

HESAM NEKOOROUY-MOTLAGH

Curriculum Vitae

February 4, 2021

Contact Information

Name: Hesam Nekoouroy-Motlagh

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Summary Statement

My academic interests lie in understanding the molecular mechanisms of disease and translating these principles into viable businesses. Professionally, I am actively involved in the entrepreneurial ecosystem by meeting and advising entrepreneurs. Previously, I was trained in molecular biophysics where my research focused on statistical thermodynamics of proteins and building a laser optical tweezers to test hypotheses informed from simulation. Subsequently, I obtained academic appointments where I lectured and researched financial valuation while also working for hedge funds. My current projects include: advising startups through my role in venture capital, using statistical simulation techniques to evaluate biotechnology businesses, a grant for a novel drug combination in preclinical trials at Stanford Medicine, and teaching curriculum at Stanford to prepare the next generation of biotechnology practitioners.

Education and Training

Stanford Graduate School of Business – Stanford, CA
Master of Business Administration (2020)

The Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise – Baltimore, MD

Postdoctoral Fellow (2016-2018)

Supervised by Steve H. Hanke (Professor in the Department of Environmental Health and Engineering)

The Johns Hopkins University – Baltimore, MD

Doctor of Philosophy, Program in Molecular Biophysics (2015)

Laboratory of Vincent J. Hilser (Professor and Chair of the Department of Biology)

Thesis Title: "Allostery and Intrinsic Disorder in Ensembles and Single Molecules"

Miami University Honors Program (Harrison Scholar) – Oxford, OH

Bachelor of Science in Biochemistry - summa cum laude (2010)

Bachelor of Science in Mathematics & Statistics - summa cum laude (2010)

Minors: Molecular Biology and Actuarial Science

Academic Appointments

Stanford University School of Medicine – Palo Alto, CA

Adjunct Professor in the Department of Structural Biology (2021-Present)

The Johns Hopkins University – Baltimore, MD

Fellow in The Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise (2016-Present)

The Johns Hopkins University – Baltimore, MD

Visiting Scholar in the Department of History (2016-Present)

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Selected Professional Experience

Khosla Ventures – Menlo Park, CA

Chief of Staff to Vinod Khosla (2021-Present)

Seer Biosciences, Inc. – San Francisco, CA

Senior Corporate and Financial Strategy Analyst (2019-2020)

Pear VC – Palo Alto, CA

Pear Fellow (2018-2020)

Croft-Leominster Investment Management – Baltimore, MD

Quantitative Research Analyst (2015-2018)

Hanke-Guttridge Capital Management – Baltimore, MD

Hedge Fund Analyst (2015)

Publications and Research

Peer-reviewed Publications - Chronological Order

1. Agonism/antagonism switching in allosteric ensembles, *Proceedings of the National Academy of Sciences of the United States of America*. Motlagh HN and Hilser VJ. **109**, 4134-4139 (2012).
2. Structural and energetic basis of allostery, *Annual Review of Biophysics*. Hilser VJ, Wrabl JO, and Motlagh HN. **41**, 585-609 (2012).
3. Thermodynamic dissection of the intrinsically disordered N-terminal domain of human glucocorticoid receptor, *Journal of Biological Chemistry*. Li J, Motlagh HN, Chakuroff C, Thompson EB, and Hilser VJ. **287**, 26777-26787 (2012).
4. Interplay between allostery and intrinsic disorder in an ensemble, *Biochemical Society Transactions*. Motlagh HN, Li J, Thompson EB, and Hilser VJ. **40**, 975-980 (2012).
5. The ensemble nature of allostery, *Nature*. Motlagh HN, Wrabl JO, Li J, and Hilser VJ. 2014. **508**, 331-339 (2014).
Highlighted on journal cover.
6. Disordered allostery: lessons from glucocorticoid receptor, *Biophysical Reviews*. Motlagh HN, Anderson JA, Li J, and Hilser VJ. **7**, 257-265 (2015).
7. Allosteric regulation and intrinsic disorder in nuclear hormone receptors, *Nuclear Receptors: From Structure to the Clinic*. 73-91 (2015).
8. Allostery vs. “allokairy”, *Proceedings of the National Academy of the Sciences of the United States of America*. Hilser VJ, Anderson JA, and Motlagh HN. **112**, 11430-11431 (2015).
9. Single-molecule chemo-mechanical spectroscopy provides structural identity of folding intermediates, *Biophysical Journal*. Motlagh HN*, Toptygin D, Kaiser CM, and Hilser VJ*. **110**, 1280-1290 (2016).

