



4th conference on “Non-traditional Data, Machine Learning, and Natural Language Processing in Macroeconomics”

October 3 – 4, 2022
Stockholm, Sweden

Conference Program

Monday October 3rd

08:00 – 08:50 Coffee and registration
08:50 – 09:00 Anna Breman (Deputy Governor of Sveriges Riksbank)
Opening remarks

Session I

[\[Link to papers\]](#)

Chair: Xin Zhang

09:00 – 09:45 “Asset Pricing with Neural Networks: Significance Tests”
Hasan Fallahgoul, Vincentius Franstianto, and Xin Lin
Discussant: Daniele Bianchi

09:45 – 10:30 “Machine Learning Panel Data Regressions with Heavy-tailed
Dependent Data: Theory and Application”
Andrii Babii, Ryan T. Ball, Eric Ghysels, and Jonas Striaukas
Discussant: Arturas Juodis

10:30 – 11:00 Coffee break

Session II

[\[Link to papers\]](#)

Chair: Maryam Haghighi

11:00 – 11:45 “A Neural Phillips Curve and a Deep Output Gap”
Philippe Goulet Coulombe
Discussant: Marcin Zamojski

Keynote talk and panel discussion

Chair: Ricardo Correa

11:45 – 12:45 “Toward robust communication of modeling results”
Jessica Hullman

12:45 – 14:00 Lunch

14:00 – 15:00 Panel discussion: Efficiency and governance of ML/AI

Salla Franzen, Paolo Giudici, Anton Korinek, and Beju Shah

Session III

[\[Link to papers\]](#)

Chair: Giuseppe Bruno

- 15:00 – 15:45 “The Central Bank Crystal Ball: Temporal information in monetary policy communication”
David Byrne, Robert Goodhead, *Michael McMahon*, Conor Parle
Discussant: Ulf Söderström
- 15:45 – 16:15 Coffee break
- 16:15 – 17:00 “‘Liked’, ‘Shared’, ‘Commented’: Central Bank Communication on Facebook and Twitter”
Yuriy Gorodnichenko, *Tho Pham*, and Oleksandr Talavera
Discussant: James Brookes
- 17:00 – 17:45 “Reading between the lines - Using text analysis to estimate the loss function of the ECB”
Markus Haavio, Pirkka Jalasjoki, Juha Kilponen, Ilona Vänni, and Maritta Paloviita
Discussant: Juri Marcucci
- 19:15 Conference dinner (by invitation)

Tuesday October 4th

08:00 – 09:00 Coffee and registration

Session IV

[\[Link to papers\]](#)

Chair: Isaiah Hull

- 09:00 – 09:45 “Estimating HANK Models with Neural Networks”
Hanno Kase, Leonardo Melosi, and Matthias Rottner
Discussant: Kieran Larkin
- 09:45 – 10:30 “Deep Reinforcement Learning in a Monetary Model”
Mingli Chen, *Andreas Joseph*, Michael Kumhof, Xinlei Pan, Rui Shi, Xuan Zhou
Discussant: Giuseppe Bruno
- 10:30 – 11:00 Coffee break

Session V

[\[Link to papers\]](#)

Chair: James Chapman

- 11:00 – 11:45 “Nowcasting Norwegian Household Consumption with Debit Card Transaction Data”
Knut Are Aastveit, *Tuva Marie Fastbø*, Eleonora Granziera, Kenneth Sæterhagen Paulsen, and Kjersti Næss Torstensen
Discussant: Ajit Desai
- 11:45 – 12:30 “National Accounts in a World of Naturally Occurring Data: A Proof of Concept for Consumption”
Gergely Buda, Vasco Carvalho, Stephen Hansen, *Alvaro Ortiz*, Tomasa Rodrigo, and Jose V. Rodriguez Mora
Discussant: Christopher Kurz
- 12:30 – 14:00 Lunch and Poster Session

Poster presentations

[\[Link to papers\]](#)

- John D. Baker “Assessing the Credibility of Central Bank Signals: The Case of Transitory Inflation”
- Salim Baz “What is the Value of Financial News?”
- Diana Gabrielyan “Can Machine Learning help in understanding inflation expectations and the Euler equation?”
- Mauricio S. Moreno “Climate-Related Disclosures in the UK Financial Sector and its Determinants”
- Lena Müller “Talking in a language that everyone can understand? Transparency of speeches by the ECB Executive Board”
- Kim Ristolainen “A Thousand Words Tell More Than Just Numbers: Financial Crises and Historical Headlines”

Keynote talk

Chair: Ulf Söderström

- 14:00 – 15:00 “Monetary policy communication: Insights from social media”
Michael Ehrmann

Session VI

[\[Link to papers\]](#)

Chair: Juri Marcucci

- 15:00 – 15:45 “Quantum Natural Language Processing for Classification of Receipt Descriptions”
Noorain Noorani, Sarah Blanchette, Omar Chikhar, Jean-Frederic Laprade, Stella Wang, Zachary Zanussi, and *Vladimir Skavys*
Discussant: Isaiah Hull

15:45 – 16:15	Coffee break
16:15 – 17:00	<p>“Better Prediction at the Cost of Attribution: The Case of Classifying News” Nelson Rayl and <i>Nitish Sinha</i> Discussant: Taeyoung Doh</p>
17:00 – 17:45	<p>“Climate Risk and Commodity Currencies” Felix Kapfhammer, <i>Vegard H. Larsen</i>, and Leif Anders Thorsrud Discussant: Olesya Grishchenko</p>

Time allocation

Presentation: 25 minutes

Discussion: 10 minutes

Q&A: 10 minutes

Local organising committee

- Isaiah Hull, Sveriges Riksbank and BI Norwegian Business School
- Lena Sundvall, Research Division, Sveriges Riksbank
- Ulf Söderström, Research Division, Sveriges Riksbank
- Xin Zhang, Sveriges Riksbank and BIS Innovation Hub Nordic Centre

Scientific committee

- Daniele Bianchi, Sveriges Riksbank and Queen Mary University of London
- Giuseppe Bruno, Division of IT support for Economics and Statistics, Bank of Italy
- James Chapman, Banking and Payments Department, Bank of Canada
- Ricardo Correa, Division of International Finance, Federal Reserve Board
- Ajit Desai, Banking and Payments Department, Bank of Canada
- Olesya Grishchenko, Division of Monetary Affairs, Federal Reserve Board
- Maryam Haghighi, Information Data and Analytics Services, Bank of Canada
- Isaiah Hull, Sveriges Riksbank and BI Norwegian Business School
- Christopher J. Kurz, Division of Research and Statistics, Federal Reserve Board
- Sabina Marchetti, International Economics and Relations Directorate, Bank of Italy
- Juri Marcucci, Economic Research Department, Bank of Italy
- Xin Zhang, Sveriges Riksbank and BIS Innovation Hub Nordic Centre

[\[Link to all papers\]](#)