

# PHILIP SOLIMINE

Vancouver School of Economics ◊ The University of British Columbia ◊ Vancouver, BC, Canada

[philip.solimine@ubc.ca](mailto:philip.solimine@ubc.ca) ◊ [www.psolimine.net](http://www.psolimine.net) ◊ [github/doctor-phil](https://github.com/doctor-phil) ◊ +1 (604) 227-0971

## EXPERIENCE

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<b>Vancouver School of Economics, The University of British Columbia</b> <i>CIDER Postdoctoral Research and Teaching Fellow</i>	2022-
<b>Department of Economics, Florida State University</b> <i>Charles &amp; Persis Rockwood Research Fellow</i> <i>L. Charles Hilton Fellow (2020-2022)</i>	2017-2022
<b>XS/FS Experimental Social Sciences Laboratory</b> <i>Research Associate</i>	2015-2017

## EDUCATION

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<b>Florida State University</b>	
<b>PhD, Economics</b> Dissertation: <i>Economic behavior in dynamic networks</i> Concentration: Consumer behavior in market platforms, social networks, and the digital economy Committee: <a href="#">Matthew Gentry</a> , <a href="#">Luke Boosey</a> , <a href="#">R. Mark Isaac</a> , <a href="#">Cynthia Yang</a> , <a href="#">Anke Meyer-Baese</a>	2022
<b>MS, Scientific Computing</b> Thesis: <i>Optimal control for networked metrics</i> Concentration: Graph theory and control-theoretic approaches to economic network analysis Committee: <a href="#">Anke Meyer-Baese</a> , <a href="#">Max Gunzburger</a> , <a href="#">Paul Beaumont</a>	2022
<b>MS, Economics</b>	2018
<b>BA / BS, Mathematics and Economics</b>	2016

## PUBLICATIONS AND WORKS-IN-PROGRESS

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### Publications

1. Solimine, P. and Isaac, RM. (2023). [Reputation and market structure in experimental platforms](#). *Journal of Economic Behavior & Organization*, 205, 528-559. Elsevier.
2. Solimine, P. and Meyer-Baese, A. (2022). [Input design for the optimal control of networked moments](#). *Proceedings of the 61st IEEE Conference on Decision and Control (CDC)*. 5894-5901. IEEE.

### Pre-Doctoral Publications

3. Dunkle, B., Isaac, RM., and Solimine, P. (2022). [The robustness of lemons in experimental markets](#). *Experimental Law and Economics*. Research in Experimental Economics, Vol. 21, Emerald.
4. Solimine, PC. (2021). [Network controllability metrics for corruption research](#). *Corruption Networks*. Understanding Complex Systems. Springer.

5. Solimine, PC. (2020). [Political corruption and the congestion of controllability in social networks](#). *Applied Network Science* (Vol. 5, p. 23). Springer.
6. Tahmassebi, A., Mohebbali, B., Meyer-Baese, L., Solimine, PC., Pinker, K., Meyer-Baese, A. (2019). [Determining driver nodes in dynamic signed biological networks](#). *Proceedings of the SPIE: Smart Biomedical and Physiological Sensor Technology XV* (Vol. 11020, p. 110200A). SPIE.
7. Tahmassebi, A., Mohebbali, B., Solimine, PC., Meyer-Baese, U., Pinker, K., Meyer-Baese, A. (2019). [Model reduction of structural biological networks by cycle removal](#). *Proceedings of the SPIE: Smart Biomedical and Physiological Sensor Technology XV*. (Vol. 11020, p. 110200K). SPIE.

## Selected Works in Progress

- **Resource sharing on endogenous networks** (with [Luke Boosey](#))

Developing econometric tools for estimation and identification of incentives in dynamic network games. Analyzing reliability of panel estimators of network formation. Applying these techniques to experimental data to learn about non-monetary behavioral incentives in network formation.

- **Barriers to entry and dynamic community structure** (with [Angelo Mele](#) and [Micah Pollak](#))

Exploring the relationship of playtime and skill dynamics with social network evolution in a popular digital platform. Leveraging a massive dataset of user behavior patterns in a large, dynamic social network. Combining novel estimation tools with machine learning methods to learn social preferences and behavior from panel network data, and conducting counterfactual policy and pricing interventions.

- **Network-moderated regulatory distortion in markets for natural resource transmission** (with [Jesse Perla](#) and [Paul Schrimpf](#))

Working with government regulators to analyze market power in networked industries with transmission rights. Investigating the relationship between price regulation and development investment incentives in regulated utilities markets, and particularly the natural gas pipeline network. Understanding how these incentives impact pipeline network resilience, efficiency, and reliability.

