



POLISH NATIONAL AGENCY  
FOR ACADEMIC EXCHANGE

## 27<sup>th</sup> Mathematical and Statistical Modeling of Complex Systems Workshop

Golden Eagles, NEIU, Chicago, USA & online

Online participation is available for registered participants only. Please **register using the following link** <https://forms.gle/rQJA2eCmiTWLMqYQ8> .

The meeting link will be provided upon registration.

## Schedule

**All hours in this programme are listed in Chicago time (CDT).**

To convert to **Warsaw time (CEST)**, please **add 7 hours**

Participants joining from other locations can use **a time zone converter** (e.g. <https://www.timeanddate.com/worldclock/converter.html> ) to check the corresponding local time.

**Tuesday, April 28, 2026** (*All hours given in Chicago time – CDT*)

**9:00 - 9:15am** Registration

**9:15 - 9:20am** Opening

**9:20 - 9:50am** *Volatility Spillovers from “Clean” and “Dirty” Cryptocurrencies to CEE Markets: A Comparative Analysis Versus Developed Markets*, Izabela Pruchnicka-Grabias (SGH, Poland) and Scott Hegerty (NEIU, USA)

**9:50-10:20am** *Sustainable Competitiveness in the Digital Age - A Bibliometric Analysis*, Marzenna Weresa (SGH, Poland) and Scott Hegerty (NEIU, USA)

*The workshop is organized by an interdisciplinary team at NEIU (Chicago, USA) and supported by multiple academic and research institutions, including SGH Warsaw School of Economics and NAWA Polish National Agency for Academic Exchange.*



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**10:20-10:50am** *Metrics for Sustainable Competitiveness: Frameworks, Indicators, and Empirical Foundations*, Scott Hegerty (NEIU, USA), Aleksandra Kubecka (SGH, Poland) and Dawid Majcherek (SGH, Poland)

**10:50-11:05am** *Coffee Break*

**11:05 -11:35am** *Social Progress and Its Dimensions: Macroeconomic Evidence from Europe*, Scott Hegerty (NEIU, USA) and Aleksandra Kubecka (SGH, Poland)

**11:35am-12:05pm** *The Impact of Industry Clusters on Twin Transition: Green and Digital Transformation*, Scott Hegerty (NEIU, USA) and Arkadiusz Kowalski (SGH, Poland)

**12:05 -12:35pm** *Exploiting Reflexivity: News Sentiment and Short-Term Reversal Strategies in Equity Markets*, Rustam Sadygov (NEIU, USA) and Nabil Kahouadji (NEIU, USA)

**12:35 - 1:05 pm** *The Bicycle as Levy Flight: How Distance Data From Zambia May Rethink Development*, Daniel Lane (NEIU, USA)

**1:05 -1:25pm** *Using Biomarker Assays to Detect Exposure to Nicotine Delivery Products"*, Sana Habiya (NEIU), Anna Ciecierski (Warsaw Medical University, Poland), Adam Ciecierski (Warsaw Medical University, Poland) and Christina Ciecierski (NEIU, USA)

**1:25-2pm** Lunch

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**Wednesday April 29, 2026** (All hours given in Chicago time – CDT)

**9:00-9:30am** *Spatial Dynamics of Sustainable Competitiveness: Health and Social Progress Across the EU-27 and the U.S.*, Dawid Majcherek (SGH, Poland), Christina Ciecierski (NEIU, USA) and Lidia Filus (NEIU, USA)

**9:30 -10:00am** *Green and Digital Innovation for Sustainable Competitiveness*, Arkadiusz Kowalski (SGH, Poland) and Małgorzata Lewandowska (SGH, Poland)

**10:00-10:30am** *Green Innovation and Sustainable Competitiveness Beyond GDP: Evidence from Cross-Country Patent and Social Progress Indicators*, Marzenna Weresa (SGH, Poland) and Artur Tomeczek (SGH, Poland) (**online**)

**10:30 -10:45am** *Coffee Break*

**10:45-11:15am** *Green and Digital Innovation among Polish enterprises. Key insights*, Małgorzata Lewandowska (SGH) and Aleksandra Kubecka (SGH)

**11:15 -11:45pm** *When Data is Here - Challenges of Small-sample Secondary Analysis in EU and MENA countries*, Małgorzata Lewandowska (SGH, Poland) and Aleksandra Kubecka (SGH, Poland)

**11:45am -12:15pm** *Survival Models*, by Esteban Ramirez (NEIU)

**12:15 - 12:45pm** *Modeling of Asymmetric Dependencies with Applications in Medicine*, Milan Stehlik (University of Valparaiso, Chile).

**12:45-1:15pm** *Evaluating Machine Learning Models in Breast Cancer Tumor Behavior Prediction*, Ardeshir Tabatabaei (NEIU) and Emma Turian (NEIU, USA)

**1:15 - 2pm** Lunch

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