

SANDEEP RATH

sandeep_rath@isb.edu | rath.sandeep@gmail.com

rathsandeep.github.io | ISB, Hyderabad

PROFILE

Operations researcher and clinical AI expert with 10+ years building and deploying data-driven models at UCLA Ronald Reagan Medical Center, UNC Health, UPMC, and the VA, generating millions in documented annual savings. Published in top-tier Operations Research journals including *Operations Research*, *POM*, and *M&SOM*. INFORMS Innovative Analytics Award Finalist. Active advisor to healthtech firms and the Government and Industry bodies in India on digital health.

CORE EXPERTISE

Clinical AI	EHR pipelines, perioperative outcome modeling, clinical decision support
Health Systems	OR scheduling, workforce planning, care coordination, digital health adoption, surgical inventory management
Methods	Mixed-integer optimization, ML, causal inference, simulation, MDP, dynamic programming
Technical	Python, R, Julia, Gurobi, SQL, scikit-learn, PyTorch, pandas, git

EDUCATION

UCLA Anderson School of Management 2016
PhD, Management (Operations Management) — *Dissertation: Resource Planning Models for Healthcare Organizations*

Indian Institute of Technology, Kharagpur 2006
M.Tech., Instrumentation Engineering — *Dissertation: CART for Natural Text to Speech for Indian Languages* |
B.Tech., Electrical Engineering | Minor, Electronics & Telecommunication

EXPERIENCE

Academic

Indian School of Business 2025–present
Assistant Professor, Operations Management *Hyderabad, India*

- Research: surgical AI, clinical operations, digital workflow optimization, healthcare workforce planning, AI adoption in clinical settings
- Teaching: Operations Management, Healthcare Operations, Managing Services in the Digital World. Executive programs on AI in Healthcare for industry and public health leaders.

Kenan-Flagler Business School, UNC Chapel Hill 2016–2025
Assistant Professor *Chapel Hill, NC*

- Collaborated with 4 major US health systems; deployed optimization models generating several million dollars in annual savings
- Taught Operations Management and Healthcare & Service Operations (avg. rating: 4.69–4.75/5); reviewer for *OR*, *MS*, *M&SOM*, *POM*

Industry

Schlumberger Ltd. 2007–2010
Manufacturing Engineer *Pune; Houston; Paris*

- Lean six sigma process improvement; global supply chain IT systems management

ITC Ltd. 2006–2007
Assistant Manager, Operations *Chennai*

- Stabilised new manufacturing process for a \$5M annual-revenue product line

ADVISORY & CONSULTING

- Scientific Advisor & Consultant — Health & Technology** 2025–present
- **Jano Health** (digital health) — evaluation of AI-driven care management platform.
 - **Altysys** (technology) — led design and development of a prototype AI-driven care management dashboard.
 - **Updeed** (social good platform) — platform strategy and design.
- Anchor, NABH Working Group on Digital Health Adoption** 2025–present
NABH (National healthcare standards body)
- Driving adoption for digital health standards and best practices in India.
- Team Member, ISB–Govt of Telangana AI in Healthcare Partnership** 2025–present
- Evaluating AI applications in public health systems for Government of Telangana State.

SELECTED PUBLICATIONS — CLINICAL AI & SURGICAL OPERATIONS

1. **Rath, S.**, Rajaram, K., Mahajan, A. Integrated Anesthesiologist and Room Scheduling for Surgeries. *Operations Research*, 2017.
2. Deshpande, V., Mundru, N., **Rath, S.**, et al. Data-Driven Surgical Tray Optimization. *Operations Research*, 2024. — *INFORMS Innovative Analytics Award Finalist 2022.*
3. **Rath, S.**, Rajaram, K., Hudson, M.E., Mahajan, A. Multi-location Dynamic Staff Planning for a Healthcare System. *Operations Research*, 2025.
4. **Rath, S.**, Rajaram, K. Staff Planning for Hospitals with Implicit Cost Estimation. *POM*, 2022.
5. **Rath, S.**, Swaminathan, J., Coleman, C. Collaborative Care for Depression and Diabetes. *Production & Operations Management Journal*, 2025.
6. Celik, U., **Rath, S.**, Kesavan, S., Staats, B. Physician EHR Task Timing and Workload. *M&SOM*, 2024.
7. Deo, S., Rajaram, K., **Rath, S.**, et al. HIV Screening, Testing, and Care at the VA. *Operations Research*, 2015.

Working papers: Surgical Block Auto-Release Planning (with UNC Health); Reducing Appointment Delays via EHR Standardisation (*Maj. Rev.*, *M&SOM*). *Medical journals:* *Annals of Plastic Surgery* (2021); *Journal of Vascular Surgery* (2021).

HONORS

- Bullard Faculty Research Impact Award, UNC (2024)
- Finalist, INFORMS Innovative Analytics Award (2022)
- POMS CHOM Research-in-Practice Showcase (2022)
- UCLA Dissertation Year Fellowship (2015–16)

MEDIA COVERAGE

- New Research Finds Data-Driven Staffing Model Delivers Major Cost Savings for Healthcare Systems — *INFORMS News*, 2025
- A Major Medical Center Gets a Cheaper, Fairer Way to Assign Doctors — *UCLA Anderson Review*, 2025
- New Research Finds Data-Driven Staffing Model Delivers Major Cost Savings for Health Care Systems — *Medical Express*, 2025
- Data-Based Physician Staffing Stands to Save Millions of Dollars for Multi-Hospital Health Systems — *HealthExec*, 2025
- Collaborating to Cut Hospital Costs — *UNC Kenan-Flagler News*, 2022
- Surgeons Diagnose a Problem and Find a Business Solution — *UNC Kenan-Flagler News*, 2022
- A Scheduling Tool that Considers Employee Preferences — *UCLA Anderson Review*, November 2021