

Thành Nguyen

Purdue University
Krannert School of Management
403 W. State Street
West Lafayette, IN 47907-2056

Phone: (765) 49-48658
Email: nguye161@purdue.edu
Homepage: <http://web.ics.purdue.edu/~nguye161/>

Position

Krannert School of Management, Purdue University <i>Lewis B. Cullman Rising Star Associate Professor</i>	2020-
<i>Associate Professor (with tenure)</i>	2019-
<i>Assistant Professor</i>	2013- 2019
Kellogg School of Management, Northwestern University <i>Postdoctoral Fellow</i>	2010-2013

Education

<i>Ph.D, Applied Mathematics, Cornell University, Ithaca, NY</i>	2010
<i>Diploma in Mathematics. Eötvös University, Budapest, Hungary</i>	2004

Research Interests

I am interested in analyzing network markets and developing algorithms for market design problems. My research applies to supply chain networks, matching markets, wireless spectrum markets and electricity markets.

Journal Papers

1. *Young-San Lin, Hai Nguyen, Thành Nguyen, Kemal Altinkemer, Allocation with Weak Priorities and General Constraints, **Operations Research** (forthcoming 2022) (abstract accepted at EC2021)*
2. *Young-San Lin, Thành Nguyen and Jiang Tao, Quantity Competition in Multi-tier Supply Chains, **Naval Research Logistics** Volume 69, Issue 3, 2022 (abstract accepted at WINE 2020)*
3. *Thành Nguyen, Hai Nguyen, Alex Teytelboym, Stability in Matching Markets with Complex Constraints, **Management Science** (Vol 67, Issue 12, 2021)*
4. *Thành Nguyen and Karthik Kannan, Welfare Implications in Intermediary Networks, **Information Systems Research** (Vol 32, Issue 2, 2021)*
5. *R. Berry, M. Honig, T. Nguyen, V. Subramanian and R. Vohra, The Value of Sharing Intermittent Spectrum, **Management Science** Volume 66, No. 11, 2020*
6. *Thành Nguyen and Rakesh Vohra, Stable Matching with Proportionality Constraints, **Operations Research** Volume 67, No. 6, 2019*

7. Thành Nguyen and Rakesh Vohra, Near Feasible Stable Matchings with Couples, **American Economic Review**, Vol. 108, No. 11, 2018
8. Thành Nguyen, Local Bargaining and Supply Chain Instability, **Operations Research**, Volume 65, Issue 6, 2017
9. T. Nguyen, H. Zhou, R. Berry, M. Honig and R. Vohra, The Cost of Free Spectrum, **Operations Research**, Volume 64, Issue 6, 2016
10. T. Nguyen, M. Peivandi and R. Vohra, Assignment Problems with Complementarities, **Journal of Economic Theory**, Volume 165, 2016
11. T. Nguyen, V. Subramanian and R. Berry, Delay in Trade Networks, **Operations Research**, Volume 64, Issue 3, 2016
12. Thành Nguyen, Coalitional Bargaining in Networks, **Operations Research**, Volume 63, Issue 3, 2015
13. Thành Nguyen, A simple LP relaxation for the Traveling Salesman Problem, **Mathematical Programming**, Volume 141, Issue 1, 2013
14. Berry, Honig, Subramanian, Nguyen, Zhou and Vohra, Newsvendor Model of Capacity Sharing, **Performance Evaluation Review**, Volume 40, Issue 2, 2012
15. Thành Nguyen, On the Disjoint Paths Problem, **Operations Research Letters**, Volume 35, Issue 1, 2007

Working Papers

Financing Innovative Activity and the Endogeneity of Patenting
with Marquez, R. and Yavuz, M.D. (R&R Management Science)

Near Substitutes and Equilibria with Indivisibilities
with Rakesh Vohra

Pseudo-Market for Military Logistics
with Markos Epitropou, Can Kizilkale and Rakesh Vohra

Learning Choice Functions: A Discrete Fourier Approach
with Hai Nguyen and Haoyu Song

The Impacts of Prediction Technologies on Relational Contracts
with Parinaz Naghizadeh and Shai Vardi

The Role of Managers Revisited,
with Parinaz Naghizadeh

Stable Network Flow with Piecewise Linear Constraints,
(abstract accepted at WINE 2017)
with Young-San Lin

Book Chapters

Externalities, Complementarities and Side Constraints in Matching
Thanh Nguyen and Rakesh Vohra in *Online and Matching-Based Market Design*.
Cambridge University Press. 2022

