

# NOA ZYCHLINSKI

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MARCH 2025

## ACADEMIC POSITION

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Oct 2020 – present **Assistant Professor**, Technion – Israel Institute of Technology,  
Faculty of Data and Decision Sciences

Sep 2018 – Sep 2020 **Postdoctoral Research Fellow**, Columbia Business School,  
The Decision, Risk, and Operations Division, NYC

## EDUCATION

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2013 – 2018 **PhD Technion** – Israel Institute of Technology, Faculty of Industrial Engineering and  
Management. Advisors: Prof. Avishai Mandelbaum and Dr. Izack Cohen

2010 – 2012 **MSc Technion** – Israel Institute of Technology, Faculty of Industrial Engineering and  
Management. Advisors: Prof. Avishai Mandelbaum and Dr. Izack Cohen  
Graduated Summa Cum Laude

2001 – 2005 **BSc Technion** – Israel Institute of Technology, Faculty of Industrial Engineering and  
Management. Major: Business Information Systems.  
Graduated Cum Laude

## RESEARCH INTERESTS

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My research focuses on service operations and management. I am interested in the analysis of queueing networks and their applications, the theory of stochastic process approximation, and data analysis of large service systems. I work primarily on operational models that are motivated by healthcare systems, in which strategic and operational decisions have the potential to improve patient care and patient outcomes, shorten waiting times and reduce operational costs.

## SUBMITTED PAPERS

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(Students are marked with an asterisk)

- Zychlinski N., Gurvich I., *The Production of Service: Complementarity and Substitution in Processing Networks*
- Liu N., Wang S., Zychlinski N., *Brick or Click: Managing Outpatient (Tele)visits with Strategic Behavior* (Alphabetical order)
- Zychlinski N., Mendelson G., Daw A., *The Hybrid Hospital: Balancing On-Site and Remote Hospitalization*
- Momcilovich P., Zychlinski N., *Service Anatomy: Integrating Acute and Post-Acute Care*
- Zychlinski N., *Managing a Mass Trauma Event: An Operational Perspective Using Fluid Models*
- Shmelev A.\*, Zychlinski N., *The Power of Letting Go: Scheduling, Rejections and Controlled Abandonments in Multi-Server Queues*
- Cai J.\*, Zychlinski N., *Expanding Naloxone Accessibility: A Lifesaver or a Risky Setback?*

#### REFEREED PAPERS IN PROFESSIONAL JOURNALS

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- Cai J.\*, Zychlinski N., When AI Is Not Enough: Reducing Diagnostic Errors with Radiologist Oversight, *Service Science*, forthcoming
- Zychlinski N., Fluss R., Goldberg Y., Zibli D., Barkai G., Zimlichman E., Segal G., 2024, Tele-medicine Controlled Hospital-at-Home Treatment of Acutely Ill Patients is Associated with Better Clinical Outcomes when Compared to In-Hospital Stay, *PlosOne*, 19(8): e0309077
- Managing Queues with Reentrant Customers in Support of Hybrid Healthcare, 2024, *Stochastic Systems*, 14(2): 167-190
- Applications of fluid models in service operations management, 2023, *Queueing Systems*, 1-25
- Managing Queues with Different Resource Requirements, with Chan C.W. and Dong J., 2022, *Operations Research*, forthcoming
- Bed Blocking in Hospitals due to Scarce Capacity in Geriatric Institutions - Cost Minimization via Fluid Models, with Mandelbaum A., Momcilovich P., and Cohen I., 2020 *Manufacturing & Service Operations Management* 22(2), 223-428
- Time-varying Multi-Server Tandem Networks: Comparing Blocking Mechanisms via Fluid Models with Reflection, with Mandelbaum A. and Momcilovich P., 2018, *Operations Research Letters* 46(5) 492-499
- Tandem Queues with Blocking: Modeling, Analysis and Operational Insights via Fluid Models with Reflection, with Mandelbaum A. and Momcilovich P., 2018, *Queueing Systems* 89(1), 15-47
- Minimizing Mortality in a Mass Casualty Event: Fluid Networks in Support of Modeling and Staffing, with Cohen, I., and Mandelbaum A., 2014, *IIE Transactions* 46(7) 728-741

#### REFEREED PAPERS IN CONFERENCE PROCEEDINGS

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- Scheduling Queues with Simultaneous and Heterogeneous Requirements from Multiple Types of Servers, with Chan, C.W, Dong, J., 2020, Proceeding of the 2020 Winter Simulation Conference
- Neustatel D.\* and Schmid T.\*, Zychlinski N., Coordination of Hospital Parking and Transportation Services: A Simulation-Based Approach, 2023, Proceeding of the 2023 Winter Simulation Conference
- Amouyal S.\*, Zychlinski N., Equity-Driven Management of Essential Environmental Resources Under Price-Based Consumption, 2023, Proceeding of the 2023 Winter Simulation Conference

#### FELLOWSHIPS AND GRANTS

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- 2024–2025 The Bernard M. Gordon Center for Systems Engineering at the Technion, Research Grant 2034807, Managing Mass Trauma Events: An Operational Perspective Using Queuing Models
- Israel National Institute for Health Policy Research, Research Grant Application 2021/160, Managing Hybrid Hospital Internal Medicine Ward: In-Hospital and Hospital at Home using Telemedicine – *Mathematical Modeling, Optimization and Applications*, USD\$50,000, 2022-2024
- The Harold and Inge Marcus Endowment for Technion/PSU IE Partnership, *Optimizing Resource Allocation and Staffing to Improve Continuity of Care: A Data-Driven Approach*. USD\$10,000, 2022-2023
- Israel Science Foundation (ISF), Research Grant Application 277/21, *Optimizing service anatomy in queueing networks: The case of acute and post-acute care*. USD\$400,000, 2021-2024

