



ISIE ANNUAL REPORT

2021

▲ International Society
▼ for Industrial Ecology

OUR MISSION

The International Society for Industrial Ecology promotes industrial ecology as a way of finding innovative solutions to complicated environmental problems, and facilitates communication among scientists, engineers, policymakers, managers and advocates who are interested in better integrating environmental concerns with economic activities.

The mission of the ISIE is to promote the use of industrial ecology in research, education, policy, community development, and industrial practices.

▲ International Society

▼ for Industrial Ecology



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PRESIDENT'S REPORT



**STEFANIE
HELLWEG
PRESIDENT**

It is a pleasure to invite you to read our third annual report, which presents the vibrant activities of our society in the year 2021.

In spite of an effective vaccine emerging, also the year 2021 was heavily shaped by the corona crisis, with several new virus variants emerging. This also affected our society, as we could not meet in person on our bi-annual conference. To abridge this lack of a physical meeting, a new virtual meeting series was created: IE Day, a 24 hour marathon of online presentation and discussion sections starting off in Australia and ending on the US West Coast. This exciting event was well-attended and very well-received around the world. Another virtual event was organized to celebrate the winners of the Society Prize, Shinichiro Nakamura, and the Laudise Medal, Andrea Hicks and Yuan Yao. The dedicated award ceremony and the following presentation by Shinichiro Nakamura were extremely inspiring and a great success.

Of course online events cannot fully substitute the social interactions within our society of a physical meeting, but they do represent a new mode of advancing science.

And they also have some clear advantages to traditional physical meetings. More than two years ago, particularly the younger Society members created a conference travel group that aimed at reducing the impacts of conference travel. Together with the conference committee, they worked on concrete suggestions how we can BE more sustainable in our society activities, in addition to doing research ABOUT sustainability. The Covid situation forced us to learn and adapt quickly - and it showed that low-carbon scientific events - like IE day and the Society Awards Ceremony - are feasible and valuable. Another advantage not to be underestimated is regional justice. Traveling costs are often prohibitive for especially young researchers from lower income countries, and may represent a barrier, which does not exist for online events. With 80% of our membership coming from North America, Europe, and East Asia, online events are an opportunity to involve increasingly more scientists and practitioners from the Global South in our community.

Online conferences have proven to be valuable, inclusive and environmentally friendly, and hence they deserve a permanent complementary place in our meeting culture. All this is not to say that we should switch all meetings to online - after all, the informal part of our conferences are very important and physical meetings serve as a glue to our community.

Also, social online events, like the ISIE Happy Hours that were launched in 2021 to provide a space for informal chats between members, cannot fully compensate in-person meetings, and I am sure all of us are looking forward to seeing each other again at the 2022 GRC in Maine and at the 2023 ISIE meeting in Leiden.

2021 was also another year of climate disasters. Heat and cold waves, storms, floods – never before has climate change become more evident as in the last years. I happened to be in Germany when an entire village was washed away by an unprecedented flood, leaving nothing but a huge crater in the earth. As industrial ecologists, this should not be a big surprise to us, but it is shocking nevertheless. It also makes clear how important our research is. And it illustrates that we need to make sure that our research results are communicated well to policy makers, to help coping with the big environmental challenges the world is facing. Developing solutions for grand environmental challenges became integral to the strategy of ISIE.

Currently most of our sections are dedicated to methods (symbiosis, metabolism, input-output, life cycle), which is extremely important to develop potent tools for assessing industrial ecology solutions. However, we also need to strengthen our crosscutting activities that are targeted at using IE methods to address grand environmental challenges and to answer policy-relevant questions, like designing a sustainable circular economy, reaching the SDGs, and a transition to sustainable energy systems. Dedicated activities on these topics would strengthen our capacity, visibility and policy impact. The big interest in such policy-relevant integrative topics was demonstrated by the vivid forum discussion and the large attendance in the voting about a Circular Economy tagline (Science for sustainability and circular economy).

We plan to build on this momentum and launch initiatives to collaborate jointly on policy-relevant topics. In addition, new digitalization technologies, such as machine learning and big data, are another crosscutting methodological topic that deserves joint action. In 2021 we developed a framework for according initiatives within ISIE – the implementation remains to be done in the coming years.

With the transfer of the Journal of Industrial Ecology to the ISIE at the end of 2021, the transition from Yale to an independent association was completed. With this, also the era of Reid Lifset as editor-in-chief ended, after 25 years of tireless engagement for the JIE. Reid had founded and set the editorial direction for the journal since the beginning, and thus he has significantly co-shaped the intellectual development of the field of industrial ecology. While Reid stepped down as editor-in-chief, he will keep an advisory honorary position as founding editor and he is assisting in the transition of all duties to the new editors-in-chief: Junming Zhu (Associate Professor at Tsinghua University in China), Gang Liu (Associate Professor at the University of Southern Denmark), and Richard Wood (Professor at NTNU in Norway and based in Australia).

Further personnel changes within the ISIE included the resignation of Paul Hoekman as Executive Director. Paul navigated the ISIE through its journey from being embedded at Yale to becoming an independent member-managed association. He initiated many projects which will accompany ISIE for many years to come. In January 2022, Paul passed over his duties to our new executive director Ned Gordon. Also Nina Kisbey-Green's term expired at the end of 2021. We thank both Paul and Nina greatly for all their engagement and wish them all the best in going forward.

Let me close by thanking everyone who has engaged in making ISIE such a lively and vibrant society, even in difficult times like last year. Actually, our membership numbers hit a new record at more than 750. and all our sections enjoy very healthy membership numbers. Participation in elections and voting were higher than ever before. On multiple occasions, great scientific dialogue and exchange occurred, be it on the online events, the AGM or on the forum. It is wonderful to have such an active membership!

Special thanks go to our sections, who organized multiple additional events and meetings, and provided a platform for exchange of ideas and collaboration. Reading through this annual report, you will get a good overview of the multiple activities of our sections, including monthly conferences, common paper-writing activities, psychological seminars and more.

Finally, I would like to thank the ISIE board members and the executive team consisting in 2021 of vice-president Ming Xu, our past executive director, Paul Hoekman, treasurer Valerie Thomas, secretary Tim Baynes, and administrative support Nina Kisbey-Green. They all contributed greatly to the good of the ISIE.

In whatever form, I hope that many of you remain active in co-shaping the society activities also in the coming years. Meanwhile, please enjoy reading the 2021 annual report!

MEMBERSHIP REPORT



TIM BAYNES
SECRETARY

We have had yet another year when conferences were cancelled or postponed, and face-to-face contact between members was rare. Yet, in testament to the resilience of the ISIE network, membership has thrived. Indeed, Society membership had reached record levels by early 2022. Although we have lost some members in the December renewal phase, there are now 739 members spread across 55 countries.

The Board, the ISIE Sections and the many Committees that operate across the Society have worked hard to provide value for membership, notably broadening the appeal to topics of the circular economy and looking to promote industrial ecology more in Asia where there has been the largest increase in membership.

An example of one such activity that drew in many new members globally was the inaugural International Industrial Ecology Day held on 21st June 2021.

The ISIE Board has also recently voted to extend courtesy membership to the translators that enable the Journal of Industrial Ecology to reach a wide international audience.

Number and Type of Membership

Some years ago, the ISIE Board agreed to a strategy for lowering membership fees, encouraging student membership, and supporting more member-lead initiatives. This strategy has paid dividends

| | 2020 | 2021 | 2022 |
|--------------------|------|------|------|
| Regular | 245 | 256 | 303 |
| Student | 248 | 192 | 357 |
| Young Professional | 78 | 42 | 71 |
| Courtesy | 6 | 5 | 8 |
| Total | 577 | 495 | 739 |

Table 1 Comparison of ISIE membership at the beginning of years 2020, 2021, and 2022

Over 2021 (as in 2020) there was particular growth in the number and proportion of student and young professional members. Having collected data consistently for three years now, we can see that this group appear to influence variation in membership more than the others combined (though this data and analysis might not pass the gold badge standard requirements of the Journal of Industrial Ecology!).

Where is Our Membership?

