture mission & vision*



1. Develop means to encourage and support professional and social responsibility in the practice of engineering.
2. Promote sensitivity to and understanding of the interaction between technology and society.
3. Foster study, discussion and appropriate action involving IEEE members and others.
4. Promote the conception of means and implement programs for predicting and evaluating the impact of technology on society.
5. Take appropriate action to implement programs.

# SSIT's Role within the IEEE Today

*Leaders in the area of technology's impact on society*

*We hear echoes of SSIT's core message in the tag-line for the IEEE organization as a whole:*



*Advancing Technology  
for Humanity*

**SSIT now runs technical committees on:**

- ▶ Sustainable Development
- ▶ Ethics and Human Values
- ▶ Universal Access to Technology
- ▶ Societal Impacts
- ▶ Protecting the Planet



## What we do. How you can get involved.

*Transcending disciplinary divides through high-quality conferences, award-winning publications, and diverse engagement opportunities.*

# Example: TC on Universal Access to Technology

*Activities: IEEE Quarter Tech Talk series, Conference panels, WIE/Student Engagement Projects*

- ▶ TC Chair: **Bozenna Pasik-Duncan** (KSU)
- ▶ Committee: USA, Ireland, France, Senegal, Australia, India



- ▶ Our core purpose is to recognize that universal digital access for all embodies a human-centered and community-centered understanding of a digital society which actively benefits all human-beings.
- ▶ Universal digital access also reminds us of the digital divide, identified long ago in the United Nations millennial goals, which has not been closed.
- ▶ Our purpose is to actively reduce this divide which separates communities and individuals on the basis of ethnicity, religious conviction, sexuality, gender identity, income, age and in many other ways.
- ▶ We will demonstrate how to carefully and ethically balance social, cultural and technological dimensions of society to the benefit of all people.

# SSIT's Big-Picture, Interdisciplinary Orientation

*E.g., SSIT's flagship conference: the IEEE International Symposium on Technology & Society (ISTAS)*

- ▶ 1991 (Toronto, Can) **Preparing for a Sustainable Society**
- ▶ 1993 (Washington, DC) **Technology: Whose costs? Whose benefits?**
- ▶ 1996 (Princeton, NJ) **Technical Expertise and Public Decisions**
- ▶ 1997 (Glasgow, Scotland) **Technology and Society at a Time of Sweeping Change**
- ▶ 1998 (South Bend, IN) **Wiring the World: The Impact of Information Technology on Society**
- ▶ 1999 (New Brunswick, NJ) **Women and Technology: Historical, Societal, and Professional Perspectives**
- ▶ 2000 (Rome, Italy) **University as a Bridge from Technology to Society**
- ▶ 2001 (Stamford, CT) **Ethical and Social Issues Criteria in Academic Accreditation**
- ▶ 2002 (Raleigh, NC) **Social Implications of Information and Communication Technology**
- ▶ 2003 (Amsterdam) **Technology, Crime Prevention, and Security**
- ▶ 2004 (Worcester, MA) **Globalizing Tech. Education**
- ▶ 2005 (Los Angeles, CA) **Weapons and Wires: Social Implications of ICT and Global Security**
- ▶ 2006 (New York, NY) **Disaster Preparedness & Recovery**
- ▶ 2007 (Las Vegas, NV) **Risk, Uncertainty, Vulnerability, Technology and Society**
- ▶ 2008 (Fredericton, NB, Canada) **Citizens, Groups, Communities, and Information and Communications Technologies**
- ▶ 2009 (Tempe, AZ) **Social Implications of Sustainable Development**



# SSIT's Big-Picture, Interdisciplinary Orientation

*SSIT's flagship conference: the IEEE International Symposium on Technology & Society (ISTAS)*

- ▶ 2010 (Wollongong, NSW, Australia) **Social Implications of Emerging Technologies**
- ▶ 2011 (Chicago, IL) **Overcoming Social Barriers with Computing**
- ▶ 2012 (Singapore) **Technology and Society in Asia**
- ▶ 2013 (Toronto, ON Canada) **Social Implications of Wearable Computing and Augmented Reality in Everyday Life**
- ▶ 2014 (Chicago, IL) **Ethics in Engineering, Science and Technology**
- ▶ 2015 (Dublin, Ireland) **Future of Sustainable Development**
- ▶ 2016 (Trivandrum, Kerala, India) **Implications of Disruptive Technologies**
- ▶ 2017 (Sydney, New South Wales, Australia) **From Good Ideas to Practical Solutions**
- ▶ 2018 (Washington, DC) **Technology, Ethics, and Policy**
- ▶ 2019 (Boston, MA) **Technology, Sustainable Development, and Ethics**
- ▶ 2020 (Phoenix, AZ) **Public Interest Technology**
- ▶ 2021 (Waterloo, Canada) **Technological Stewardship & Responsible Innovation**

# This year's ISTAS Conference – Student/YP Activities

28-31 October 2021, Virtual Event, hosted by Universities of Waterloo & Guelph (Ontario, Canada)



- ▶ Subthemes: Health Systems; Privacy & Security; Technology Policy & Governance; Sustainable Cities & Communities; AI & Automation; Ethical & Human Values in Emerging Technology
- ▶ 5 keynotes, 14 special sessions, 18 paper sessions, 500+ attendees, student fee waivers
  - Ron Deibert Keynote, “Investigating Targeted Espionage: Methods, Findings, Implications” @ <https://www.youtube.com/watch?v=WUXqIzjbtjg>
- ▶ <https://attend.ieee.org/istas-2021/>
- ▶ **SSIT Student Essay Contest**
- ▶ **Student/YP Mentoring Sessions**
- ▶ **SSIT YP Vision Workshop**

