

Curriculum Vitae

ANANYA SHETH

**Post-doctoral Research Fellow
Stevens Business School
Stevens Institute of Technology, NJ**

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LATEST DEGREE EARNED

2016 – 2021 Doctor of Philosophy
Dissertation Title: Pathways to Enterprise Resilience

Concentration: Innovation and Transformational Design
The Institute for Innovation Science
The Lyles School of Civil Engineering
Purdue University, IN. USA

INDUSTRY-ACADEMIA PARTNERSHIP RESEARCH

2018-2022 Served on research projects linked to **Innovation Strategy** with the Proctor & Gamble Co. (Corporate R&D Organization, Feminine Care Business Division, and Oral Care Business Division) via The Consortium for Corporate Entrepreneurship, Stevens Institute of Technology, and The Institute for Innovation Science, Purdue University

AWARDS

2021 **NSF dissertation grant (co-PI)** Awarded by the Decision, Risk, and Management Science, Division of Social and Economic Sciences, **National Science Foundation**.
Grant Title: Doctoral Dissertation Research in DRMS: Building a comprehensive understanding of enterprise risks and their interdependencies for improved risk-intelligence.



https://www.nsf.gov/awardsearch/showAward?AWD_ID=2049782&HistoricalAwards=false

2021 Business model competition Burton D. Morgan Business Model Competition, Purdue University
Awarded the best social innovation business plan

2019 Grant Purdue University Graduate School

2015 Scholarship Construction Management Association of America – Chicago

2012 Finalist Go Green in the City 2012 – A top-tier global annual innovation challenge by Schneider Electric – Paris

PEER-REVIEWED PAPERS (PUBLISHED)

- 2022 Sheth, A. An analytical framework to compare innovation strategies and
Sinfield, JV. identify simple rules. **Technovation**, 115, 102534.
<https://doi.org/10.1016/j.technovation.2022.102534>
- 2022 Sheth, A. Resiliency of Smart Manufacturing Enterprises via Information
Kusiak, A. Integration. **Journal of Industrial Information Integration**, 100370.
<https://doi.org/10.1016/j.jii.2022.100370>
- 2021 Sheth, A. Systematic Problem-specification in Innovation Science using
Sinfield, JV. Language. **The International Journal of Innovation Science**
<https://doi.org/10.1108/IJIS-03-2020-0019>
- 2020 Sinfield, JV. Framing the Intractable: Comprehensive Success Factors for Grand
Sheth, A. Challenges. **Sustainable Futures** 2020, 2.
Kotian, RR. <https://doi.org/10.1016/j.sftr.2020.100037>
- 2014 Sheth, A. Properties of Concrete on Replacement of Coarse Aggregate and
Goel, A. Cementitious Materials with Styrofoam and Rice Husk Ash
Pai, BV. American Journal of Engineering Research 2014, 3(1), 268-271.

PEER-REVIEWED PAPERS (R&R)

- 2022 Sheth, A. Building Resilient Enterprises
Sinfield, JV. **MIT Sloan Management Review**
- 2022 Morkan, B. Building Megaproject Resilience with Stakeholders: The Roles of
Bertels, H. Citizenship Behavior and Critical Transition Mechanisms
Sheth, A. **International Journal of Project Management: SI on Resilience in Project**
Holahan, P. Studies

PEER-REVIEWED PAPERS (IN-REVIEW)

- 2022 Sheth, A. Collective leadership in Top Management Teams (TMTs): Individual
Sinfield, JV. behaviors and TMT performance
Organization Science
- 2022 Bishop, S. Leadership Behaviors Needed to Implement Ambidextrous
DiPaola, M. Organizations within Large Incumbent Firms
Hill, L. **Harvard Business Review**
Koen, P.
Sheth, A.
- 2022 Sheth, A. A Taxonomy of Enterprise Risk Events
Sinfield, JV. **Journal of Business Research**

INVITED TALKS

- 2021 CASN-RA A Comprehensive Typology of Complex Supply Chain Risk Networks
ASU Venue: Complex Adaptive Supply Networks – Research Accelerator,
Arizona State University
Co-presented with Prof. Rachna Shah (Carlson School - UMN)

WORKING PAPERS

- 2022 Sheth A. "Where to play?" An Expanded Three-Part Exploration Typology for Large Incumbent Firms
Koen P. **Academy of Management Review**
- 2022 Sheth, A. Variations in firm riskiness and their causes: An industry-firm multi-level analysis
Shah, R. **Management Science**
Sinfield, JV.
- 2021 Sheth, A. A Comprehensive View of Corporate Risks: A data-driven approach
Rayz, J. Venue Undecided
Sinfield, JV.