Membership in Europe and North America has increased in absolute numbers but Asia has more than doubled in its count of members to become the second ranked global region by representation in ISIE.

Between the end of 2020 and the beginning of 2022, China had the largest growth of any single country increasing membership from 44 to 122 (177%) in one year.

Since 2020, ISIE has also extended the range of countries where members are now located to include the Democratic People's Republic of Korea, Ecuador, Lao People's Democratic Republic, Morocco, Pakistan, Poland, Puerto Rico, Romania, Qatar, United Arab Emirates, and Zimbabwe.

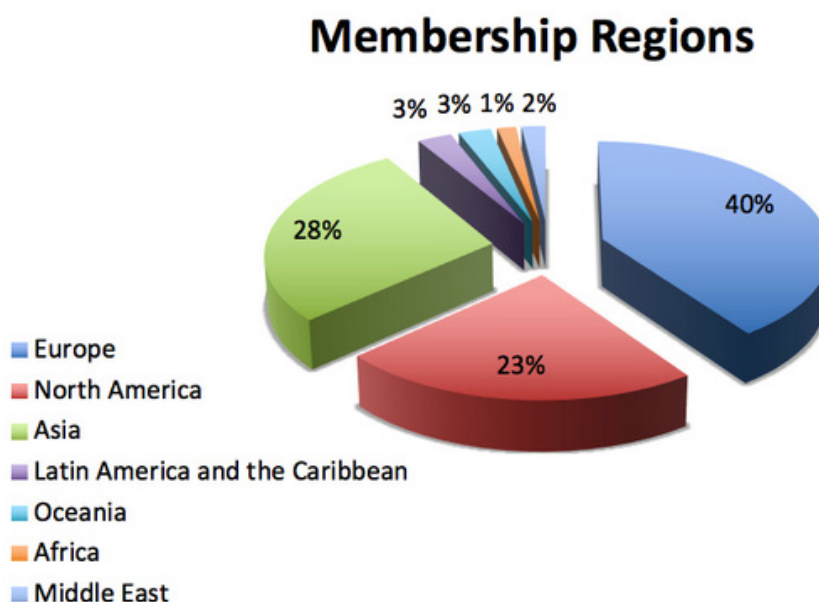


Figure 1 ISIE membership by global regions



Members Involved in Sections

The increase in overall membership has translated to an increase across all Sections of ISIE. Notably, the Islands Section has doubled in size in its second year. Although total ISIE membership is 739, if we sum membership over Sections, this appears to be 1915. We may infer that, on average, an ISIE member is involved in 2 – 3 Sections.

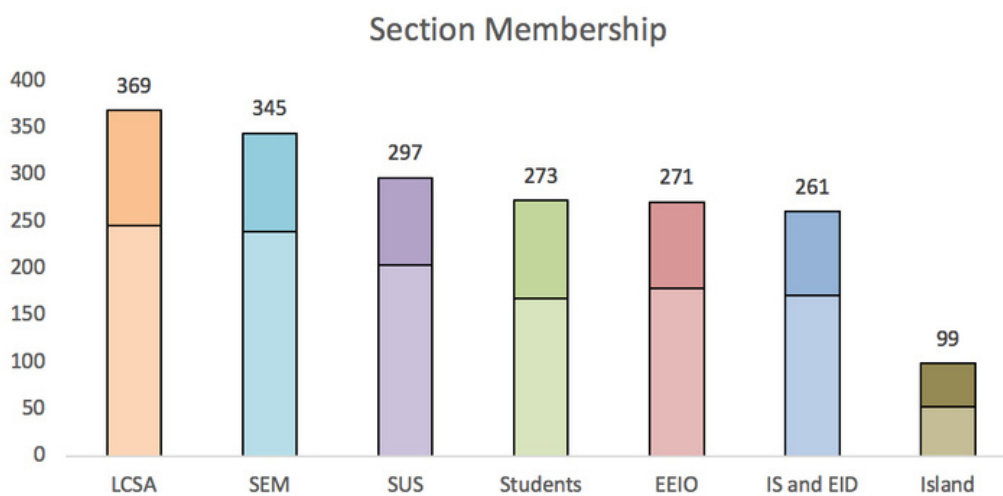


Figure 2 Membership of Section totals. Numbers are members at the end of 2021, and the line is the level of membership in 2020. Key - IS and EID: Industrial Symbiosis and Eco-Industrial Development, EEIO: Environmentally Extended Input-Output Section, SUS: Sustainable Urban Systems, SEM: Socio-economic metabolism, LCSA: Life Cycle Sustainability Assessment

FINANCIAL REPORT



**VALERIE
THOMAS
TREASURER**

In this report, the ISIE will provide its members with an overview of the finances of our society. We will look back at the year 2021, and look forward to the upcoming years.

Income: The Society has three principal sources for generating funds: membership subscriptions; donations; and net proceeds from biennial conferences.

We offer only two-year memberships. Fees vary by the country in which members live and work. Memberships start at the beginning of the calendar years. Total membership and donations for 2021 amounts to € 36,584. This is considerably more than in 2020, when we received € 22,970.

Expenses: We have been resilient despite the pandemic, with low operating expenses.

Remunerations: There are two main paid positions within the ISIE: the Administrative Assistant running the secretariat, and the Executive Director. In 2021, these remunerations were 62% of our actual expenses. In addition, the Secretary and the Treasurer receive a modest remuneration.

Office Expenses: We have contracted with Penguin Protocols for website management. And we have expenses for accounting software, communication services (Mailgun, Zoom), and banking fees.

Travel: No travel took place in 2021. We have tentatively reserved some travel budget going forward.

Scholarships and Awards: The ISIE usually makes available scholarships for students to attend the biennial conference. A budget is also made available during the alternating years to support the other conferences. There were no expenditures for scholarships in 2021. Awards were made for the IE Day poster competition and for the biennial Laudise Medal

Projects and Initiatives: We expect that member-driven proposals and other projects will become a pillar in our society. We spent less in this category in 2021 than budgeted. We plan to spend more in 2022.

Journal of Industrial Ecology: The ISIE has assumed ownership of the Journal of Industrial Ecology (JIE). The anticipated income from the JIE for 2022 is expected to match expenses for the Journal. In the category of unforeseen costs, we solicited legal advice on the JIE acquisition, which cost 2100 euros.

Income Statement 2021

| | 2020 Real | 2021 Budget | 2021 Real | 2022 Budget | 2023 Forecast |
|---|----------------|----------------|----------------|----------------|------------------|
| Income (€) | | | | | |
| Memberships and Donations | 23,270 | 23,000 | 37,130 | 18,000 | 26,000 |
| Conference income | 0 | 0 | 0 | 0 | 50,000 |
| Journal Industrial Ecology Income | | 47,600 | 0 | 87,124 | 98,672 |
| Total income | 23,270 | 70,600 | 37,130 | 105,124 | 174,672 |
| Expenses (€) | | | | | |
| Remunerations | | | | | |
| Administrative services | 9,334 | 9,614 | 8,878 | 9,902 | 10,199 |
| Executive Director | 10,400 | 15,030 | 15,030 | 13,325 | 13,325 |
| Secretary Remuneration | 2,000 | 2,500 | 2,500 | 2,500 | 2,500 |
| Treasurer Remuneration | 2,000 | 2,500 | 2,500 | 2,500 | 2,500 |
| General expenses | | | | | |
| Accounting software | 241 | 250 | 130 | 258 | 265 |
| Credit card fees | 586 | 660 | 957 | 540 | 660 |
| Banking fees | 240 | 247 | 400 | 255 | 262 |
| Website management | 3,388 | 3,600 | 3,403 | 3,300 | 3,630 |
| Journal of Industrial Ecology Communications | 5,481 | 47,600 | 1,690 | 87,124 | 98,672 |
| Currency fluctuation | 93 | 200 | 60 | 206 | 212 |
| | | | -1,414 | | |
| Travel | | | | | |
| Executive Director | 0 | 0 | 0 | 2,000 | 2,060 |
| President and Board Members | 0 | 0 | 0 | 0 | 2,060 |
| Scholarships and Awards | | | | | |
| Conference Scholarships | 0 | 0 | 0 | 10,000 | 10,000 |
| ISIE Awards | 0 | 750 | 1,500 | 750 | 750 |
| Projects and initiatives | | | | | |
| Yale closing ceremony | 0 | 0 | 0 | 2,000 | 0 |
| Member proposals | 0 | 20,500 | 484 | 22,500 | 23,175 |
| Legal, regulatory, and insurance | 1,618 | 2,500 | 2,118 | 3,000 | 3,090 |
| Total expenses | 35,380 | 105,951 | 38,236 | 160,159 | 173,361 |
| Net income | -12,110 | -35,351 | -1,106 | -55,035 | 1,311 |
| Start-of-year reserves | 190,128 | 178,017 | 178,017 | 176,911 | 121,876 |
| End-of-year reserves | 178,017 | 142,666 | 176,911 | 121,876 | 123,187 |

