

# ROMAN SIGALOV

[rsigalov@g.harvard.edu](mailto:rsigalov@g.harvard.edu) ♦ [rsigalov.github.io](https://rsigalov.github.io)

## EDUCATION

---

**Harvard University** *2017 - 2023 (expected)*  
PhD Candidate, Business Economics

**New Economic School** *2013 - 2017*  
Bachelor of Arts in Economics, *summa cum laude*. Bachelor of Excellence award

## WORK EXPERIENCE

---

**Goldman Sachs, Summer Associate** *Jul. 2021 - Aug. 2021*  
Investment Strategy Group. Systematic Option Strategies

## RESEARCH

---

### **Jump risk: estimation and implications**

*(with Nikunj Kapadia and Emil Siriwardane)*

- Estimated model free jump measure based on difference between risk-neutral variance and integrated variation for the full cross section of equity option
- Portfolio sorts on the average jump measure are priced in the cross-section of stock returns
- Used particle filtering and maximum likelihood to show that leading macro-finance models are inconsistent with the time-series of the empirical jump measure

### **Real and Financial Options: A Production Based Approach to Option Pricing**

- Documented higher skews for growth firms in expansions but not in recessions.
- Priced options in a novel model based on firms investments consistent with the finding.
- Solved a dynamic optimization problem utilizing large scale parallelization with multiple GPUs to match the model quantitatively to the data.

### **Portfolio choice with sustainable spending: A model of reaching for yield**

*(Journal of Financial Economics, 2022, with John Y. Campbell)*

- Solved a dynamic portfolio choice model with a constraint linking spending rate and expected portfolio return.
- Showed that a lower real interest rates lead to more risk-taking in both static and dynamic models.

## TECHNICAL SKILLS

---

**Programming Languages:** Python (Numba, JAX for GPU acceleration), R, Julia

## TEACHING EXPERIENCE

---

Teaching Assistant to Tarek A. Hassan, PhD Level Asset Pricing *Spring 2021*

Teaching Assistant to John Y. Campbell, PhD Level Asset Pricing *Fall 2019*