COMPETITIVE GRANT WRITING

- 2021 Co-PI on a **fulfilled NSF grant** Doctoral Dissertation Research Improvement Grant – Decision, Risk, Management Science, Division of Social and Economic Sciences, **National Science Foundation.**
- Grant Title: Doctoral Dissertation Research in DRMS: Building a comprehensive understanding of enterprise risks and their interdependencies for improved risk-intelligence.
- https://www.nsf.gov/awardsearch/showAward?AWD_ID=2049782&HistoricalAwards=false
- 2016 Fellowship **Kauffmann Foundation** graduate research grant
Grant Title: Embracing change: the art of transformation for the intrapreneur. (not awarded)

REFEREED CONFERENCE PAPERS

- 2022 Morkan, B. Managing with Stakeholders: Citizenship Behavior Action Strategies for Mega Project Resilience
Bertels, H. **Eastern Academy of Management, 2022**
Sheth, A.
Holahan, P.
- 2019 Sheth, A., Simulating Self-Organization during Strategic Change: Implications for Organizational Design.
Sinfield, JV. **Collective Intelligence** 2019, Carnegie Mellon University – Pittsburgh. arXiv:2007.08521v1
- 2018 Sheth, A., Applying 'simple-rules' to simulate managerial adaptation to strategic change
Sinfield, JV. **European Group for Organizational Studies (EGOS)** 2018, Tallinn, Estonia
- 2017 Sheth, A., Swarm Intelligence and Organizations.
Sinfield, JV. **Society for Industrial and Applied Mathematics (SIAM)**

PAPER DEVELOPMENT WORKSHOPS

- 2018 Sheth, A., Towards proactive organizational change.
Sinfield, JV. Paper Development Workshop - **Academy of Management (AOM)**
2019 Chicago
- 2018 Sheth, A., The theory of proactive organizational resilience.
Sinfield, JV. **Academy of Management Review (AMR)** 2018, Haas School of
Business, University of California Berkeley

REFREED POSTERS

- 2020 Sheth, A., Towards Resilient Organizations- Beginning with a Typology of Risks.
Sinfield, JV. Purdue's intramural annual Sigma Xi poster competition
- 2019 Lin, YC., Enabling Innovation in Action
Lumpkin, D. The Civil Engineering Graduate Research Symposium – Purdue
Sheth, A., University
Sinfield, JV.

OTHER PUBLICATIONS

- 2019 Sheth, A., Enabling Innovation Insights Report for the **Proctor & Gamble Co.**
Sinfield, JV.
- 2019 Sheth, A., Enabling Innovation Implementer's Guide for the **Proctor & Gamble**
Sinfield, JV. **Co.**
- 2018 Sheth, A., Synthesis Study: Overview of Readily Available Culvert Inspection
Sinfield, JV. Technologies – Joint Transportation Research Program
Indiana State Department of Transport (INDOT)

TEACHING AND MENTORING EXPERIENCE

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| Present | Lecturer | MGT-103: Introduction to Entrepreneurial Thinking at The Stevens Business School, Stevens Institute of Technology. Mandatory course for all first-year engineering students (550+ students). Taught in collaboration with 11 other faculty members. |
| Present | Mentor | Two Ph.D. candidates at the Institute for Innovation Science (Innovation Science Lab), Purdue University. |
| Spring 2020 | Proxy Lecturer | Purdue University class ENGR 490 on Breakthrough Thinking for Complex Challenges. I introduced undergraduate seniors and juniors to Systems Thinking, covering the variety of system, complexity and associated concepts, and their application to the class project. https://www.youtube.com/watch?v=IDO0272iydM |
| 2018-2020 | Lab coach | Transferred research skills and new methods to the Innovation Science Lab group on a monthly basis as part of our lab's research effectiveness and skill transfer agenda. This often involved teaching methods to students working in parallel areas. |

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| 2019-2020 | Mentor | Played the role of mentor to one incoming graduate student under the Purdue Civil Engineering peer-mentoring program 2019-2020 |
| 2015-2017 | Facilitator | A component of my job as program manager for URGlobal was facilitating discussions and hosting training sessions for undergraduate club officers. These trainings encompassed methods to design learning programs, techniques to deliver them and improve student engagement, as well as personality introspection. |

SERVICE

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| 2020-2021 | Team lead | Purdue Engineering Initiative on Innovation & Making – Aggregation of innovation resources at Purdue University and website design |
| 2017-2021 | Reviewer | The Academy of Management (AOM) annual meeting |
| 2018-2022 | Reviewer | The International Journal of Systematic Innovation |
| 2021-2022 | Reviewer | The International Journal of Innovation Science |
| 2016-2018 | Co-chair | Professional development committee for the Civil Engineering Graduate Students Advisory Council (CEGSAC) – Purdue University |
| 2018-2019 | Organizer | Research Bytes seminar series, Graduate research symposium series, and Successful Alumni series of the CEGSAC |

