IEEE Environmental Engineering Initiative

René Garello, EEI Chair
Vincenzo Piuri, EEI Co-Chair
Goals

• Create an interdisciplinary forum in environmental engineering for the entire scientific and professional community

• Integrate IEEE and external forces for promoting the environmental engineering concept:
  academic research, R&D, industry, scientific and professional associations, standards, regulatory bodies

  ▶ New specific technologies and methodologies
  ▶ Disseminate technologies, methodologies, standards, and best practices

• Stimulate eco-innovation in technology and methodology

• Support socio-economic policy and decision making for a sustainable future
Scope

Technologies, methodologies, systems, and applications for environmental engineering, specifically for modeling, monitoring, and control of natural and artificial environments to support livability and a sustainable future of the environments as well as well-being of individuals and the community.
Topics

sensors, instrumentation, measurements, remote sensing, aerospace systems, communications, networking, internet of things, sensor networks, information processing, big data, digital architectures, analog/digital circuits, electronic devices and systems, embedded systems, system modeling, complex systems, signal processing, image processing, data fusion, knowledge extraction and management, human interfaces, visualization, robotics, industrial informatics, environmental informatics, oceanic engineering, vehicles, transportation, electromagnetic compatibility, microwaves, magnetics, power systems, nuclear systems, reliability, safety, societal implications, technology management, ...
Further disciplines

- Environmental sciences
- Ecology
- Chemistry
- Physics
- Agricultural sciences
- Pollution analysis and management
- Hydraulics
- ...
Relevance for industry and IEEE

- Improving interdisciplinary vision
- Provide a single entry point to industry and professionals
- Embrace and empower the community
- Contributing to engaging new generations and underserved segments of the community
- Expand and curating knowledge dissemination
- Supporting continuing education for professionals and industry
- Supporting services to industry and entrepreneurs
- Contributing to expanding people networking
- Contributing to supporting standardization activities
- Contributing to attract and retain members
- Contributing to support public policy, public service, and public visibility
Participating IEEE OUs

- IEEE Societies & Technical Councils (23 in 2017)
  - IEEE Aerospace and Electronic Systems Society (Maria Sabrina Greco)
  - IEEE Antennas and Propagation Society (Eric Mokole)
  - IEEE Communications Society (Jinsong Wu)
  - IEEE Computational Intelligence Society (Dipti Srinivasan)
  - IEEE Computer Society (Niklas Carlsson)
  - IEEE Control Systems Society (Sonja Glavaski)
  - IEEE Council on RFID (Emily Sopenski)
  - IEEE Electromagnetic Compatibility Society (Frank Sabath)
  - IEEE Geoscience and Remote Sensing Society (Prashanth Marpu)
  - IEEE Information Theory Society (Yaobin Chen)
  - IEEE Instrumentation and Measurement Society (Subhas Mukhopadhyay)

- IEEE Intelligent Transportation Systems Society (Matthew Barth)
- IEEE Magnetics Society (Philip Pong)
- IEEE Microwave Theory and Techniques Society (Timothy Lee)
- IEEE Oceanic Engineering Society (Jay Pearlman)
- IEEE Robotics and Automation Society (Toshio Fukuda)
- IEEE Signal Processing Society (Fredrik Gustafsson)
- IEEE Society on Social Implications of Technology (Philip Hall)
- IEEE Systems Council (Roger Oliva)
- IEEE Systems, Man, and Cybernetics Society (Ni-Bin Chang)
- IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society (Clark Nguyen)
- IEEE Vehicular Technology Society (Javier Gozálvez)
- IEEE Power & Energy Society (Maike Luiken)

- IEEE Standards Association (Jaafar Elmirghani)
- IEEE Members and Geographic Activities Board (Sasi Pilacheri Meethal)
- IEEE Educational Activities Board (Tariq Durrani)
Coordinators

- Chair: René Garello
- Founder and Co-Chair: Vincenzo Piuri
- Vice Chair For Community Building: Anne Johannet
- Vice Chair for Technical Activities: Jinsong Wu
- Vice Chair for Conferences: Maria Sabrina Greco
- Vice Chair for Publications: Ni-bin Chang
- Vice Chair for Standards: Jaafar Elmirghani
- Vice Chair for Education: Tariq Durrani
IEEE Activities in Environmental Engineering

- Technical committees (40+ specialized; 200+ related)
- Conferences (15+ specialized; 170+ related)
- Publications (10 specialized; 50+ related)
- Educational activities (6 groups with specialized material; 25+ with related material)
- Standards (3 main groups; 20+ related)
2016 EEI Activities

- Organizational workshop: business plan and budget
- Organizational structure: steering committee appointments, chairs
- Infrastructure configuration: Portal & Newsletter
- Conferences:
  - Technical Cosponsor of SusTech2017
  - Technical Cosponsor of EESMS2017
- Fund collection for 2017
2017 EEI Activities

- Portal: extension, content
- Community building
  - Collabratec
  - IEEE technical community
  - Newsletter
- Marketing:
  - Publicity
  - Recruitment campaign
  - Awareness

http://environmental.ieee.org
2017 EEI Activities

- Technical Committees
- Conference/Workshop/Meetings
  - 2017 IEEE International Workshop on Environmental, Energy and Structural Monitoring, Milan, Italy
  - 2017 IEEE Conference on Technologies for Sustainability, Phoenix, AZ, USA
  - Planning for 2018 Conference on Environmental Engineering
  - 2017 IEEE Workshop on Electronic Waste, Mumbai, India
- Outreach
- Detailed planning for subsequent years
- Administrative meeting
2018 EEI Activities

- Conference/Workshop/Meetings
  - 2018 Conference on Environmental Engineering
    Milan, Italy, 12-14 March 2018
  - 2018 IEEE International Workshop on Environmental, Energy and Structural Monitoring
  - 2018 IEEE Conference on Technologies for Sustainability
  - Planning for 2019 Conference on Environmental Engineering

- Planning for events for entrepreneurs and young professionals
- Expand collaboration with other international associations
- Collaboration with international agencies (e.g., United Nations)
- Newsletters
Questions?

Email environmental@ieee.org