- Career Advancement Chair in Economics and Finance, Technion, 2020-2022
- The Israeli Council for Higher Education Postdoctoral Fellowship, USD\$80,000, 2018–2019
- The Eric and Wendy Schmidt Postdoctoral Award for Women in Mathematical and Computing Sciences, USD\$100,000, 2018 – 2019
- Israel Ministry of Science, Technology and Space (MOST), Outstanding PhD Student Grant in the Field of Applied and Engineering Science, USD\$71,000, 2016–2018
- Technion, Doctoral Fellowship, 2013–2018
- Technion, Graduate fellowship, 2010–2012

#### HONORS AND AWARDS

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- Technion, commendation for teaching excellence – awarded based on students’ evaluations, 2021
- Career Advancement Chair, Technion, 2020
- Muriel and David Jacknow Award for continuous excellence in teaching, USD\$2,500, 2018
- Faculty of Industrial Engineering and Management, Technion, First Place: Best Research Poster Competition, 2017
- Technion, Excellent Teaching Assistant Award – awarded based on students’ evaluations, 2011–2018
- The “Jewish National Fund” Excellence Student Award, 2011
- Technion, President’s Award for Distinction, 2004–2005
- Signal Corps Best Officer Award, Israel Defense Forces, 2001

#### CONFERENCES AND INVITED TALKS

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- The 2024 Euro Conference, Copenhagen, Denmark 2024
- The 2023 ORSIS Conference, Tel Aviv, Israel, April 2023
- The 2022 MSOM Conference, Munich, Germany, June 2022
- The 2022 ORSIS Conference, Jerusalem, Israel, May 2022
- The 10th National IEM Research Conference, Tel Aviv University, April 2022
- The 2021 ORSIS Conference, Technion, Israel, August 2021
- The 2020 Winter Simulation Conference, Orlando, FL, USA, December 2020
- Seminar talk, Department of Operations Research and Information Engineering, Cornell University, NY, USA, February 2019
- Seminar talk, Cornell-Tech, NY, USA, February 2019
- Seminar talk, Department of Industrial Engineering and Operations Management, University of California, Berkeley, USA, January 2019
- Seminar talk, Kelley School of Business, University of Indiana, Indiana, USA, January 2019
- Seminar talk, The Jerusalem School of Business Administration, The Hebrew University, Israel, December 2019
- Seminar talk, Faculty of Engineering, Tel Aviv University, Israel, December 2019
- Seminar talk, Faculty of Industrial Engineering and Management, Technion, Israel, December 2019
- Seminar talk, Department of Industrial Engineering and Manufacturing, Penn State University, State College, PA, USA, December 2019
- The 2019 INFORMS Annual Meeting, Seattle, Washington, USA, October 2019

- Cornell ORIE Young Researcher Workshop, Ithaca, NY, USA, October 2019
- The 2019 INFORMS Healthcare Conference, Cambridge, Massachusetts, USA, July 2019
- Seminar talk, Simon Business School, Rochester University, Rochester, NY, USA, March 2019
- Seminar talk, Stern Business School, NYU, New York, NY, USA, February 2019
- Seminar talk, Columbia Business School, New York, NY, USA, November 2018
- The 2018 INFORMS Annual Meeting, Phoenix, Arizona, USA, November 2018
- The 2018 European Conference of Queueing Theory (ECQT), Israel, July 2018
- Seminar talk, Faculty of Engineering, Tel Aviv University, Israel, May 2018
- Seminar talk, Coller School of Management, Tel Aviv University, Israel, May 2018
- The Operations Research Conference in memory of Prof. Uriel Rothblum, Israel, January 2018
- Seminar talk, Technion–Israel Institute of Technology, Israel, November 2017
- Seminar talk, Ben-Gurion University of the Negev, Israel, November 2017
- Seminar talk, Yale School of Management, New Haven, Connecticut, USA, October 2017
- The 2017 INFORMS Annual Meeting, Huston, Texas, USA, October 2017
- The International POMS Conference, Israel, June 2017
- The 10<sup>th</sup> Young European Queueing Theorists (YEQT) Workshop, EURANDOM, Eindhoven University of Technology, Eindhoven, the Netherlands, November 2016
- The 8<sup>th</sup> IMA Conference on Quantitative Modelling in the Management of Health and Social Care, England, March 2016
- The 18<sup>th</sup> IE&M Conference, Israel, March 2014

## TEACHING EXPERIENCE

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### Teacher In-Charge

- Simulation – Modeling, Analysis and Applications (undergraduate)
- Project management (undergraduate)
- Seminar on Analytics of Healthcare Networks (graduate)

### Research Project Advisor (as part of the Excellence Program):

- Ziv Keidar
- Shai Bakal
- Reut Shapira

### Teaching Assistant at Columbia Business School:

2019 **Operations Management** (Executive MBA)

Teaching Assistant at the Technion in the following courses:

2015 – 2018 **Service Engineering** (undergraduate and graduate)

2014 **Advanced Topics in IE - Healthcare Operation** (graduate)

2010 – 2017 **Introduction to Probability and Statistics** (undergraduate)

2011 – 2012 **Facility Layout and Location Planning** (undergraduate and graduate)

**PROFESSIONAL EXPERIENCE**

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2005 – 2010 Mediatech Information Technologies, Israel

2008 – 2010 Team Leader and Senior Project Manager of ERP system implementation projects

2005 – 2007 Project manager of ERP system implementation projects

1997 – 2001 Computer and signal officer as part of IDF compulsory service

**MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS**

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- INFORMS – Institute for Operations Research and the Management Sciences
- MSOM - Manufacturing and Service Operations Management
- POMS - Production and Operations Management Society
- ORSIS - The Operations Research Society of Israel