



SESYNC Feedbacks

News from the National Socio-Environmental Synthesis Center

LIVE WEBCAST

Uncertainty, Transparency, and Robustness in Socio-Environmental Systems (SES) Modeling and Assessments



Jan Bakkes
Introduction



Andrea Saltelli
Panelist



Veronica Gaffey
Panelist



Arthur Petersen
Panelist



Sondoss El Sawah
Welcome

Hosted by: The Integrated Assessment Society (TIAS); The National Socio-Environmental Synthesis Center (SESYNC); and the journal, *Socio-Environmental Systems Modeling* (SESMO)

REGISTER NOW | New SES Modeling Webinar Series

Join us for a webcast series on Socio-Environmental Systems (SES) Modeling. Co-hosted by SESYNC, **The Integrated Assessment Society** (TIAS), and the journal **Socio-Environmental Systems Modelling** (SESMO), this series will explore the development and application of models to investigate complex problems arising from interactions between human and natural systems.

If you missed our first seminar on April 14, you can watch Dr. Sondoss El Sawah give an overview of the eight grand challenges in SES modeling [here](#). (Be on the lookout for a full summary of that webcast to come soon!)

NEXT SEMINAR:

There's also still time to **register** for the next webcast, which will cover "**Uncertainty, Transparency and Robustness in Socio-Environmental Systems Modeling and Assessments.**"

WHEN:

Weds. 28 April 2021, 15:00-16:30 (EDT UTC -4)

Weds. 28 April 2021, 21:00 – 22:30 (CEST UTC +2)

Thur. 29 April 2021, 05:00 - 06:30 (AEST UTC +10)

While the first webcast explored current challenges and the future of SES modeling more generally, this webcast addresses models and the environmental and development-related assessments that rely on them in terms of uncertainty issues, transparency (including trust, bias and world views), and robustness of the conclusions.

WEBINARS IN THE SERIES

"Eight Grand Challenges in SES Modeling"

Dr. Sondoss El Sawah

14 April / 15 April 2021

Video lecture available [here](#). Summary of full webinar to come.

"Uncertainty, Transparency & Robustness in SES Modeling & Assessments"

Jan Bakkes

28 April / 29 April 2021

[Register here](#).

"Confronting Issues of Scale in SES Modeling"

Rose Wang

25 May / 26 May 2021

[Register here](#). (More details to come.)

"Creating Socio-Environmental Scenarios"

Vanessa Schweizer and Hannah Kosow

28 June / 29 June 2021

[Register here](#). (More details to come.)

APPLY NOW | Virtual SESYNC Computational Summer Institute

Applications Open through April 30 for Virtual Summer Institute on Cyberinfrastructure for Socio-Environmental Synthesis

The National Socio-Environmental Synthesis Center (SESYNC) invites applications to a short course on data and coding skills for socio-environmental synthesis. The 8th annual Summer Institute will be held virtually on Tuesday, July 20, 2021 (optionally on July 19) through Friday, July 23. The short course will combine lectures, hands-on computer labs, and project consultation designed to accelerate the adoption of cyber resources for all phases of data-driven research and dissemination.



Members of SESYNC science teams (i.e., participants in a Pursuit or Workshop funded by SESYNC) will be given priority. Remaining space will be awarded to teams of 2-4 researchers who are actively collaborating on problems at the intersection of humans and the environment that involve quantitative and/or qualitative data. Participants may be at any career stage, from graduate student to senior researcher/faculty, and from academic, government, or non-profit sectors. More details about the course and how to apply are available [here](#).

SEMINAR | Our Spring Seminar Series Concludes

Join us for the final virtual seminar of our spring series! As always, talks are free and open to the public. Registration is required. See below for recordings of our previous seminars.



Dr. Tu Nguyen, Dalhousie University

"COVID-19 Economic Impact on Fisheries Workers"

May 18, 2021
11 a.m. ET

Learn more and register [HERE](#).

SEMINAR VIDEOS | Recent Seminars Now Available

Catch Up on Recent Seminars from Our Spring Virtual Series!

"Climate Change and Temperature Variability in the Northeast Shelf Regional Ecosystem"

Presented by **Dr. Katie Peterson**, SESYNC

"Situating Justice and Sustainability: Connections, Convergence and Confounding"

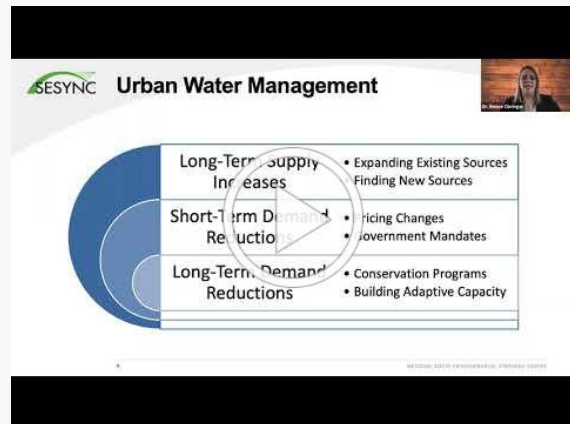
Presented by **Dr. Julie Sze**, University of California, Davis



"Characterizing the Human Dimension of Urban Water Systems in the Southwestern United States"

Presented by **Dr. Renee Obringer**, SESYNC

To view more of our spring seminars, visit our [YouTube channel](#). And remember to [subscribe](#) to get updates when new videos are added!