Balance Sheet

December 31, 2021

Current assets

| | |
|---------------------|----------------|
| Cash Unrestricted | 151,508 |
| Accounts Receivable | 0 |
| | 151,508 |

Restricted funds

| | |
|------------------|---------------|
| Laudise Medal | 11,419 |
| Scholarship Fund | 15,036 |
| Metabolism | 2,364 |
| Development | 363 |
| | 29,182 |

| | |
|-------------------------|----------------|
| Total assets (€) | 180,691 |
|-------------------------|----------------|

Liabilities

| | |
|-------------------|-------|
| Accounts Payable | 3,780 |
| Other Liabilities | 0 |

Equity

| | |
|-------------------|----------------|
| 2021 Earnings | -1,106 |
| Retained Earnings | 178,017 |
| | 176,911 |

| | |
|---|----------------|
| Total liabilities and equity (€) | 180,691 |
|---|----------------|

Balance Sheet

December 31, 2020

Current assets

| | |
|---------------------|----------------|
| Cash | 152,761 |
| Accounts Receivable | 0 |
| | 152,761 |

Restricted funds

| | |
|------------------|---------------|
| Laudise Medal | 11,610 |
| Scholarship Fund | 14,345 |
| Metabolism | 2,256 |
| Development | 346 |
| | 28,557 |

| | |
|-------------------------|----------------|
| Total assets (€) | 181,317 |
|-------------------------|----------------|

Liabilities

| | |
|-------------------|--------------|
| Accounts Payable | 3,300 |
| Other Liabilities | 0 |
| | 3,300 |

Equity

| | |
|-------------------|---------|
| 2020 Earnings | -12,110 |
| Retained Earnings | 190,128 |
| | 178,017 |

| | |
|---|----------------|
| Total liabilities and equity (€) | 181,317 |
|---|----------------|

INTERNATIONAL INDUSTRIAL ECOLOGY DAY



**ANNA
PETIT-BOIX**
CO-CHAIR



**STEFAN
PAULIUK**
CO-CHAIR

After a year of travel restrictions and significant changes in our daily and personal lives, the ISIE felt the need to bring our community together in an online event. The International Industrial Ecology Day (IE Day) was then conceived as an opportunity to get updated on the latest industrial ecology research, brainstorm new ideas, and meet new and old colleagues while international conference travel was not possible.

Under the theme “Global Science for Global Sustainability”, IE Day was an ambitious attempt to celebrate industrial ecology around the world for 24 hours. It featured 29 sessions organized in 14 consecutive time slots.

The day started on June 21, 2021, at 9 am in Sydney (Australia) and ended at 4 pm in Santa Barbara (California).

The session hosts were based in several locations and thus covered all time zones to make their research accessible to a wide audience from science, industry and policymaking.

IE Day was a great community effort and allowed many colleagues to reconnect during the pandemic. We observed many interesting dynamics during the planning phase. Some things we learned:

- 1) Expect the unexpected: the organizing committee received many interesting session proposals. Some of them turned into inspiring keynote sessions, roundtables or workshops. However, time allocation can be challenging in a conference linked to time zones. For this reason, a couple of sessions proposed by different organizers were merged. The result: an admirable coordination between people who barely knew one another. We learned that new collaborations can arise in the most unexpected situations and result in exciting proposals that people feel drawn to.

2) More dissemination is needed: the organizing committee and the session hosts used the official ISIE channels and their own networks to advertise the event. Even so, some session proponents made a herculean effort to keep their sessions alive when abstract submissions were insufficient. This resulted in a good number of invited presentations, which extended the participation beyond the ISIE community.

3) Conferences can be an open space for everyone: experimenting can be challenging, but several session proponents managed to include different kinds of people in their discussions. Policymakers, industrial partners and researchers from various disciplines (such as social scientists or architects) shared their views with the community. We learned that we should not be afraid to experiment and many of the IE Day sessions prove that it can turn into an exciting experience. Roundtables, participatory workshops, informal gatherings and open discussions gave participants the opportunity to voice their opinions and find a safe and inclusive space within the community.

4) The ISIE Sections are very much alive: upon invitation to the IE Day, the Sections were very enthusiastic and came up with many different types of contributions. Some had a modest (but not less important) presence on the conference webpage, where they displayed their latest news and materials. EEIO organized a session in each time zone. Islands launched their Section in Asia Pacific and the Americas with two panel discussions to attract the membership and the general public. SUS and IS also hosted a session each with invited talks.

5) Posters are fun: thanks to the Student Chapter, we also experimented with the poster sessions to give them more prominence. This was a general request resulting from the 2019 conference survey. Two poster sessions were organized in different time zones. Participants were given the chance to pitch their research and then transfer to a networking platform to discuss their research with the audience. Additionally, a poster gallery was prepared ahead of IE Day and the community was able to vote for their favorite posters. The awards were announced a few days later.

6) ISIE is ready for virtual events: while the ISIE was not prepared for this new online scenario, IE Day helped us make the most out of the ISIE webpage. Participants were able to sign up for sessions, create their own calendar with links to the meeting rooms, submit their abstracts, upload their presentations and vote for the poster awards. Thanks to Paul Hoekman's work on the ISIE webpage, the ISIE is now equipped with the necessary tools to run the basic logistics of an online conference or related events.

We would like to thank everyone involved in making the first ever IE Day a success: current and previous presidents, Executive Board members, Sections, Regional Committees, session hosts and countless volunteers.

We would like to share some final thoughts: There is still so much to learn. Don't be afraid to try something new. It can be challenging, it most certainly has its flaws, but it can be the start of something bigger and meaningful.

DIVERSITY AND INCLUSION INITIATIVE



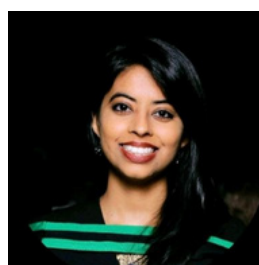
**ELIETTE
RESTREPO**



**CALLIE
BABBITT**



BABA MUSAH



AKSHI SINGH

The past two years introduced a new normal in the way we work and communicate - offering some challenges and many opportunities to develop innovative ways of engaging with one another. The pandemic pushed us to evaluate how we spend our time and energy. In 2021, the D&I Initiative focused on the development of a vision statement and set of goals, each contributing towards a greater Diversity and Inclusion Strategy. The past year also included a re-evaluation of the portfolio of activities, to be more inclusive of the new normal and open to new opportunities that may further strengthen the ISIE community.

Vision Statement

ISIE believes that diversity, equity, and inclusion are at the core of our mission to create innovative solutions to global sustainability challenges and facilitate communication among diverse stakeholders. We are committed to creating an inclusive culture where all people have the opportunity to contribute to, benefit from, and shape the field of Industrial Ecology.

Diversity and Inclusion Statement Goals:

- Increase the voice, representation, and participation of students, researchers and practitioners who reflect the diversity of global society but who have been historically underrepresented in Industrial Ecology.
- Provide opportunities and resources for ISIE members to learn about diversity and inclusion principles.
- Enable broader participation in and accessibility of ISIE conferences and events
- Incorporate diversity and inclusion principles that mitigate implicit bias in publishing, awards, and recognition
- Promote diversity and inclusion in the governance and leadership of ISIE

These goals will be benchmarked and reported annually.