***Denotes co-corresponding authors; highlighted by journal as “New and Notable” with companion publication:** Untangling a Structurally Resolved Protein Folding Intermediate, *Biophysical Journal*. Auton M. 2016. 110 (6), 1205-1206.

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10. Genetically tunable frustration controls allostery in an intrinsically disordered transcription factor, *Elife*. Li J, White JT, Saavedra H, Wrabl JO, Motlagh HN, Liu K, Sowers J, Schroer TA, Thompson EB, and Hilser VJ. **6**, e30688 (2017).

Working Papers - Chronological Order

1. Investment Thesis for Polskie Gornictwo Naftowe I Gazowincto (WSE: PGN), *Studies in Applied Finance*. Hanke SH, Motlagh HN, and Subramanya A. **15**, 1-30 (2017).
2. Probabilistic Valuation of Nanotronics, *Studies in Applied Finance*. Hanke SH, Gomez C, and Motlagh HN. **26**, 1-27 (2019).
3. On the Quest for the Holy Grail of Diversification, *Studies in Applied Finance*. **29**, 1-22 (2020). Motlagh HN and Hanke SH.

Administrative Appointments

Editor, *Studies in Applied Finance* Working Paper Series at The Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise (2016-Present)

Books

Motlagh HN and Hanke SH. (2021) "Security Analysis: A Probabilistic Approach." (In preparation for Wiley Finance)

Teaching Experience

2020-2021

- *Primary Instructor* – Preparation and Practice: Finance of Biotechnology (Winter 2021). Managing Instructor: Stephanie Eberle. Secondary Instructor: Todd Meyerrose. Stanford University School of Medicine.
- *Secondary Instructor* – Preparation and Practice: Business of Biotechnology (Spring 2021). Managing Instructor: Stephanie Eberle. Primary Instructor: Todd Meyerrose. Stanford University School of Medicine.

2019-2020

- *Secondary Instructor and Teaching Assistant* – Preparation and Practice: Biotechnology Business and Finance (Winter 2020). Managing Instructor: Stephanie Eberle. Primary Instructor: Todd Meyerrose. Stanford University School of Medicine.
- *Guest Lecturer* – Applied Economics and Finance (Fall 2019). Primary Instructor: Steve Hanke. The Johns Hopkins University.

2017-2018

- *Primary Instructor* – Applied Economics and Finance (Fall 2017 and Spring 2018). The Johns Hopkins University.

2016-2017

- *Primary Instructor* – Applied Economics and Finance (Fall 2016, Spring 2017, and Summer 2017). The Johns Hopkins University.

2015-2016

- *Primary Instructor* – Applied Economics and Finance (Spring 2016 and Summer 2016). The Johns Hopkins University.

2013-2014

- *Head Teaching Assistant* – Graduate Biophysical Chemistry (Spring 2014). Primary Instructors: Greg Bowman, Juliette Lecomte, Vincent Hilser, Elijah Roberts, and Andrew Martens. The Johns Hopkins University.

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2012-2013

- *Teaching Assistant* – Graduate Biophysical Chemistry (Spring 2013). Primary Instructors: Greg Bowman, Carolyn Fitch, Ernesto Freire, Vincent Hilser, and Sarah Woodson. The Johns Hopkins University.

2011-2012

- *Teaching Assistant* – Intro to Biophysical Chemistry. Primary Instructor: Doug Barrick (Spring 2012). The Johns Hopkins University.