INDUSTRY WORK EXPERIENCE

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| 2018-2021 | Researcher | Proctor & Gamble Co. <ul style="list-style-type: none"> Served on industry-academia partnership research projects <ul style="list-style-type: none"> with the Corporate R&D Organization with the Feminine Care Business Division with the Oral Care Business Division |
| 2020 | Research Fellow | DigitalDx Ventures <ul style="list-style-type: none"> Participated in organization strategy for the venture fund |
| 2019 | Research fellow | Purdue Ventures <ul style="list-style-type: none"> Lead researcher for the due diligence effort on an early-stage Purdue-licensed technology for a \$500,000 funding round |
| 2014-2016 | Assistant Program Manager | Purdue University Residences <ul style="list-style-type: none"> Built the UR Global program and Student Club. Led trainings and conducted leadership workshops for 30+ student volunteers Organized 30+ events for international undergraduate students' development |

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| 2012-2014 | Assistant Project Manager | V-Create Architects, India <ul style="list-style-type: none"> Delivered two construction projects and played key roles in all phases of the construction life cycle. Led the operations team to deliver 67,000 sft. of space on time and within budget, maintaining an optimum construction cycle |
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EDUCATION AND TRAINING

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| 2021 – 2022 | Post-doctoral Research Fellow The Consortium for Corporate Entrepreneurship Stevens Business School Stevens Institute of Technology, Hoboken, NJ. USA |
| 2016 – 2021 | Doctor of Philosophy Concentration: Innovation and Transformational Design Dissertation: Pathways to Enterprise Resilience The Institute for Innovation Science The Lyles School of Civil Engineering Purdue University, IN. USA |
| 2014 – 2016 | Master of Science The Lyles School of Civil Engineering Purdue University, USA GPA: 3.83 |
| 2008 – 2012 | Bachelor of Engineering Department of Civil Engineering Manipal Institute of Technology, India GPA: 3.50 |

RELEVANT COURSEWORK

Concept building coursework:

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| Strategic management I | Gained a foundational understanding of both Business and Corporate Strategy |
| Competitive strategy | Gained a foundational understanding of competitive dynamics and competitive strategy |
| Entrepreneurship and business strategy in engineering | Gained a foundational understanding of approaches for business opportunity evaluation, testing, and development |
| Breakthrough thinking for complex challenges | Gained a systematic converge-structure-diverge method to frame and address complex challenges |
| Deep learning | Gained a foundational understanding of deep learning methodologies and an opportunity to apply them for text data |

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| Perspectives on systems engineering | Gained a conceptual view of the various flavors of systems and the various approaches to analyze them qualitatively |
| Systems-of-systems modelling and analysis | Gained a conceptual understanding of multiple-interacting systems, their modeling, and their analysis |

Methodology-focused coursework:

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| Analytical method in design and construction | Learned simulation methods such as agent-based modeling and applied them to the domain of organizations |
| Statistical and econometric methods | Gained a foundational understanding of econometrics and the experience of applying it to the domain of organizations |
| Business Analytics | Gained a methodological foundation in formulating and analyzing the business case in corporate companies |
| Optimization modelling with spreadsheets | Gained a methodological foundation in applying data-driven techniques for problems related to business operations |
| Nature-inspired computation | Got introduced to computational methods inspired by natural systems that are useful in system optimization and beyond |
| Natural language technologies | Gained a foundational understanding of computational linguistics and their application to business systems |

Professional development-focused coursework:

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| Succeeding as an engineering professor | Gained a holistic view of the opportunities, challenges, and professional milestones in the career of a tenure-track Engineering faculty at a R1 university in the USA, and strategies to succeed therein. Additionally, gained detailed understanding of writing a successful NSF Career grant. |
| Student managed venture fund | Experiential Learning Initiative: Provided an opportunity to lead the due diligence process for a real-life investment opportunity on behalf of the Purdue Venture Fund |
| ELI: Corporate consulting | An Experiential Learning Initiative- Gained real-world corporate consulting experience with leading consulting companies |

SKILL DEVELOPMENT WORKSHOPS

- Writing Effective Teaching Cases workshop offered by the casecenter.org
- Writing Publishable Papers series offered at the Purdue College of Engineering
- eXtreme Science and Engineering Discovery Environment (XSEDE) workshops on using High Performance Computing resources provided by the XSEDE project

PROFESSIONAL MEMBERSHIPS

- Academy of Management (AOM)
- European Group on Organizational Studies (EGOS)
- Industry Studies Association (ISA)
- The Society for Decision Making Under Deep Uncertainty (DMDU)
- International Society for Professional Innovation Management (ISPIM)
- Association of Computing Machinery (ACM)
- Institute for Operations Research and the Management Sciences (INFORMS)
- Purdue System Thinkers – Student Chapter of Purdue (INCOSE)
- The Evolution Institute
- The Prosocial Institute

EXTRA-CURRICULAR ACTIVITIES

- Karate – Goju Ryu (7th Kyu)
- Art of Living – Purdue Chapter
- Founding member – TATVAM – Global fusion music band at Purdue
 - Performed 50+ music shows in Indiana and Illinois