

## STEFAN BUCHER

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### **Employment**

Postdoctoral Researcher, Univ. Tübingen AI Center & Max Planck Institute for Biological Cybernetics, 2021–  
Supervisor: Peter Dayan

### **Education**

PhD in Economics, New York University, 2015–2021

Thesis Title: “Information Constraints in Decision-Making”

Committee: Andrew Caplin, Paul Glimcher, Adam Brandenburger, Michael Woodford,  
Andrew Schotter, Eero Simoncelli

MSc in Economics, London School of Economics and Political Science, 2015

MSc in Computational Science and Engineering, ETH Zürich (Dept. of Mathematics), 2013

Semester at Ecole Polytechnique Fédérale de Lausanne (Blue Brain Project)

BSc in Computational Science and Engineering, ETH Zürich (Dept. of Mathematics), 2013

Semester at Ecole Normale Supérieure Paris (Dept. of Cognitive Science)

### **Invited Talks and Conference Presentations**

\*poster \*\*presented by co-author ♦attendance

**2023:** U Chicago Becker Friedman Institute (Conference on Rational Inattention),

NeurIPS Workshop on Information-Theoretic Principles in Cognitive Systems,

Triennial Invitational Choice Symposium, MIT Conference on Digital Experimentation\*,

Marketplace Innovation Workshop\*, AMA Summer Academic Conference\*,

Society for Neuroeconomics\*, Swiss Economists Abroad

**2022:** ASSA Meeting, Society for Neuroeconomics\*, ISMS Early-Career Scholars Camp♦

**2021:** NYU SoM Neuroscience Institute, Virtual Behavioral Economics Seminar\*\*, University of

Alicante\*\*, Cosyne\*, Society for Neuroeconomics\*, Society for Neuroscience\*, Swiss Economists  
Abroad

**2020:** Society for Neuroeconomics, NYU Economics Micro Theory Seminar, International Conference on  
Mathematical Neuroscience\*

**2019:** Workshop on the Cognitive Foundations of Economic Behavior, NYU Shanghai Neuroeconomics  
Summer School, Society for Neuroeconomics\*, Society for Neuroscience\*

**2018:** Columbia Student Workshop in Experimental Economics Techniques, Society for  
Neuroeconomics\*, Society for Neuroscience\*, Swiss Economists Abroad

### **Other Professional Activities**

Tübingen AI Center Council (elected representative), 2023–

Reinforcement Learning Algorithms Club (founder & organizer), 2023

NYU GSAS Committee on Graduate Curriculum and Financial Aid (member), 2020

Workshop on PhD applications for students from low- and middle-income countries (CaCTüS), 2022–2023

Refereeing: Nature Human Behavior

### **Honors, Fellowships, and Grants**

2020–2021 NSF Doctoral Dissertation Research Improvement Grant (\$40k)

2020–2021 NYU GSAS Dean’s Dissertation Fellowship

2015–2020 NYU GSAS Henry M. MacCracken Fellowship

2015–2016 Fulbright Scholarship

2013 Ecole Normale Supérieure Sélection Internationale, ranked 7th (of 98)

2009–2019 Swiss Study Foundation

## **Publications**

Bucher & Brandenburger (2022): “Divisive Normalization is an Efficient Code for Multivariate Pareto-Distributed Environments,” *Proceedings of the National Academy of Sciences*, 119(40):e2120581119. <https://doi.org/10.1073/pnas.2120581119>

## **Peer-Reviewed Conference Proceedings**

Kurtz-David, Alladi, Bucher, Brandenburger, Louie, Glimcher (2023): “Choosers Adapt Value Coding to the Environment, but Do Not Attain Efficiency,” *Proceedings of the Annual Mtg. of the Cognitive Science Society*, 45(45).

## **Working Papers**

“Cognition-Optimized Information Filters: Algorithmic Choice Architecture for Boundedly Rational Consumers”  
with Peter Dayan

“Inattention and Inequity in School Matching,” *NBER Working Paper 29586*. <https://doi.org/10.3386/w29586>  
with Andrew Caplin

“Dynamics of base-rate neglect: Disregarding prior probabilities while accumulating evidence,” *SSRN*. <https://dx.doi.org/10.2139/ssrn.4068498>  
with Paul Glimcher

## **Work in Progress**

“Dopamine-Revealed Preference and Beliefs over Resolving Uncertainty”  
with Zih-Yun Yan, Paul Glimcher, and Peter Dayan

“Rational Inattention in (Tiered) Matching Markets”  
with Andrew Caplin

## **Teaching Experience**

Spring 2021	Firms & Markets (Microeconomics), NYU Stern EMBA, TA for Simon Bowmaker
Summer 2020	NYU Shanghai Neuroeconomics Summer School (PhD), TA
Spring 2019	Applied Statistics & Econometrics II, NYU Master’s, TA for Banani Nandi
Fall 2018	Applied Statistics & Econometrics I, NYU Master’s, TA for George Lentzas
Spring 2017	Macroeconomic Analysis, NYU Undergraduate, TA for Giorgio Topa

## **Research Experience and Other Employment**

2014	Swiss National Bank, Money Market and Foreign Exchange Unit
2013-2014	ETH Zurich Center for Law & Economics, RA to Prof. Daniel Chen (assisted in the development of the oTree.org platform for behavioral experiments)

## **References**

(in alphabetical order)

**Professor Adam Brandenburger**  
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NYU Langone Neuroscience Institute  
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