New portfolio of activities for the coming year

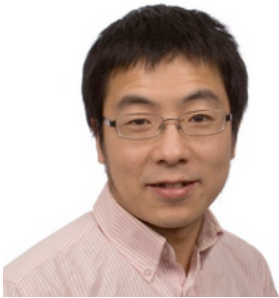
- Expanding the student community by reaching out to higher education institutions and student groups, particularly in underrepresented regions to establish ties and networks with new potential members. This would be aimed at building a synergy effect between industrial ecology and other STEM disciplines in order to increase the reach of the ISIE community. In turn, we hope to broaden the membership of the society to be more representative of the diversity of global society. The ultimate goal of this initiative is to bring on board all-inclusive skills sets encompassing various demographics.
- Provide support services for underrepresented groups in the ISIE community and beyond - which could be in the form of financial, capacity building, mentorship, career guidance, etc. Previously, this strategy aimed at partially financing conference-related expenses for researchers who could otherwise not have participated due to financial constraints. Although the emergence of the COVID-19 pandemic has changed travel policies and dynamics globally, some academic events including conferences now have hybrid options (in-person and virtual). Therefore, we aim to utilize the funds available this year on a case-to-case basis under the prevailing conditions.

- Interactive webinars centered on the topics related to diversity & inclusion, personal development, and collaboration. The webinar will target both the student and the larger ISIE community as a whole.
- Courses related to D&I and development will be shared with ISIE members with the aim of raising awareness and enhancing knowledge in this space. These courses will be self-paced and voluntary based.
- Ad-hoc support to the broader ISIE community on any projects or queries related to the Diversity and Inclusion Initiative. The objective is to develop an open space and welcome members to interact and collaborate with other ISIE members.

Support for the D&I Portfolio

The D&I Initiative aims to support all members of the greater ISIE society. Our objective towards a more diverse and inclusive community is facilitated through the portfolio goals - maintained by a D&I Team and by members of the ISIE board. In the past year, Callie Babbitt, Vice Secretary on the ISIE Board, worked closely with the D&I Team, offering guidance on the development of the vision statement & goals, and on evaluating potential opportunities to improve the Initiative. The 2022 team consists of student chapter members: Akshi Singh, Masters's student at the University of Cape Town (UCT), South Africa, and Baba Musah, Ph.D. student at Wuhan University of Technology, Wuhan, China.

JOURNAL OF INDUSTRIAL ECOLOGY



GANG LIU
CO-EDITOR-
IN CHIEF



**RICHARD
WOOD**
CO-EDITOR-
IN CHIEF



**JUNMING
ZHU**
CO-EDITOR-
IN CHIEF

2021 in review and plans for 2022

2021 was a momentous year for the JIE. The most notable event was the completion of the Journal's 25th year of publication and, after a quarter century at the helm of the JIE, Reid Lifset stepped down as Editor-in-Chief and assumed the newly created advisory role of Founding Editor. Also momentous was that, after 25 years of being owned by Yale University, the ownership of the JIE was transferred to the ISIE. The Society has engaged three co-Editors-in-Chief to share the responsibility of running the Journal. They are Gang Liu (Associate Professor at the University of Southern Denmark), Richard Wood (Professor at the Norwegian University of Science and Technology in Norway and based in Australia), and Junming Zhu (Associate Professor at Tsinghua University in China).

An exciting array of papers have been published in the Journal, with many works focusing on the role of industrial ecology in critical sustainability concerns, including for climate change mitigation, (e-)waste and circularity, and sustainable consumption. The impact factor of the JIE increased again, up from 6.5 to 6.9. A special issue on Material Efficiency for Climate Change Mitigation was published with many key pieces presented for this important domain. The preparation of a second special issue on Data Innovation in Industrial Ecology was completed so it could be published as the first issue of 2022. Three additional special issues are in the works: A special Issue on Industrial Ecology for the Oceans, a special issue on Product Lifetime Extension, and one on Life Cycle Sustainability Assessment for Sustainable Development Goals.

An increasing number of articles are being published open access. It is important to note that with all the changes in the JIE's structure and function, the important benefit to Society members of a 20% discount on the Article Publication Charge (APC) for open access was maintained.

There are two other important operational changes to note. First, many of the basic manuscript processes that used to be handled in the editorial office at Yale are now being dealt with by a department within the Journal's publisher, Wiley. Secondly, the Society has engaged Cheryl Myrup, a longtime assistant editor, to serve as managing editor and assist the co-Editors-in-Chief with the day-to-day management of the JIE.

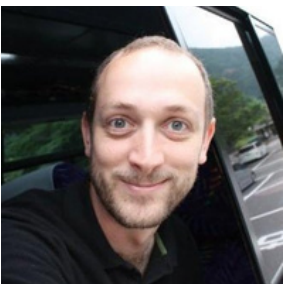
With all the focus on the major changes mentioned above, we were fortunate to be able to maintain a stable pool of associate editors. The changes to the editors were limited to the addition of Laura Scherer and Shweta Singh as data editors—needed because of the continued increase in requests for the JIE's data openness badges that recognize data contribution.

Now that the transfer of the JIE to the Society is complete and new co-Editors-in-Chief have been engaged, attention is turning to new developments that could be implemented for the JIE. These will include strategies to encourage submissions, as well as evaluating criteria for special issues, and examining the role of columns and book reviews for the Journal. The JIE is also developing a plan for social media promotion, which includes maintaining and enhancing the existing promotion of JIE articles to the Chinese speaking community through WeChat, as well as better utilization of LinkedIn and Twitter. Co-organizing industrial ecology webinars is also being included in the journal promotion plan.

CONFERENCE COMMITTEE



**ANNA
PETIT-BOIX
CO-CHAIR**



**TOMER
FISHMAN
CO-CHAIR**

Adapting conferences to the pandemic and the “day after”

Together with the rest of our society and indeed the whole world, the ISIE conference committee had to adapt to the reality of the ongoing covid19 pandemic.

Due to the cancelation or long-term postponement of nearly all in-person conferences and meetings, the conference committee changed its priorities. The committee supported the ISIE’s various on-line activities, foremost supporting the first “Industrial Ecology Day” which was held on June 21 and received very positive feedback.

Work is now ongoing with the ISIE leadership to make this a fixed event on the ISIE’s schedule. The conference committee is also gathering experiences from other online community activities, such as the Socioeconomic Section’s “Perpetual Online Conference”, which utilizes a different format of spreading out its sessions throughout the year, as well as experiences outside the ISIE.

One of the objectives of the conference committee’s work is to provide with the ISIE with options for various circumstances, such as a continuation or repeat of lockdowns that enable only remote and online events, a return to “normal” circumstances that enable in-person meetings, and hybrid situations.

The committee is taking into consideration the eventual return of in-person conferences and how online events can complement them, benefiting from the various advantages of online meetings to expand participation of those who cannot or prefer not to attend in person due to various reasons.

The conference committee plans to continue re-evaluating the structure of our conferences and events and developing a long-term plan for all the meetings held by or jointly sponsored by the ISIE.

▲ International Society
▼ for Industrial Ecology

ISIE Sections

Environmentally Extended Input-Output

Life Cycle Sustainability Assessment

Students

Sustainable Urban Systems

Island Industrial Ecology

Socio-Economic Metabolism

Industrial Symbiosis & Eco-industrial Development

Members of the ISIE are able to join subject sections as part of their membership. Sections provide a small community within the ISIE through which ideas are exchanged and collaborations are formed. Members can engage on a minimal level or can be considered for leadership positions within a Section.

ENVIRONMENTALLY EXTENDED INPUT-OUTPUT SECTION

The EEIO section of the International Society for Industrial Ecology (ISIE) is to develop environmentally extended input-output analysis internationally in academia and to promote its application in policy and businesses. This includes establishing and maintaining cooperation with international organizations, companies, and government organizations. The section may collaborate with the International Input-Output Association (IIOA) when organizing its activities.

In a 24-hour online event called the Industrial Ecology Day on June 21, 2021, three EEIO sessions 'EEIO Frontiers' were organised, covering all time zones in Asia, Europe and the USA. EEIO section members had the opportunity to present their research and interact with each other through sessions lasting a total of six hours.

