International Symposium on Sustainable Systems and Technology (ISSST)

2024 Conference

Baltimore, Maryland

June 18 - 20, 2024
(Pre-conference workshops June 17, 2024)

Call for Contributions

Transitions to low-carbon economy, circular economy, and sustainable systems are of paramount importance. The ISSST 2024 Conference welcomes the submission of abstracts that define, design, assess, support, and/or implement technologies, policies, and systems for sustainability transitions. For more information about the conference, please visit our website at https://issst.net.

In our 31st year, **ISSST is one of the longest-running research conferences on sustainability at the intersection of technology, policy, and behavior**. We are a vibrant community of engineers, scientists, professionals, and educators, sharing cutting-edge research and collaborations. **Our mission is to think beyond the traditional and envision a future where science has no limits.**

We are a volunteer-run, non-profit community, led primarily by academics and government analysts. We aim to be a welcoming space for participants from all sectors, from engineering, industrial ecology, sustainable consumption and production, and beyond. A key distinguishing feature of our conference is an openness to unconventional and creative sessions or activities, and you're invited to be a part of it!

We are excited to announce new leadership, governance, and DEI commitments that will continue to guide our community as an inclusive, innovative, creative, and sustainable space for all. We hope you will join us!

This year's conference will highlight the following thematic areas:

- **Agroecology, Industrial Ecology, and the Bioeconomy**
  The fields of Agroecology and Industrial Ecology look to ecosystems for guidance in designing sustainable systems, particularly for agriculturally-derived products and systems such as bioenergy, biomaterials, and food. Areas of particular interest include but are not limited to, biogeochemical modeling, carbon: nitrogen dynamics in relation to carbon accounting; characterizing materials flows in rural vs. urban environments and their intersections; modeling methods for assessing sustainability indicators.

- **Human dimensions of sustainability**
  This theme may include how to integrate human dimensions into sustainability design and implementations and research/projects focused primarily on linking knowledge with actions, environmental justice, decision science, participatory approaches, social life cycle assessment methods, etc.

- **Sustainability and resilience of energy systems**
  ISSST is a leader in quantitative assessment of the sustainability and resiliency of various systems associated with energy systems, including their interconnections and future uncertainties. Abstracts that provide cutting-edge insights, case study results, and methods related to renewable, low-carbon, energy systems and transitions are welcome. Applications may span relevant domains including transportation energy, electricity, industry, building energy use, and more.

- **Sustainability and resilience of infrastructure systems**
  ISSST is a leader in quantitative assessment of the sustainability and resiliency of various systems associated with water, transportation, built environment, and waste management systems, including their interconnections and future uncertainties. Abstracts that provide cutting-edge insights, case study results, and methods are welcome. Topics related to embodied emissions, circular economy, risk, disaster resilience, and similar, are all welcome in this category.

- **Sustainability education**
  Educating future generations to be capable of realizing sustainable solutions is challenging and critical. ISSST welcomes you to share your educational approaches for community, K-12, university, and the workplace. We want to learn from you!

- **Other creative sustainability-related topics**
  ISSST has long encouraged participants to dream big and try new approaches to realize sustainable futures. Please consider sharing new methods and ideas that demonstrate unique partnerships, big ideas, and perspectives from non-STEM (science, technology, engineering, math) disciplines. We also welcome creative submissions for unconventional or experimental sessions, such as exploring sustainability through games and other activities.

  We also welcome sustainability-relevant contributions in:

  - Ecosystem Services
  - Circular Economy
  - Materials Flow Analysis
  - Applied Machine Learning and Data Science
  - Business & Industry Practices or Case Studies
  - Policy, Management & Regulation
  - Open Science and Communication of Sustainability Science
  - Equity and Justice
  - Life Cycle Assessment and Evaluation of Emerging Technologies
  - Advances in Sustainability Assessment Methods
  - Computational Tools for Sustainability
  - Energy and Sustainability in the Global South
  - Handprint Analysis
  - Pathways to Net-zero
  - Critical Materials
  - Sustainable Waste Management

If you have an idea, but are not sure, please feel free to reach out: issstnetwork@conoscente.net.

Instructions for Oral and/or Poster Presentation Abstract Submission:

Participants are invited to submit abstracts for oral and/or poster presentations through www.conftool.org/issst2024. Abstracts should be 300 - 500 words and will be reviewed relative to four criteria: (1) Impact; (2) Originality; (3) Technical Quality; and (4) Completeness. The abstract should include a brief background/motivation but should focus on methods and results/anticipated results, or your proposed conference activity.

ISSST encourages submissions from academics, researchers, students as well as professionals, and we aim for the symposium to represent our emerging diversity including gender, sexuality, race, ethnicity, class, national origin, disability, career stage, professional affiliation, and educational journey.

During abstract submission, you can indicate the thematic area most appropriate for your abstract in the online submission form. In addition, please note your preference for an oral and/or poster presentation at the time of abstract submission.

The program committee will evaluate abstracts for acceptance into the program, designate them for an oral or poster presentation, and place them within thematically organized sessions. Inquiries should be directed to issstnetwork@conoscente.net.

Instructions for Workshop Proposal Submission:

Participants interested in hosting a workshop are also invited to submit a proposal. ISSST 2024 will include full-day (6 hours) or half-day (3 hours) workshops. Accepted workshops will be held on Monday, June 17, 2024, from 10:00 AM until 4:00 PM, preceding the Tuesday-Thursday main conference days.

Workshop proposals on the following topics are strongly encouraged: 1) career advising and mentoring for the ISSST community; 2) participatory research; 3) sustainability education; 4) team building and conducting convergent projects; and, 5) technical topics of high relevance and/or urgency to the ISSST community (e.g., data visualization in python, machine learning and data science).

Workshop proposals should be also be submitted via www.conftool.org/issst2024. Proposals must include the following details:

- Workshop title
- Workshop duration: Full-day or half-day
- Workshop motivation and description
- Intended audience and size limit (if applicable)
- Workshop Organizers.

For full consideration, submit abstracts via ConfTool for oral presentations, poster presentations, and workshops by January 12, 2024.

ISSST 2024 Program Committee

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