

BOYAN DUAN

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EDUCATION

Carnegie Mellon University, Pittsburgh, USA

September 2016 - June 2021 (expected)

Ph.D. in Statistics

Department of Statistics & Data Science

University of Science and Technology of China, Hefei

September 2012 - June 2016

Bachelor of Statistics

School of the Gifted Young

University of Birmingham, UK

June 2015 - August 2015

Intern in Computer Science

RESEARCH INTERESTS

Adaptive sequential experiments

Human-in-the-loop interactive testing, Anytime p -values, Martingale

Hypothesis testing in dynamic settings

Multiple testing, Nonparametric hypothesis testing, Reproducibility in science and technology

SUBMISSION AND ONGOING PROJECTS

Interactive Martingale Tests for the Global Null [arXiv](#) (EJS, major revision)

Boyan Duan, Aaditya Ramdas, Sivaraman Balakrishnan, Larry Wasserman

Propose martingale analogs of classical global null tests and further develop human-in-the-loop interactive tests.

Presented in the International Conference on Multiple Comparison Procedures (MCP) in Dec., 2019.

Familywise error rate control by interactive unmasking ([arXiv](#)) (ICML, 2020)

Boyan Duan, Aaditya Ramdas, Larry Wasserman

Develop interactive procedures for multiple testing with familywise error rate (FWER) control.

Interactive rank tests (ongoing)

Boyan Duan, Aaditya Ramdas, Larry Wasserman

Develop interactive tests to compare two/multiple samples provided with paired/unpaired data in a nonparametric setting.

TEACHING ASSISTANT

In-class tutorials, office hours, and grading for the following classes:

36-218 Probability Theory for Computer Scientists (Head TA)

36-708 Statistical Methods in Machine Learning (PhD Level Class)

36-705 Intermediate Statistics (PhD Level Class)

46-927 Statistical Machine Learning II

36-410 Introduction to Probability Modeling

36-401 Modern Regression

36-217 Probability Theory and Random Processes

36-225 Introduction to Probability Theory