We organised a joint IO & SEM event, 9th session of the ISIE Socioeconomic Metabolism Section perpetual online conference: “Progress in modelling the socio-economic metabolism - combining material flow principles and input-output analysis”, to discuss the benefits of IO in MFA and the latest research.

e-planning of the setting up of the EEIO session and related events at the EcoBalance 2022, which is an international conference on life cycle thinking and will be held on-site in Japan from October 30 to November 2 in 2022. The plan had been postponed due to the pandemic. Members were invited to submit abstracts by March 31, 2022.

The EEIO section also work with the Joint Interest Group on Life Cycle Assessment (LCA) of SETAC North America and the American Center for Life Cycle Assessment (ACLCA) to develop a roadmap to enable EEIO to better serve decision-making at all levels.

As of early January 2022, the section had a total of 276 members.

SECTION BOARD MEMBERS

Co-Chair **Keisuke Nansai**

Co-Chair **Kuishuang Feng**

Board Member **Dominik Wiedenhofer**

Board Member **Moana S. Simas**

LIFE CYCLE SUSTAINABILITY ASSESSMENT SECTION

Reflecting on 2021

2021 was a challenging year for the LCSA Section due to the global pandemic, the childcare leaves of Cassandra Thiel and David Font Vivanco, and the transition of Yuan Yao and Oludunsin Arodudu into their new positions. The Board especially regrets not being able to meet with section members in the ISIE 2021 Leiden Conference and looks forward to the 2023 edition. Despite the hurdles, the LCSA Section has carried out the following activities:

- Coordination of a special issue in the Journal of Industrial Ecology on Life Cycle Sustainability Assessment for Sustainable Development Goals. We have completed the review of extended abstracts submitted and invited full manuscript submissions. The deadline of submission was November 5th 2021 and we have received many interesting manuscripts. The editorial team is currently handling these manuscripts.
- Publication of two newsletters, the summer and winter quarterlies, with highlights of new LCSA section members, JIE feature articles, relevant news, and announcements of upcoming events.
- Participation in the IE-day by sending LCSA Section highlights to Section members.

- Increase our presence on social media by creating a Twitter account and taking control of our LinkedIn group. Please follow us to stay updated about section activities!
- Board member Oludunsin Arodudu has inaugurated the member spotlight section.

Upcoming events in 2022

The Board looks forward to 2022 and plans to:

- Renew the Section Board in the June 2022 elections, with all spots being up for re-election. Nominations may be made either by the Board or by any member of the Section's membership with agreement by the candidate.
- Publish the special issue on Life Cycle Sustainability Assessment for Sustainable Development Goals by the end of 2022 and organise a dedicated webinar with featured articles and authors.
- Feature early-stage researchers in the member spotlight section to help visualise emerging topics.
- Appoint a social media manager.
- Organize webinars on timely topics related to LCSA.

SECTION BOARD MEMBERS

Co-Chair **Wenjie Liao**

Co-Chair **Cassandra Thiel**

Board member **Yuan Yao**

Board member **Oludunsin Tunrayo Arodudu**

Board member **David Font Vivanco**

Board member **Haibo Feng**

STUDENT SECTION

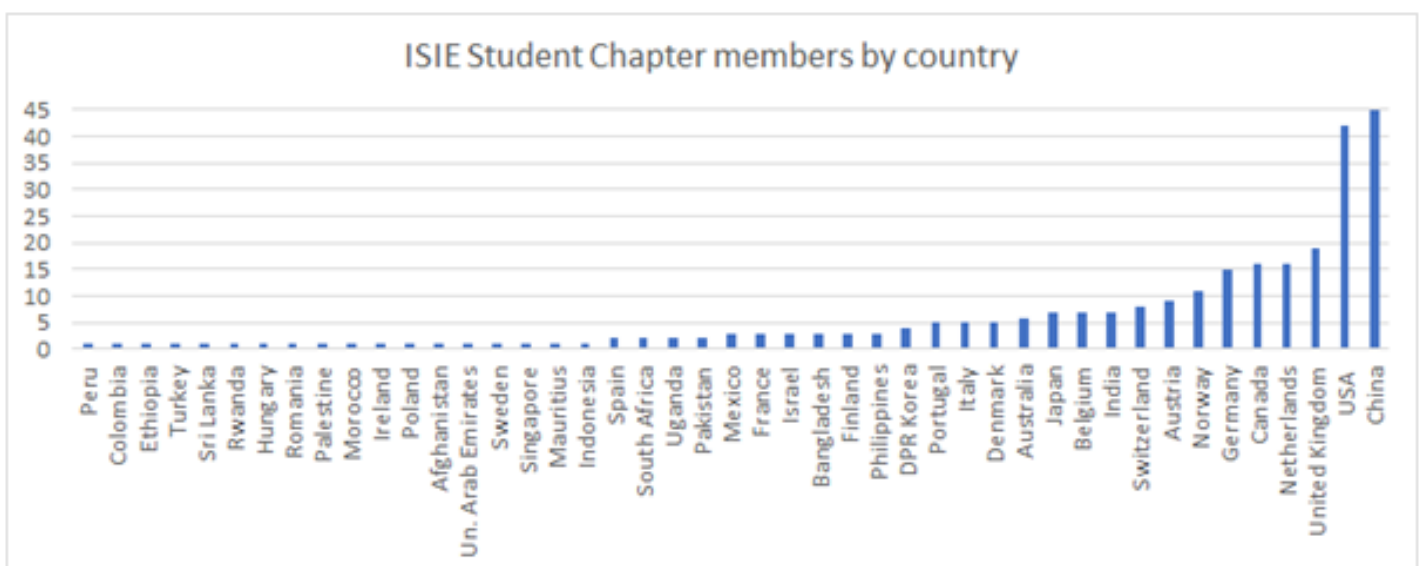
Membership

The Student Chapter is represented by a Board, with 10 international students in charge of organizing activities for students and young professionals, extending outreach, and supporting organization of conference activities. The student and young professional community of ISIE in February 2022 consists of 271 members from 45 countries across the globe. Currently, China, followed by the United States of America and the United Kingdom are the countries with the most student members registered with ISIE. We have the highest level of representation from Europe, Asia and North America (in that order). Membership from Africa, Middle East, Oceania and South America stands at 8, 6, 6 and 2 members, respectively. Through our Diversity & Inclusion initiative, we are actively increasing our efforts to reach out to previously underrepresented countries this year.

Accomplishments in 2021

Together, the members of the Student Chapter (Board) conducted many events over the last year. The following are some highlights from 2021:

- Conducted the first ever virtual SIEYP one week prior to International Industrial Ecology Day 2021. The SIEYP included two events: first, we hosted a workshop on eco-anxiety to theoretically understand and learn strategies on coping with anxiety triggered by the climate crisis or the Covid-pandemic. The workshop was conducted by a group of professional psychologists with expertise in eco-anxiety. Second, we organized a special networking event on the platform Wonder
- Started an outreach strategy to engage more students from related fields in Africa and Latin America



- Kick-started activities for better connecting the student chapter by hosting several Peer Group meetings (informal gatherings like the ISIE Happy Hours) and setting up a Student Chapter Slack Channel which currently has around 60 members.
- Conducted two Virtual Networking events, one in the traditional bilateral format in May and one group event in October
- Conducted the 2021 Student Chapter Board Elections in October 2021, said goodbye to 6 great outgoing team members (thank you for your efforts!), and welcomed 6 motivated and great new people into our team.
- Organize two Virtual Networking events in April and October to keep up with the tradition and help connecting Student Chapter members around the globe
- Host rooms in the ISIE quarterly Happy Hours to engage the student community into discussions of diverse topics
- Support the organization of the 2022 Gordon Research Seminar for Industrial Ecology
- Organize an Industrial Ecology ‘Wikipedia Editathlon’ in which members of the society can contribute to updating and generating new content about our field on Wikipedia. We will provide a workshop on how to do this with the goal of increasing the visibility of the field and the relevance of the existing articles.

