# Nikolay Kudrin

[Latest Version]

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### Education

University of California, San Diego

La Jolla, California

PhD Candidate in Economics

2023 (expected)

Committee: Graham Elliott (chair), Kaspar Wüthrich, Yixiao Sun, Alexis Akira Toda, Ery Arias-Castro

New Economic School

Moscow, Russia

Master of Arts in Economics

Specializations: Data Analysis, Finance, Advanced Macroeconomics

**Higher School of Economics** 

Nizhny Novgorod, Russia

Bachelor of Science in Economics (magna cum laude)

2013

2015

Mathematical Methods in Economics, Econometrics

### References

Graham Elliott (Chair)

UC San Diego

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Yixiao Sun

UC San Diego

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### Fields of Interest

Econometrics, Research Transparency

### Research

### **Publications**

o "Detecting p-hacking" (with G. Elliott and K. Wüthrich), *Econometrica*, 2022.

**Abstract:** We theoretically analyze the problem of testing for p-hacking based on distributions of p-values across multiple studies. We provide general results for when such distributions have testable restrictions (are non-increasing) under the null of no p-hacking. We find novel additional testable restrictions for p-values based on t-tests. Specifically, the shape of the power functions results in both complete monotonicity as well as bounds on the distribution of p-values. These testable restrictions result in more powerful tests for the null hypothesis of no p-hacking. When there is also publication bias, our tests are joint tests for p-hacking and publication bias. A reanalysis of two prominent datasets shows the usefulness of our new tests.

### Working papers

o "Robust Caliper Tests" (Job Market Paper)

**Abstract:** Caliper tests are widely used to test for the presence of p-hacking and publication bias based on the distribution of the z-statistics across studies. We show that without additional restrictions on the distribution of true effects, Caliper tests may suffer from substantial size distortions. We propose a modification of the existing Caliper test, referred to as the Robust Caliper test, which is shown to control size irrespective of the

true effect distribution. We also propose a way of correcting the regression-based version of the Caliper test that allows for the inclusion of additional covariates. The proposed tests are easy to implement and perform well in practice.

o "(When) Can We Detect p-hacking?" (with G. Elliott and K. Wüthrich)

**Abstract:** p-Hacking can undermine the validity of empirical studies. A flourishing empirical literature investigates the prevalence of p-hacking based on the empirical distribution of reported p-values across studies. Interpreting results in this literature requires a careful understanding of the power of methods used to detect different types of p-hacking. We theoretically study the implications of likely forms of p-hacking on the distribution of reported p-values and the power of existing methods for detecting it. Power can be quite low, depending crucially on the particular p-hacking strategy and the distribution of actual effects tested by the studies. We relate the power of the tests to the costs of p-hacking and show that power tends to be larger when p-hacking is very costly. Monte Carlo simulations support our theoretical results.

### Work in Progress

o "Nonparametric Estimation of Publication Bias"

o "Uniform inference in binary response models with endogeneity"

### **Teaching Experience**

### University of California, San Diego

La Jolla, California 2016 to present

Instructor

CSS 1 (Introductory Programming for Computational Social Science)

Econ 280 (Computation)

Teaching Assistant

Graduate: Econ 220B (Econometrics) and Econ 280 (Computation).

Undergraduate: Principles of Microeconomics, Undergraduate Econometrics/Macroeconomics/Microeconomics

New Economic School

Teaching Assistant

2014–2016

Teaching Assistant
Core Graduate Econometrics, Empirics of Financial Markets, Topics in Econometrics,

Applied Microeconometrics, Applied Time Series Econometrics, Macroeconometrics

### International College of Economics and Finance

Moscow, Russia

Class Teacher

2015-2016

Elements of Statistics

#### **Higher School of Economics**

Nizhny Novgorod, Russia

Teaching Assistant

2012–2013

Probability & Mathematical Statistics, Econometrics

### **Professional Activities**

Referee service: Journal of Economic Behavior and Organization

### **Awards**

Clive Granger Research Fellowship (2021)

Zhao Family Econometrics Summer Fellowship (2020)

UCSD Graduate Summer Research Fellowship (2017, 2018)

UCSD Regents Fellowship (2016)

## Other Information

 ${\it Languages:} \ \, {\it English} \, \, ({\it fluent}), \, \, {\it Russian} \, \, ({\it native})$ 

Computer skills: MATLAB, Python, R, Stata, MS Office, LATEX