Geocoding with R

By: Andres Garcia

Data is not perfect. We all know that. A little while ago I stumbled onto an **Annotated Honey Bee Images** dataset from **Kaggle** and decided to map it, except I couldn't map it right away. The dataset included text for the city names where the images were collected, but not the latitude and longitude

coordinates needed to map the locations. I decided to do some geocoding to get the coordinates for each location to map the bees!

What Is geocoding?

Geocoding is the process of converting addresses/places into geographic coordinates, which can be used to place markers on a map. [Read more.](#)

Data Exploration to Cultivate Better Living at the 2021 UMD Data Challenge

SESYNC Data Scientist **Quentin Read** recently served as a mentor for the grand prize-winning team in the 2021 UMD Data Challenge (DC21). Learn more about DC21 from the Challenge's Grand Prize Winners **Allie Cahanin** and **Katie Toren** below.



Above: Allie Cahanin (top left) and Katie Toren (bottom) accept the DC21 Grand Prize from Dean Doug Oard, UMD, College of Information Studies.

As graduate students in the Geographical Sciences Department at the University of Maryland, pursuing MS degrees in Geospatial Intelligence (GEOINT), we are always looking for ways to practice and improve our analytical skills on real-world datasets. This February, we participated in the 2021 UMD Data Challenge (DC21) with the goal of improving our skills in data exploration and data science. As newbies to data science, we were excited to have Quentin Read, a data scientist with SESYNC, assigned as our mentor for the week! [Read more.](#)

CALL FOR DATA | Seeking Foliar Nitrogen Measurements

SESYNC Researchers Seeking Data for New Compilation

Is the protein content of plants on the decline? SESYNC researchers Andrew Elmore and Rachel Mason plan to find out, and they're asking for your help. As part of their pursuit, "[The ecological consequences of declining nitrogen concentrations in plants worldwide](#)," Drs. Elmore and Mason are compiling what they hope to be the largest database of foliar nitrogen (N) measurements to date. If you have foliar N measurements from non-agricultural ecosystems anywhere in the world, please consider contributing them to this project. Data access and co-authorship opportunities available; see [here](#) for more information.

NEW PUBLICATIONS | SESYNC in the Journals

"Changing elemental cycles, stoichiometric mismatches, and consequences for pathogens of primary producers." Published in *OIKOS* by Thijs Frenken, Rachel Paseka, Angélica L. González, Lale Asik, Eric W. Seabloom, former SESYNC postdoc Lauren A. White, Elizabeth T. Borer, Alex T. Strauss, Angela Peace, and Dedmer B. Van de Waal. This paper resulted from the Pursuit, "[Microbial disease dynamics, ecosystem processes, and human eutrophication of the environment.](#)"

"Institutional navigation for polycentric sustainability governance." Published in *Nature Sustainability* by Mark Lubell and Tiffany H. Morrison, as a result from the Pursuit, "[Testing and extending Ostrom's frameworks: quantitative synthesis and modeling of social-ecological dynamics.](#)"

"Negative socio-environmental feedback loop may foster inequality for urban marine subsistence fishers." Published in *Environmental Science & Policy* by Meghna N Marjadi, Lauren Drakopoulos, Lian W. Guo, J. Zachary Koehn, Sarita V. Panchang, and Dustin Robertson. This paper resulted from the Graduate Pursuit, "[Urban ecologies of vulnerability and risk: What is the role of fish consumption advisories?](#)"

"Ecological resilience in tropical Andean lakes: A paleolimnological perspective." Published in *Limnology and Oceanography* by former SESYNC postdoc Xavier Benito Granell and colleagues Melina Luethje, Tobias Schneider, Sherilyn C. Fritz, Paul A. Baker, Eric J. Pedersen, Pierre Gaüzère, Majoi de Novaes Nascimento, Mark Bush, and Albert Ruhí.

"The philosophy of Constantine the Philosopher of Nicaea." Published in *Byzantinische Zeitschrift* by SESYNC postdoc Merle Eisenberg and colleague David Jenkins.

"Public contributions to early detection of new invasive pests." Published in *Conservation Science and Practice* by Rebecca Epanchin-Niell, Alexandra L. Thompson, and Tyler Treakle, as a result of the Pursuit, "[Advancing Behavioral Models of Private Land Stewardship to Improve Environmental Policy.](#)"

"Exploring the relationships between tree canopy cover and socioeconomic characteristics in tropical urban systems: the case of Santo Domingo, Dominican Republic." Published in *Urban Forestry & Urban Greening* by former SESYNC postdoc Dexter H. Locke and former SESYNC researcher J. Morgan Grove with colleagues Sebastián Martinuzzi, Olga Ramos-González, Monika Sanchez, Tischa A. Muñoz-Erickson, Wayne J. Arendt, and Gerald Bauer.

"Using internet search data to understand information seeking behavior for health and conservation topics during the COVID-19 pandemic." Published in *Biological Conservation* by former SESYNC postdocs Varsha Vijay, Christopher R. Field, Florian Gollnow, and Kelly K. Jones.

"Flood risk behaviors of United States riverine metropolitan areas are driven by local hydrology and shaped by race." Published in *Proceedings of the National Academy of Sciences of the United States of America* by former SESYNC postdoc James Knighton and former SESYNC staff member Kelly Hondula with colleagues Cielo Sharkus, Christian Guzman, and Rebecca Elliott.

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