Planned Activities for 2022

- Host a student gathering at the 14th ISIE SEM conference in September 2022 in Vienna, Austria, to connect participating students and young professionals, finally again in person
- Kick-start new events such as the ‘Work together’ meetings and the ‘Career Series’. . The ‘Work together’ sessions shall connect members in a ‘virtual office space’ using the pomodoro technique with several focused work slots and breaks for chat and exchange in between. The ‘Career Series’ shall provide skill workshops or examples of careers in and outside of academia to help students in shaping their profile.

SECTION BOARD MEMBERS

| | |
|-------------------------------|------------------------------------|
| President | Aishwarya Iyer |
| Vice-president | Glenn A. Aguilar-Hernandez |
| Diversity & Inclusion Officer | Eleitte Restrepo |
| Diversity & Inclusion Officer | Fernando Aguilar Lopez |
| Diversity & Inclusion Officer | Akshi Singh |
| Board Member At-Large | Diana Ita Nagy |
| Board Member At-Large | Brent McNeil |
| Board Member At-Large | Sónia Cunha |
| Board Member At-Large | Daniel Itzamna Avila-Ortega |
| Board Member At-Large | Jan Streeck |

SUSTAINABLE URBAN SYSTEMS SECTION

The Sustainable Urban System (SUS) Section wants to engage practitioners and researchers by providing a platform for multidisciplinary systems approaches to understand, plan, build, and manage sustainable, healthy, and resilient cities. As of early February 2022, the section has 293 members, up from 191 members in 2021.

Meetings and Organization

As a board, we generally meet monthly throughout the academic year. We are digitally organized so all board members have access to agendas and meeting minutes, along with operational documents.

ISIE Virtual Day

In 2021, the Section was involved in the ISIE Day Virtual Day. The goal of this session was to focus on the future direction of SUS research.

The aim of the SUS is to engage practitioners and researchers by providing a platform for multidisciplinary systems approaches to understand, plan, build, and manage sustainable, healthy, and resilient cities. At the event we wanted industry, business, government and academia to reconnect with the global scholarly community, to learn about the latest developments in the field, and to engage with each other in times of the pandemic.

The ISIE SUS virtual day session aimed to (re)imagine the research goals and vision for cities across a rapidly changing world. After an initial introduction from our SUS board members, future and current leaders explored emerging SUS areas of environmental justice, circular economy, digital twins, energy analysis, and resilience. The agenda included the following:

- Introduction
Dr. Melissa Bilec and Dr. Hua Cai,
co-chairs SUS Board
- Digital Twins
Philip James, Professor of Urban Data,
School of Engineering,
Newcastle University
Digital Twins and the Smart City
- Towards Sustainable Batteries
Dr. Qiang Dai
Environmental Impacts and Supply
Chain Considerations
- Energy Analysis
Dr. Kangkang Tong, Postdoctoral
Research Associate, Princeton
University's Department
of Civil and Environmental
Engineering; Researcher in the
Sustainable Healthy Cities Network;
Fellow in the World Economic Forum's
Global Future Council on Cities of
Tomorrow.
Multi-scale Urban Energy Analytics for
Low-carbon and Equitable Development

- Environmental Justice
Dr. Harold Rickenbacker, Manager,
Clean Air and Innovation, Environmental
Defense Fund
Air pollution, Health, and Equity
- Resilience
Dr. Muhammad Sajjad, Senior Scientist
of Climate Risk & Resilience at Intensel
Limited
Resilient Urban System in the Face of
Looming Uncertainties: Towards Risk-
Resilience-Sustainability Nexus-Based
Data-Driven Decision Making

Research

After the ISIE Virtual day, board member, Joe Bozeman III, was the leader for the writing, curation, and submission of a journal article from this event as a beacon for our SUS section moving forward. The article is currently being submitted for review.

Article title: Three research priorities for just and sustainable urban systems: now is the time to refocus

Authors: Joe F. Bozeman III, Shauhrat S. CHOPRA, Philip James, SAJJAD Muhammad, Hua Cai, Kangkang Tong, Maya Carrasquillo, Harold Rickenbacker, Destenie Nock, Weslynn Ashton, Oliver Heidrich, Sybil Derrible, and Melissa Bilec

Abstract: Now is the time to refocus efforts for urban research and design. A changing climate and extreme weather events are presenting unique challenges to urban systems around the world. These challenges illuminate the social barriers that accompany disruptive events such as resource inequities and injustices. In this perspective, we provide three research priorities for just and sustainable urban systems that are core to meeting several of the United Nations Sustainable Development Goals (i.e., 1 – No Poverty, 8 - Decent Work and Economic Growth, 10 – Reduced Inequalities, and 11 – Sustainable Cities and Communities).). The three research priorities are: (1) social equity and justice, (2) circularity, and (3) digital twins. Conceptual context and future research direction themes are provided for each priority. For social equity and justice, the future directions are mandatory equity analysis and inclusionary practices, understanding and reconciling historical injustices, and intentional integration with diverse community stakeholders. For circularity applications, they are better metrics for integration, more robust evaluation frameworks, and dynamic modeling at multiple spatial and temporal scales. Future directions for digital twins include developing principles to reduce complexity, integrating model and system components, and reducing barriers to data access. Useful social and technical matters are discussed throughout, where we highlight the importance of prioritizing localized research efforts and provide guidance for community-engaged research and co-development practices.

SECTION BOARD MEMBERS

Content

Co-Chair **Melissa Bilec**

Co-Chair **Hua Cai**

Treasurer and COP26 Activities Coordinator **Oliver Heidrich**

Secretary and creative director **Paul Currie**

Web Editor and Communication Strategist **Liang Dong**

Professional Liaison Coordinator **Joe Bozeman III**

Research coordinator **Shauhrat Chopra**

Members Spotlights

Launched in April 2018, SUS Member Spotlights aims to connect our members and help everybody to get to know each other. We featured 12 members in 2020 and 7 members in 2021 (Alexandre Milovanoff, Zhi Cao, Weiwei Mo, Haoran Zhang, Carine Lausselet, Julius Ott, and Masoumeh Khalkhali.)

Survey

We launched a survey in 2021 to better understand what our members would like our section to provide. The high level summary includes webinars, informal social activities, and a linkedin account. We are using the results from this survey to guide 2022 activities and goals.

Board priority

A priority of the board was to engage emerging professionals, and the 2021-2024 board introduced a new board slot, “Emerging Professional.”

Upcoming events and activities in 2022

- Webinars, starting in March
- Socials at GRC and ISIE conferences
- LinkedIn account

SECTION BOARD MEMBERS

Co-Chair **Melissa Bilec**

Co-Chair **Hua Cai**

Treasurer and COP26 Activities Coordinator **Oliver Heidrich**

Secretary and creative director **Paul Currie**

Web Editor and Communication Strategist **Liang Dong**

Professional Liaison Coordinator **Joe Bozeman III**

Research coordinator **Shauhrat Chopra**

Board election

The 2021-2024 board includes:

- Co-Chair: Melissa Bilec, University of Pittsburgh
- Co-Chair: Hua Cai, Purdue University
- Professional Liaison Coordinator: Joe Bozeman III, GaTech
- Web Editor and Communication Strategist: Liang Dong, City University of Hong Kong
- Research Coordinator: Shauhrat Chopra, City University of Hong Kong
- Treasurer and COP26 Activities Coordinator: Oliver Heidrich, Newcastle University
- Secretary and Creative Director: Paul Currie, Stellenbosch University
- Emerging Professional: Kangkang Tong, Shanghai Jiao Tong University

As the SUS section board elected in 2017 was reaching its end of term, it conducted an election in October 2020. The 2017-2020 board included:

- Chair: Sybil Derrible, University of Illinois at Chicago
- Vice-Chair: Oliver Heidrich, Newcastle University
- Treasurer and Research Coordinator: Eugene Mohareb, University of Reading
- Secretary: Hua Cai, Purdue University
- Web Editor and Communication Strategist: Matan Mayer, IE University
- Professional Liaison Coordinator: Paul Hoekman, Metabolism of Cities
- Awards Coordinator: David Bristow, University of Victoria