- **Viral dynamics and coordinated pricing in digital platforms** (with [Matthew Gentry](#))

Estimating price sensitivities, price dispersion and consumer dynamics on large platform markets. Applying tools from computer vision and data mining to decompose product-level heterogeneity and network effects. Documenting a novel pattern, in which firms can design pricing strategies that use temporary promotions to create lasting demand effects. Developing a structural econometric model to characterize firm pricing strategy in highly competitive oligopolistic platform markets.

- **Regulating adversarial discord in social networks** (with [Wei Li](#) and [Jesse Perla](#))

Continuing my line of published work that applies control theoretic methods to social science problems and understanding social network manipulation. Characterizing the incentives of platforms in regulating the spread of misinformation. Developing tools to counter social network manipulation.

## TEACHING

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### University of British Columbia

ECON 622 Computational Economics (PhD) (instructor)	2023-
ECON 526 Mathematics for Economics (MA) (instructor)	2023-
ECON 323 Quantitative Economic Modeling and Data Science (instructor, ×7 sections)	2022-

### Florida State University

ECO 4400 Games and Decisions (instructor)	2020 (online), 2021
ECO 2023 Principles of Microeconomics (instructor)	2019
ECO 5434 Analysis of Economic Data for M.S. Applied Economics (guest instructor)	2022

## AWARDS & GRANTS

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· Postdoctoral Fellowship, Vancouver School of Economics	2022-
· Charles & Persis Rockwood Doctoral Research Fellowship	2017-2022
· L. Charles Hilton Center Research Fellowship	2020-2022
· FSU Open Access Publishing Grant	2020
· L. Charles Hilton Center Summer Research Fellowship	2019-2021
· FSU College of Social Sciences and Public Policy Research Support Grant	2019

## PROFESSIONAL SERVICE

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### Conference Talks and Presentations

- **2023:** International Industrial Organization Conference; UBC Econometrics Group
- **2022:** IEEE Conference on Decision and Control, UBC Econometrics Group (invited); Conference of Network Science in Economics (×2); FSU Computational Xposition; FSU Quantitative Methods Group; FSU Microeconomic Theory Group
- **2021:** Conference of Network Science in Economics; Economic Science Association Job-Market Candidates Seminar; North American Meeting of the Economic Science Association; Networks 2021 (NetSci and Sunbelt); Conference of the Southern Economic Association; FSU Experimental Group
- **2020:** NetSci 2020 (invited); Network Science in Economics; Global Meeting of the Economic Science Association; FSU Computational Xposition; FSU Experimental Group
- **2019:** Caltech Symposium in Honor of Charles R. Plott (invited); Conference of the Southern Economic Association; NetSci 2019; FSU Experimental Group

### Referee

- International Journal of Industrial Organization (×4)
- Journal of Economic Behavior & Organization
- Economics Letters, Economics (open access), Government and Opposition

## SKILLS & TECHNICAL EXPERTISE

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<b>Programming Languages</b>	Python, C/C#/C++, Julia, R, Matlab
<b>Software &amp; Tools</b>	JAX, TensorFlow, OpenMP, MPI, Unity, Stata, UNIX/Linux Pytorch, Numba, zTree, oTree
<b>Technical Applications</b>	Machine learning, Structural econometrics, Simulation, High-performance computing, Game & experiment design, System administration, Neurocomputing, Computer vision Artificial intelligence, Reinforcement learning, Optimization
<b>Spoken Languages</b>	English (Native), German (Working)

## PROFESSIONAL REFERENCES

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**Jesse Perla**

Associate Professor  
Vancouver School of Economics  
The University of British Columbia  
jesse.perla@ubc.ca

**Matthew Gentry**

Associate Professor  
Department of Economics  
Florida State University  
mgentry@fsu.edu

**Paul Schrimpf**

Associate Professor  
Vancouver School of Economics  
The University of British Columbia  
paul.schrimpf@ubc.ca

**Angelo Mele**

Associate Professor  
Carey School of Business  
Johns Hopkins University  
angelo.mele@jhu.edu

**Wei Li**

Associate Professor  
Vancouver School of Economics  
The University of British Columbia  
wei.li@ubc.ca

**R. Mark Isaac**

John & Hallie Quinn Professor  
Department of Economics  
Florida State University  
misaac@fsu.edu