



SESYNC Feedbacks

News from the National Socio-Environmental Synthesis Center

SUMMER INSTITUTE | Teams Applying Their New Data Skills

Teams Put Skills Gained from the Summer Institute to Use in Interdisciplinary Research

This year, SESYNC's data science team really put the "cyber" in its annual [Summer Institute on Cyberinfrastructure for Socio-Environmental Synthesis](#)---adapting their usual in-person program to be entirely Zoom-friendly. Even with this new format, participants found they were able to gain valuable, applicable data skills that helped advanced their research, which a couple of participants share below.

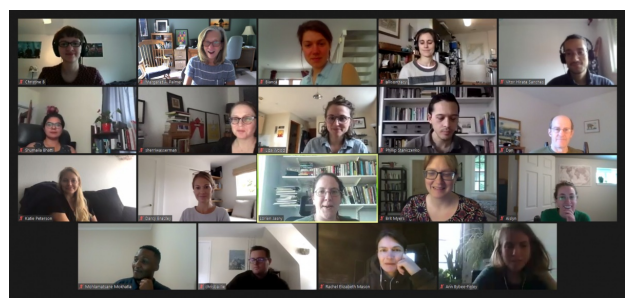
Each year, the Summer Institute, led by members of SESYNC's data science team, gives research teams the opportunity to enhance their data and coding skills. The institute places particular focus on helping teams learn how to script complete data pipelines and implement distributed workflows within the R + RStudio development environment. SESYNC staff are also available to provide advice on a wide range of workflow and methodological challenges to help teams achieve their specific project objectives. Participants include both currently supported SESYNC research teams, as well as teams from outside SESYNC.

Kacey Stewart, a participant in this year's event, leads a [graduate student pursuit](#) exploring the connection between narrative and ecological systems. "In particular we are focusing on the oyster industry in Maine and using newspaper coverage as a way to see how these narratives emerge and evolve over time," he explained. [Read more.](#)

S-E NETWORK ANALYSIS | SESYNC's Short Course Returns

Building a Network for Network Analysis

Former SESYNC postdocs Phillip Staniczenko and Lorien Jasny recently led a new online version of their short course, [Introduction to Social and Ecological Network Analysis](#). Combining approaches from both the social and natural sciences, the returning course aimed to inform new strategies for studying socio-environmental systems using network analysis, which focuses on the relationships among entities to explain emergent properties of complex systems. Having taught the course in the past in-person at SESYNC, Staniczenko and Jasny reconfigured the course this year, so it could be taught online due to COVID-19.



The short course's participants represented a wide range of experiences and research interests. In fact, Staniczenko said this year's group of 16 participants included graduate students, postdocs, faculty, and research scientists, hailing from around the globe, including the United States, the United Kingdom, Canada, Germany, Brazil, and South Africa. [Read more.](#)

CURRENT OPPORTUNITIES | Fellowship & Postdoc Position



The Dr. Richard Payne Graduate Fellowship

Deadline: October 2, 2020

This fellowship is intended to recognize excellence in graduate students in the University of Maryland's College of Computer, Mathematical, and Natural Sciences (CMNS). It provides \$5,000 to support graduate-level research that directly links social and environmental sciences, with a particular focus on connecting climate and policy studies. It is offered in partnership with SESYNC, funded by a grant from the National Science Foundation to CMNS. Awardees will benefit from mentorship and interdisciplinary research learning opportunities over the course of the award via engagement with

members of the SESYNC Leadership team and access to the Center's diverse and robust scientific community and calendar of events, including its virtual seminar series. The award carries no tuition remission. [Learn more.](#)

Postdoctoral Researcher: Incorporating LiDAR Remote Sensing of Forest Structure into Bird Species Distribution Models

Apply by August 31, 2020 for best consideration.

A two-year postdoctoral position is available to work with Dr. Andrew Elmore and Dr. Matt Fitzpatrick at SESYNC. The postdoc will lead the development of methods that combine measurements of forest structure with spatial modeling methods to understand and predict changes in bird habitat and distribution resulting from forest management practices in Pennsylvania. The position is ideally suited to researchers with interests in combining Light Detection and Ranging (LiDAR) and other types of remote sensing with novel spatial modeling methods to better understand and forecast how forest birds respond to changes in forest and landscape structure. The successful candidate will also be encouraged to become an active member of the SESYNC postdoctoral community and to participate in professional development programs offered. [Learn more.](#)

SESYNC SEMINARS | Free, Virtual Seminars Open to All

FALL 2020 SEMINAR SERIES

VIRTUAL SERIES

Seminars begin at 11 a.m. ET and are free and open to the public.