SECTION BOARD MEMBERS

Co-Chair **Melissa Bilec**

Co-Chair **Hua Cai**

Treasurer and COP26 Activities Coordinator **Oliver Heidrich**

Secretary and creative director **Paul Currie**

Web Editor and Communication Strategist **Liang Dong**

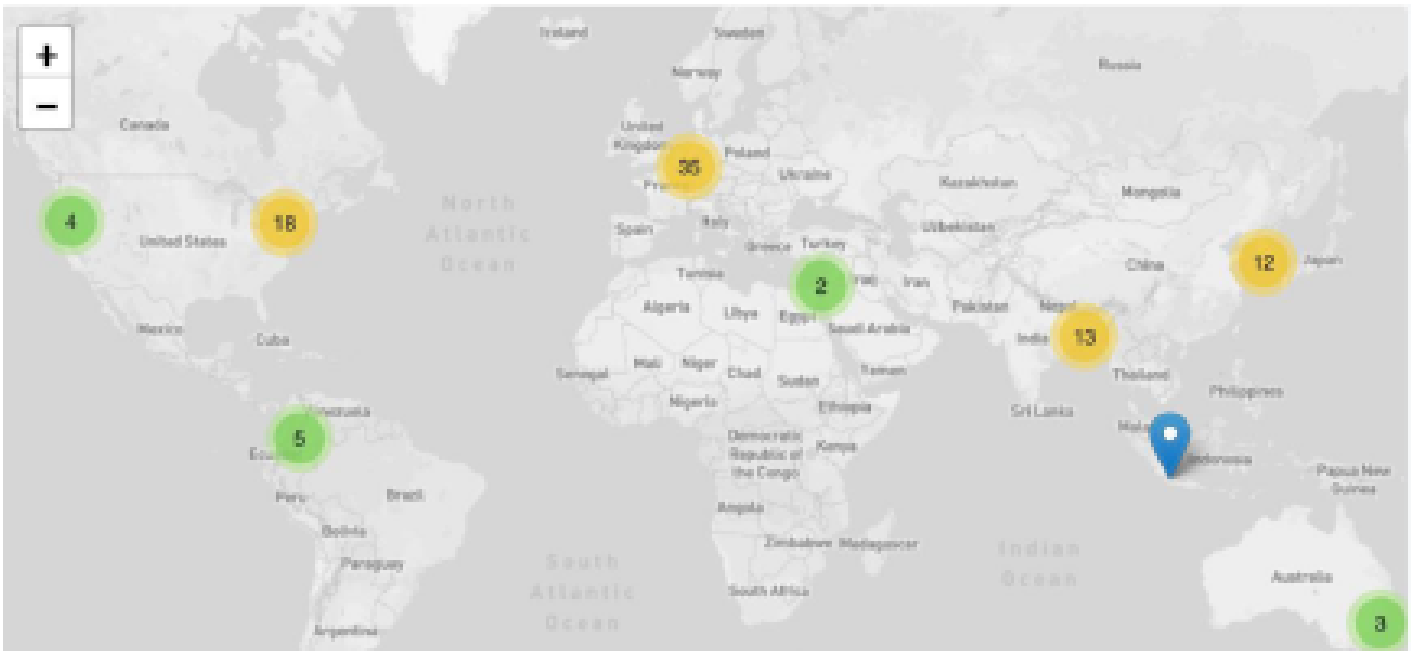
Professional Liaison Coordinator **Joe Bozeman III**

Research coordinator **Shauhrat Chopra**

ISLAND INDUSTRIAL ECOLOGY

Members of the Islands section organised and participated in several activities this year, and was active in communicating to its members events, outreach, opportunities, new publications, and member spotlights through

the section and ISIE newsletter. Membership in the Islands section doubled, from 50 in 2020, to 101 in 2021, and are from all over the world.



The Island section of ISIE organized two Spotlight Sessions at the Industrial Ecology Day, that included a panel discussion followed by a networking event. The Asia-Pacific session with the theme “Resilience and resource self-sufficiency in the Pacific islands” was chaired by Simran Talwar, moderated by Dominik Noll, and featured an inspiring discussion between Amardeep Wander, Shun Fung Chiu, Anna Gero and Rui Jing.

The Americas session focused on “Island waste challenges and the potential for circular economy” and was chaired by Bart van Hoof and Simron Jit Singh, moderated by John Telesford. Panelists were Matthew Eckelman, Luc Alofs, Allison Elgie, Alex Saer, and Artie Dubrie. Both sessions were engaging with fruitful discussions and options for future collaborations.

SPOTLIGHT SESSION ISLANDS

The session on “Resilience and resource self-sufficiency in the Pacific islands” is part of the Industrial Ecology Day 2021. A panel discussion will be followed by a networking event.

Session chair: Simran Talwar | Panel moderators: Simran Talwar and Dominik Noll

OUR SPEAKERS

- DR. AMARDEEP WANDER
Asia Pacific Visiting
Consultant (APVC)
- PROF. SHUN FUNG CHIU
De La Salle University
Manila, Philippines
- PROF. ANNA GERO
University of Technology
Sydney, NSW, Australia
- DR. RUI JING
School of Engineering
Cardiff University, UK

21st JUNE 2021 | 15.00-17.00 PM
(UTC+10, Sydney time) [REGISTER NOW](#)

INTERNATIONAL SOCIETY FOR INDUSTRIAL ECOLOGY (ISIE) | Non ISIE members please email DOMINIK.NOLL@ROKU.AC.AU | OR VISIT <https://is4ie.org/>

SPOTLIGHT SESSION ISLANDS

The “Island Waste Challenges and the Potential for a Circular Economy” is part of the Industrial Ecology Day 2021. A panel discussion will be followed by a networking event.

Session chairs: Bart van Hoof & Simron Singh | Panel moderation: John Telesford

OUR SPEAKERS

- MATTHEW ECKELMAN
Northwestern University,
USA
- LUC ALOFS
University of Leoben,
Austria
- ALLISON ELGIE
University of Waterloo,
Canada
- ALEX SAER
Ministry of Environment
Colombia

21 JUNE 2021 | 09.00-11.00 AM
(New York time) [REGISTER NOW](#)

INTERNATIONAL SOCIETY FOR INDUSTRIAL ECOLOGY (ISIE) | Non ISIE members please email SIMRON.SINGH@UWATERLOO.CA | <https://is4ie.org/>

SECTION BOARD MEMBERS

- Chair **Simron J. Singh**
- Vice-Chair **John Telesford**
- Secretary **Bart Van Hoof**
- Treasurer **Dominik Noll**
- Member **Catalina Spataru**
- Member **Simran Talwar**
- Member **Bob Paul**

Sustainable Island Futures (SIF)

The Islands-IE section now partners with SIF symposia series founded by SISSTEM, University of Aruba (<http://www.ua.aw/sisstem/>) & the Metabolism of Islands (MoI). These symposia, twice a year, brings together researchers to exchange ideas and approaches for a sustainability transformation in small island states and to foster interdisciplinary and interinstitutional collaboration. The next symposium is on 9th June 2022.

Maintaining a library of Island publications

Through the Metabolism of Islands (MoI) library, the Islands-IE section maintains a repository of resources related to the field of island sustainability and resource-use more broadly. There are currently 330 items listed, with 120 case studies, and 87 review articles. Literature directly related to Island-IE is rapidly growing with 37 articles. In 2021, 33 new publications were added to the database.

Member spotlights

In 2021, the section published 4 member spotlights. These were: Andrea Thorenz (August 2021), Thomas Y. Chen (September 2021), Chris Matthew (October 2021), and Simran Talwar (November 2021).

Activities for 2022

Introductory Lecture series (MOOCS) on Island-IE: In response to the call from ISIE, the section will participate in the development of the first five introductory lectures on island industrial ecology. The aim of this lecture series is to make the field of island-IE accessible to non-industrial ecologist audience. This activity will be led by Simran Talwar and Simron Singh, with the support of all board and section members.

It is expected that this activity will dovetail into a *webinar series* that is also planned by the section board.