# SSIT's Broader Conference Portfolio

*Many opportunities for student and young professional engagement!*

## ▶ IEEE Conference Series on Norbert Wiener in the 21<sup>st</sup> Century (21CW)

- 2014: Boston, USA
- 2016: Melbourne, Australia
- 2021\*: Chennai, India (Virtual Event)
- <https://21stcenturywiener.org>

## ▶ IEEE International Symposium on Ethics in Engineering, Science, and Technology (ETHICS)

- 2014: Chicago, USA
- 2016: Vancouver, Canada
- 2021: Part of ISTAS21 (virtual event, hosted by Waterloo/Guelph, Canada)
- <https://attend.ieee.org/ethics-2021/>

## ▶ IEEE Global Humanitarian Technology Conference (GHTC)

- <https://ieeeghtc.org>

## ▶ IST-Africa

- <http://www.ist-africa.org/home/>

## ▶ Plus: SSIT sessions and speakers at other IEEE/non-IEEE events

- E.g. Society for Social Studies of Science (4S): Dis/empowerment in autonomous systems (Oct 2021)

## ▶ Student/YP engagement welcome at all events!

# SSIT's Publications Portfolio

*Reaching across and beyond IEEE's technical audiences*



Through its monthly newsletter, award-winning *Technology & Society Magazine*, and new *Transactions on Technology & Society* publications, SSIT cooperates and collaborates with a diverse range of...

- ▶ Technically specialized societies within and beyond the IEEE;
- ▶ Interdisciplinary stakeholders, including social scientists, humanists, and artists interested in technology's social impacts.

# SSIT's Publications Portfolio: TSM (since 1977!)

## *IEEE Technology & Society Magazine*

### ► Scope:

- Health and safety implications of technology,
- Engineering ethics and professional responsibility,
- Engineering education in social implications of technology,
- History of electrotechnology,
- Technical expertise and public policy,
- Social issues related to energy, information technology, and telecommunications,
- Systems analysis in public policy decisions,
- Economic issues related to technology,
- Peace technology,
- Environmental implications of technology.

### ► Editor in Chief: **Jeremy Pitt** (Imperial C.L.)

### ► Popular Articles:

- **AI Ethics In Predictive Policing: From Models Of Threat To An Ethics Of Care** (Asaro)
- **Self-Driving Cars: Ethical Responsibilities Of Design Engineers** (Borenstein, Herkert, Miller)
- **Face Recognition Technology: Security Versus Privacy** (Bowyer)

### ► More info:

- <https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=44>

# SSIT's Publications Portfolio: TTS (new as of 2020!)

## *IEEE Transactions on Technology & Society*

- ▶ The IEEE Transactions on Technology and Society publishes research papers on:
  - the interactions among technology, science, and society;
  - the impact of such interactions on individuals and society; and
  - the ethical, professional and social responsibility in the practice of science, technology, engineering and mathematics.
- ▶ The publication also provides a forum for open discussion of resulting issues.
- ▶ Editor in Chief: **Katina Michael (ASU)**
- ▶ Popular Articles:
  - **Responsible AI—Two Frameworks For Ethical Design Practice** (Peters et al.)
  - **Design Lessons From AI's Two Grand Goals: Human Emulation And Useful Applications** (Shneiderman)
  - **Demographic Bias In Biometrics: A Survey On An Emerging Challenge** (Drozdowski et al.)
- ▶ More info:
  - <https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=8566059>

# Additional SSIT Activities

*Chapters, Lectures, Awards, Student & YP, Communications*

- ▶ **27 Active International Chapters**
- ▶ **Active Distinguished Lecturer and Awards programs**
- ▶ **Growing committees for Student Activities and Young Professionals**
  - *More on this from SSIT Student Activities Committee (SAC) Chair, Saiteja Goud Karingu*
  - *Volunteer opportunities are available!*
- ▶ **Expanding publications, education, and communications portfolio**
  - *IEEE Transactions on Technology & Society*
  - *IEEE Technology & Society Magazine*
  - SSIT Newsletter
  - **technologyandsociety.org (website & blog)**
  - **Strong social media presence (Facebook, Twitter, Instagram, LinkedIn)**

# Join us! Community, Mentorship, Networking

*Make a difference in the field of societal impacts of technology*

- ▶ **\$33 (USD) per year for IEEE members**
  - ▶ **Only \$4 (USD) per year for IEEE student members!**
  - ▶ [www.technologyandsociety.org/join-ssit/](http://www.technologyandsociety.org/join-ssit/)
- ▶ **Benefits of membership**
    - Community, networking and mentorship opportunities
    - Publication access (SSIT Newsletter; *Technology and Society Magazine* – new and archived issues; *Transactions on Technology and Society* – special member subscription rate)
    - Conferences: reduced registration rates for members at SSIT conferences
    - Volunteer opportunities as authors, referees, chapter/lecture activities, other events
  - ▶ **Find out more at:**
    - [www.technologyandsociety.org](http://www.technologyandsociety.org)
    - “About Us,” “Board of Governors”



*Thank you.*