Join us this fall as our seminar series moves online! Starting September 8, 2020, we'll be hosting a virtual seminar every other Tuesday, featuring a different research topic. Seminars are free to join and open to all. Registration is required. Learn more about our scheduled speakers and their topics below:

DATE	SEMINAR
Sept. 8, 2020 11:00 a.m. ET	Dr. Mysha Clarke Topic: The Human Dimensions of Natural Resource Management: What Is the Role of Mixed Methods Approaches? Register here. 
Sept. 22, 2020 11:00 a.m. ET	Dr. Dan Fiscus & Dr. Brian Fath Topic: Foundations for Sustainability: A Coherent Framework of Life-Environment Relations Register here.  
Oct. 6, 2020 11:00 a.m. ET	Dr. Devon Payne Sturges Topic: Making the Invisible Visible: Intervening on Cumulative Environmental Neurodevelopmental Risks Using a System Dynamics Approach Register here. 
Oct. 20, 2020 11:00 a.m. ET	Dr. Rachel Mason Topic: Evidence, Causes, and Consequences of a Global Decline in Available Nitrogen Dr. Rachel Zuercher Topic: Does Ocean Planning Deliver Socio-Ecological Benefits Relevant to the Sustainable Use of Ocean Ecosystems? Register here.  
Nov. 3, 2020 11:00 a.m. ET	Dr. Olaf Jensen Topic: Conservation at a Cost: U.S. Fisheries Management Under the Magnuson-Stevens Act Register here. 
Nov. 17, 2020 11:00 a.m. ET	Dr. Yoon Ah Shin Topic: Risk Perception of Political Leadership toward Climate Change Risk: Applied with the Theory of Planned Behavior Dr. Fushcia-Ann Hoover Topic: Dissecting the Decision-Making Processes Behind Green Infrastructure Siting Register here.  
Dec. 1, 2020 11:00 a.m. ET	Dr. Theresa Ong Topic: Chinatowns as Alternative Food Networks Register here. 

Seminar schedule is also available [on our website](#) and [for download](#).

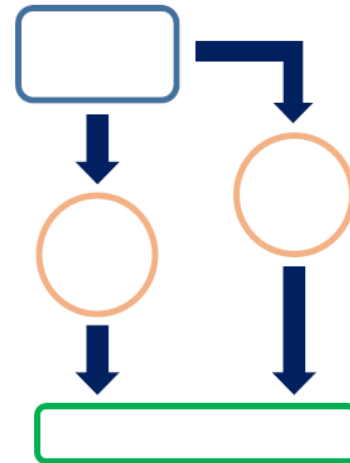
Tips for a Smooth R(Studio) Workflow and Reproducible R Code

By Quentin Read

A lot of people at SESYNC use R (often through RStudio on rstudio.sesync.org), are interested in making their research as reproducible as possible, and want to save time and make life easier for themselves. That's why I wrote this blog post with some ideas for how you can make your R workflow smoother, easier for you and anyone you ask to help you, and more in line with reproducible science best practices!

Wait, what's a workflow?

Your workflow, as defined in this [tidyverse blog post](#), is all of your personal habits and preferences that you do as part of any project you work on. It doesn't include raw data and the code itself. Your workflow is unique to you and you don't need others to reproduce it, and your project is the actual output you want people to be able to reproduce. Incidentally the blog post I just linked to has some other good ideas for best practices and is worth a read. [Read more.](#)



YOUTUBE | Watch Our Data & Methods Series

From the archives: Check out this series of videos on [Data and Methods](#) on our [YouTube channel!](#)

Watch the first video in the series: [Different Types of Data](#) below.



Keep in touch with us via social media by following us on [Twitter](#), [Facebook](#), and [LinkedIn](#).



SESYNC postdoc Merle Eisenberg and former SESYNC postdoc Lee Mordechai.

"The Adoption of Agropastoralism and Increased ENSO Frequency in the Andes." Published in *Quaternary Science Reviews* by Majoi N. Nascimento, Nicole A. Sublette Mosblech, Marco Raczka, S. Baskin, K.E. Manrique, J. Wilger, Liviu Giosan, Mark B. Bush, and SESYNC postdoc Xavier Benito.

"The Economics of the Joint Management of Water Resources and Aquatic Species in the United States." Published in *Review of Environmental Economics and Policy* by Kailin Kroetz, Yusuke Kuwayama, Caroline Vexler, as part of the Pursuit, [Advancing Integrated Process-Based Modeling of Complex Socio-Environmental Systems](#).

"Linking Land and Sea Through an Ecological-Economic Model of Coral Reef Recreation." Published in *Ecological Economics* by Kirsten L.L. Oleson, Kenneth J. Bagstad, Carlo Fezzi, Megan D. Barnes, Mary K. Donovan, Kim A. Falinski, Kelvin D. Gorospe, Hla Htun, Joey Lecky, Ferdinando Villa, and Tamara M. Wong. This paper resulted from the Pursuit, [Hawaiian Watershed Response](#).

"Crop rotation mitigates impacts of corn rootworm resistance to transgenic Bt corn." Published in *Proceedings of the National Academy of Sciences* by Yves Carrière, Zachary Brown, Serkan Aglasan, Pierre Dutilleul, Matthew Carroll, Graham Head, Bruce E. Tabashnik, Peter Søggaard Jørgensen, and Scott P. Carroll. This paper resulted from the Pursuit, [Living with Resistance](#).

"Predicting flood insurance claims with hydrologic and socioeconomic demographics via machine learning: Exploring the roles of topography, minority populations, and political dissimilarity." Published in *Journal of Environmental Management* by SESYNC postdoc James Knighton and colleagues Brian Buchanan, Christian Guzman, Rebecca Elliott, Eric White, and Brian Rahm.

"Stakeholders Reach Consensus in Troubled Waters: Apalachicola-Chattahoochee-Flint River Basin, Southeastern USA." Published in *Case Studies in the Environment* by former SESYNC fellow Kathleen Rugel.

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