

# IEEE Systems Council Technical Operations

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# Technical Committees

## *Existing*

- ▶ Analytics and Risk
- ▶ Cyber-Physical Systems
- ▶ Industrial Interface
- ▶ Intelligent Transportation Design
- ▶ Networked Systems
- ▶ Security and Privacy in Complex Information Systems
- ▶ Systems Biology and Biomedical Systems
- ▶ Workforce Development

*These technical committees were in existence as of 2016.*

# Analytics and Risk Technical Committee

*Deshing “Dash” Wu, Chair*

- ✓ Leadership in place
- ✓ Web presence established, but information is dated
- ✓ Holding meetings (latest meeting at SysCon 2017)
- ✓ Issued call for papers on “Risk Analytics in Industrial Systems” (2015) status unknown
- ✓ Conducting annual Symposium on Analytics and Risk (2016-Beijing, 2017-Shanghai)

*Summary – Well established technical committee with good activities, but need better and more current information available to stimulate more participation.*

# Cyber-Physical Systems Technical Committee

*Shiyan Hu and Albert Y. Zomaya, Co-Chairs*

- ✓ Leadership in place
- ✓ Relatively large membership
- ✓ Extensive web presence on IEEE website – linked from Systems Council website
- ✓ Publishes semiannual newsletter (latest issue February 2017)
- ✓ 2<sup>nd</sup> IEEE International Workshop on Design Automation for Cyber-Physical Systems
  - ✓ June 18, 2017
  - ✓ Austin, TX, USA
- ✓ Awards program
  - ✓ 2017 Technical Achievement Award – Alberto Sangiovanni-Vicentelli, UC Berkeley
  - ✓ 2017 Distinguished Leadership Award – Tei-Wei Kuo, National Taiwan University
  - ✓ 2017 Early-Career Award – Qi Zhu, UC Riverside

***Summary – Well established and active technical committee following many best practices.***

# Industrial Interface Technical Committee

*Les Oakes, Acting Chair\**

- ✓ Need new leadership
- ✓ Web presence established, but information is dated

*\*Message from Les Oakes:*

*The II TC has fallen apart and nothing was ever accomplished. After initial interest from eight IEEE members, we wound up with just three members and then just me. I had attempted to get this TC restarted from its previous failure, but I was also unsuccessful.*

*I am still interested in being part of the TC, but my failure to get anything accomplished should probably be taken as a sign that I am not the person to organize it.*

# Intelligent Transportation Design Technical Committee

*LaMont McAliley, Chair*

- ✓ Leadership in place
- ✓ Web presence established, but information is slightly dated
- ✓ Holding meetings, but none reported since late 2016
- ✓ Relatively small membership

*Summary – Activity and membership seem to have fallen off. Reaching out to Chair to see if he needs assistance.*

# Networked Systems Technical Committee

*Rob Riley, Chair*

- ✓ Leadership in place
- ✓ Web presence established and updated earlier this year
- ✓ Next meeting planned at IEEE NetSciCom Workshop being held on 1 May in Atlanta, GA
- ✓ Activities currently focused on networked systems for telecommunications

*Summary - Relatively well-established technical committee with limited activities and membership. Chair seeking suggestions for additional topics.*

# Security and Privacy in Complex Information Systems TC

*Pierangela Samarati, Chair*

- ✓ Leadership in place
- ✓ Web presence on IEEE website
  - ✓ Linked from Systems Council website after some difficulty
  - ✓ Information is slightly dated (2016)

*Summary – TC seems to be well-established, but need to update information to stimulate membership and activities.*



# Systems Biology and Biomedical Systems TC

*Bernard Fong, Acting Chair*

- ✓ Leadership in place, and most interested in Region 10 activities
- ✓ Web presence established, but information is very dated (2014)
- ✓ Extremely small membership
- ✓ Chair wants to conduct a workshop in Asia this fall to “kick-start” activities
  - ✓ Judy provided list of IEEE conferences in Asia this fall
  - ✓ Chair reviewing list and has requested potential volunteers to help

*Summary – Not an active technical committee. Viability is questionable.*

# Workforce Development Technical Committee

*Richard Millham, Chair*

- ✓ Leadership in place, but plans to relinquish the role next year
- ✓ Extremely small membership (2 people)
- ✓ Web presence established and updated through the end of 2016
- ✓ Goals
  - ✓ 2015 – Host educational conference workshops (pilot at 2015 ISSE)
  - ✓ 2016 – Identify future challenges across 20 engineering disciplines and recommended curricula changes to address them (captured on spreadsheet in Google Documents)

*Summary – Viability of this technical committee is questionable.*

# Technical Committees

*New*

- ▶ CubeSat – Need Chair
- ▶ Information Fusion – Need Chair
- ▶ Standards
- ▶ Systems Education

*These technical committees were created during 2016.*

# Standards Technical Committee

*Annette Reilly, Chair*

- ▶ I had agreed to take this on last year, but made no headway with it due to other commitments. I do think it would be worthwhile to share information about related systems standards underway among the IEEE Systems Council member societies. This could promote consistency, avoid duplicative standardization work, and bring more resources to bear on cross-cutting areas such as Internet of Things.
- ▶ So once again I will say yes, and attempt to clear some time to pursue setting up a Systems Council Standards Committee during 2017. Note, as I am retired and involved in IEEE activities as a volunteer, I have very limited funding to attend meetings and conferences unless there is IEEE reimbursement.

*Summary – Created a Call for Participation to Council Societies.*

# Systems Education Technical Committee

*Charles K. Pickar, Chair*

- ✓ Leadership in place
- ✓ Initial web presence established
- ✓ *The IEEE Systems Council Systems Education Technical Committee provides both a resource and forum for members to discuss and exchange ideas on systems related activities including systems thinking, systems engineering and system dynamics and how to promote and sustain these skills for both members and the larger engineering community. It is meant to be a location for members to discuss and share systems focused educational information, practice and new thinking. Ideally, we will be able to collect, refine and warehouse ideas and materials for members to share and use in any aspect of informing on systems thinking, education and engineering. While meant for all interested members, it will also serve as a repository for systems focused educational techniques, including systems engineering and system dynamics.*

**Summary – Possible successor to Workforce Development Technical Committee?**