Awards & Grants

- **(Krannert)** Ross-Lynn Postdoctoral Scholar Grant on Market-Learning-Optimization (*with W. Sun and M. Tavarmalani*) 2022-2024
- **(DARPA, \$328,000)** Pseudo Markets with Constraints & Uncertainty (*with Rakesh Vohra*) 2018-2019
- **(NSF, \$3,581,912)** Sociotechnical systems to enable smart and connected energy-aware residential communities (*with Panagiota Karava, Ilias Biliotis, James E Braun, Leigh Raymond, Torsten Reimer*) 2018-2022
- **(NSF, Co-PI, \$502,945)** Understanding strategic behavior in systems engineering: A theoretical framework based on dynamic network games of incomplete information (*with Ilias Biliotis and Jitesh Panchal*) 2017-2020
- **(NSF, PI, \$173,000)** Creating an Ecosystem for Spectrum Utilization Through Dynamic Mechanisms 2014-2018
- Jay Ross Young Faculty Scholar Award, Krannert School of Management 2016-2017
- Outstanding Core MBA Teaching Recognition, Krannert School of Management 2015, 2016, 2017, 2018
- US Patent App. 12/714,238: Weighted Proportional Sharing Mechanisms

Teaching

Optimization in Data Science (Master-Level Course)	Spring 2021
Algorithmic Decision Models (Graduate Course)	Spring 2020
Business Analytics (MBA core course), Purdue University (<i>Distinguished MBA teacher award, Instructor Evaluation 4.7/5- 4.9/5</i>)	Fall 2014-2018
Advanced Spreadsheet Modeling (Undergraduate course)	Spring 2015-2020
Social and Economic Networks (PhD course), Purdue University (<i>Instructor Evaluation 5/5</i>)	Spring 2014

Professional Experiences

Editorial Work: Naval Research Logistics (Associate Editor), Operations Research (guest Associate Editor)

Program Committee: WINE 2021, EC 2018 (senior member), EC 2013-2021; WINE 2013; AMMA 2015; MATCH-UP 2017, NetEcon (2018, 2019)

Reviewer for Operations Research Journals: Operations Research, Management Science, Mathematics of Operations Research, Information Systems Research, Production and Operations Management, Manufacturing and Service Operations Management, Mathematical Programming, Mathematical Methods of Operations Research, Operations Research Letters, European Operations Research, IEEE/ACM Transactions on Networking.

Reviewer for Economic Journals: Econometrica; Journal of Economic Theory, Games and Economic Behavior, American Economic Journal: Microeconomics, Review of Economic Design, Journal of the European Economic Association, International Economic Review

Ph.D Students

Jiang Tao (graduated 2020, Goldman Sachs)

Young-san Lin (graduating summer 2022, Melbourne business school)

Hai Nguyen (graduating winter 2022)

Invited Presentations

Allocation with Weak Priorities and General Constraints

ACM Conference on Economics and Computation 2021 Virtual

Improvement Properties in Preferences and Equilibria with Indivisibilities

ACM Conference on Economics and Computation 2021 Virtual

Pseudo Markets

Industrial and Enterprise System Engineering, UIUC November 2020

The Impacts of Prediction Technologies on Relational Contracts

Informatics Seattle 2019; WISE Munich Germany 2019

Stability in Matching Markets with Complex Constraints

EC- Phoenix Arizona 2019; Informatics Seattle 2019

The Role of Managers Revisited

Network Science Conference, Bloomington, IN, 2019; Network Science and Economics Conference, Bloomington 2019; Midwest Econ Theory Conference, Nashville 2018; Olin Business School, Washington University in St. Louis, 2018.

The Use of Scarf lemma in Market Design

Economic Department Indiana University, 2018;

Stable Matchings with Proportionality Constraints:

ACM EC 2017, Cambridge MA, NSF/NBER conference, Baltimore October 2016; INFORMS, Nashville November 2016

Near Feasible Stable Matchings with Complementarities:

Economic Department, Rice University (November 2015)
NBER Market Design Working Group Meeting (October 2015)
Chicago Booth (November 2015)
Economic Department, Ohio State University, April 2015;
Cornell University, March 2015;
Duke University, February 2015;

Competing Ad-Networks:

Ad auction workshop, Palo Alto, 2014

One-Sided Matching with Limited Complementarities:

NSF/NBER Decentralization Conference, Stanford, 2014

Delay in Trade Networks

INFORMS 2014; Allerton 2013.

Coalitional Bargaining in Networks:

Duke University, 2012; Kellogg School of Management, 2012; NSF/NBER Math Econ/GE Conference 2011; Microsoft Research New England, 2012; EC 2012

Local Bargaining and Supply Chain Instability:

NSF/NBER Decentralization Conference, California Institute of Technology, 2012; The Econometric Society's North American Summer Meetings 2012, Midwest Econ Theory 2012; EC 2012

The Cost of Free Spectrum:

INFORMS 2012.