SECTION BOARD MEMBERS

| | |
|------------|-------------------------|
| Chair | Simron J. Singh |
| Vice-Chair | John Telesford |
| Secretary | Bart Van Hoof |
| Treasurer | Dominik Noll |
| Member | Catalina Spataru |
| Member | Simran Talwar |
| Member | Bob Paul |

SOCIOECONOMIC METABOLISM SECTION

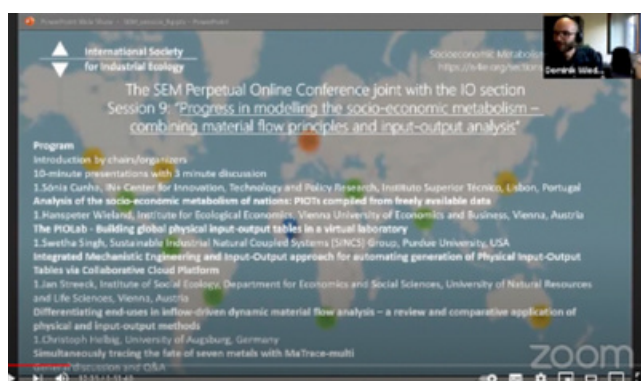
With about 340 members, the socioeconomic metabolism (SEM) section of the International Society for Industrial Ecology (ISIE) is the largest global network of researchers employing material flow analysis as a tool for environmental sustainability assessment. Below, we report important recent and ongoing activities.

The ISIE Socioeconomic Metabolism Perpetual Conference

Due to the impacts of the current Corona crisis and postponements of regular ISIE conferences, the ISIE-SEM section has started to organize a series of monthly online conference sessions in July 2020. The ten sessions organized so far covered a wide range of SEM research topics and the resonance within the community is very high. Until today, more than 1,500 colleagues participated in the online conference or watched the recorded sessions on the ISIE YouTube platform.

<https://is4ie.org/events/isie-section-conferences/65>

The ISIE-SEM Perpetual Online Conference continues in 2021, and will be expanded with more SEM members' engagement, and new session topics.



SEM at Industrial Ecology Day 2021

The Industrial Ecology Day 2021, a global 24 hr online event featuring industrial ecology research on all continents, included a good dozen sessions on socio-metabolic research and material flow analysis, including sessions on the circular economy of the built environment, bottom-up built environment MFA, community modelling in dynamic material flow analysis, or the future of urban metabolism research. Many section members contributed to this first truly global IE event, as participants, presenters, or session organizers.

SEM biannual conference

Upcoming 14th ISIE SEM conference in Vienna, September 2022: After a long absence from physical conferences due to the Corona pandemic, we are happy to announce that the 14th ISIE Socio-Economic Metabolism section conference will take place in Vienna from 19-21 September 2022.

The ISIE-SEM conference will be co-organised by the Vienna University of Economics and Business (WU), the University of Natural Resources and Life Sciences, Vienna (BOKU) and TU Wien (TU). Our board member Stefan Giljum is one of the co-chairs of this conference.

While the main conference will take place in a physical setting, the organizers will offer hybrid options, with plenary sessions being live-streamed to all colleagues, who want to join us remotely from all over the world.

Details can be found on the conference website <http://www.isiesem2022.org>.

Sessions of the SEM Perpetual Conference 2021

Most sessions (including Sessions 1-5) are available to view on the [ISIE website](#).

Session 6: Toward Sustainable Material Stock **28 January 2021**

Chair: Hiroki Tanikawa

Speakers: Tomer Fishman (IDC Herzliya, Israel), Ippei Maruyama (U-Tokyo, Japan), Maud D. Lanau (U-Sheffield, UK), Beijia Huang (U-Shanghai Science and Technology, China)

Session 7: Socio-economic metabolism and inequality **25 February 2021**

Chair: Peter-Paul Pichler

Speakers: Diana Ivanova (U-Leeds, UK), Joe Bozeman (U-Chicago, US), Ingram Jaccard (PIK)

Session 8: ISIE and Oceans **28 April 2021**

Chair: Helen Hamilton

Speakers: Tamar Makov & Alon Shepon (BGU & Tel Aviv-U, Israel), Paritosh Deshpande (NTNU), Julia Blanchard (U-Tasmania)

Session 9: <Joint session with IO Section> **Progress in modelling the socio-economic metabolism - linking stocks and flows through combined material flow and input-output analysis** **27 May 2021**

Chair: Dominik Wiedenhofer and Tomer Fishman

Speakers: Sónia Cunha (Instituto Superior Técnico, Portugal), Hanspeter Wieland (Vienna Univ, Austria), Swetha Singh (SINCS, USA), Jan Streeck (IFF, Austria), Christoph Helbig (Univ of Augsburg, Germany)

Session 10 The physical triple bottom-line: Balancing the stock dynamics of people, products, and planet **26 January 2022**

Chair: Daniel Müller

Speakers: Dirk Lauinger (EPFL, Switzerland), Felipe Vásquez (CEMPRE, Colombia), Romain Billy (NTNU, Norway), Helen Hamilton, (Biomar, Norway)



MFA database and data exchange

As part of its mission and after an intense participative process, the ISIE-SEM section board has compiled the first Guidelines for Data Modeling and Data Integration for Material Flow Analysis and Socio-Metabolic Research. The document is self-explaining and was designed as a standard reference for all who are in the process of publishing, documenting, or archiving MFA research, either within a software such as STAN (<https://www.stan2web.net/>) or in a custom modelling environment.

We hope that these guidelines will provide reliable orientation in many different research and consulting settings. The guideline document is evolving and will be updated every couple of years to keep pace with the development of the field.

We also hope that it will trigger discussions and spur engagement around some of the open items, like the development of common material classifications or of a system taxonomy for MFA datasets.

Outlook

The perpetual conference will continue also in 2022, and session proposals can be submitted by all section members via the event section of the IS4IE homepage. In late 2022, board elections to determine the new board members will be held and all section members will be asked to cast their vote. Through the timing of the board elections, the section's election rhythm will be in line with the ISIE's general election and board member term periods.

SECTION BOARD MEMBERS

Chair **Hiroki Tanikawa**

Vice-Chair **Stefan Pauliuk**

Secretary **Gang Liu**

Treasurers **Kazuyo Matsubae, Stefan Giljum**

Web Editor & Communication strategists **Peter-Paul Pichler, Helen Ann Hamilton**

Link to ISIE membership committee **Tomer Fishman**

INDUSTRIAL SYMBIOSIS AND ECO-INDUSTRIAL DEVELOPMENTSECTION

2021 saw the IS-EID section return to somewhat more normal activities than the year before. In addition to welcoming new members and keeping the members connected and updated via our newsletter and section content we held a General Assembly in March, and a 'Spotlight' session at the International Industrial Ecology Day in June. We did not host the annual Industrial Symbiosis Research Symposium (ISRS) in 2021, however we look forward to re-establishing the tradition in 2022.

Around 30 members joined the General Assembly discussions in March, where subjects such as the section's data working group and approaches to community engagement through webinars & webisodes were discussed broadly. Furthermore, a call for collaborators in researching and communicating best practices & KPIs for EIPs was announced. Open member discussion was encouraged along with the employment of a live questionnaire to gather and gauge the memberships desires for the section. Networking, knowledge sharing, case studies, and even co-creating/collaborating on new synergy developments were some areas at the top of most member's minds.

On June 21st our section hosted a spotlight session during the well-attended International Industrial Ecology Day. This spotlight session had presentations from symbiosis facilitation practitioners, academia, and policy making organizations. Presenters included Synergie Québec, Newcastle University, a multitude of organizations from Kwinana, Australia, and the Global Eco-Industrial Park program (GEIP) of UNIDO.

To realize the ambitions of the section membership, we are looking forward to welcoming new engaged academics and practitioners to the board of the section in 2022! Elections are opening this Spring, so please join the section on IS4IE.org for more information or drop us a line at symbiosis.isie@gmail.com.

SECTION BOARD MEMBERS

| | |
|----------|-------------------------------------|
| Chair | Graham Aid |
| Co-Chair | Pierre-Alexandre Guillemette |
| Member | Bart Van Hoof |
| Member | Liang Dong |
| Member | Anne Hewes |
| Member | Peter Lowitt |
| Member | Michael Martin |

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INFO@IS4IE.ORG