Stanford

Sita Syal

Ph.D. Student in Mechanical Engineering, admitted Autumn 2017

Bio

BIO

Sita is a Ph.D. candidate and a National Science Foundation Graduate Fellow in Mechanical Engineering and Human-Centered Design at Stanford University. Her research focuses on quantifying human influence, cost, and equity in sustainable energy systems models through an integration of qualitative and quantitative methods. Her work spans applications in solar, wind, and sustainable transportation. She also studies data science problem solving processes and how these processes can be redefined to be more human-centric.

Sita grew up in Michigan and completed a B.S.E. in Chemical Engineering and an M.Eng in Energy Systems Engineering, both from the University of Michigan, Ann Arbor, as well as an M.S. in Product Design Engineering ("Design Impact") at Stanford. She was awarded a Morris K. Udall scholarship in 2012 for her work in sustainability and clean energy. Additionally, she completed a semester abroad at Delhi University and studied rural and urban solar implementation throughout India. Her experience spans energy, from biofuels development to topsides process engineering. Before graduate school, Sita worked in the energy industry and served as a process engineer onshore and an operations engineer on one of the largest oil rigs in the Gulf of Mexico. Outside of her academic life, Sita is passionate about supporting women and minorities in STEM fields and enjoys running long distances and playing her violin.

EDUCATION AND CERTIFICATIONS

- M.S., Stanford University , Product Design Engineering ("Design Impact")
- M.Eng., University of Michigan - Ann Arbor , Energy Systems Engineering
- B.S.E., University of Michigan - Ann Arbor , Chemical Engineering

Teaching

COURSES

2019-20

- Human-Centered Design Methods in Data Science: CME 197, EARTH 197 (Spr)

Publications

PUBLICATIONS

- **Quantifying the Importance of Solar Soft Costs: A New Method to Apply Sensitivity Analysis to a Value Function** *JOURNAL OF MECHANICAL DESIGN*
  Syal, S. M., MacDonald, E. F.
  2020; 142 (12)
- **Agent-Based Modeling of Decisions and Developer Actions in Wind Farm Landowner Contract Acceptance** *JOURNAL OF MECHANICAL DESIGN*
  Syal, S. M., Ding, Y., MacDonald, E. F.

2020; 142 (9)

- **QUANTIFYING THE UNCERTAINTY OF SOLAR PHOTOVOLTAIC SOFT COSTS IN THE "COST OF RENEWABLE ENERGY SPREADSHEET TOOL" (CREST) MODEL** *Proceedings of the Design Society: DESIGN Conference*
  Syal, S. M., MacDonald, E. F.
  2020: 2157–2166

- **AGENT-BASED MODELING OF DECISIONS AND DEVELOPER ACTIONS IN WIND FARM LANDOWNER CONTRACT ACCEPTANCE**
  Syal, S. M., Ding, Y., MacDonald, E. F., ASME
  AMER SOC MECHANICAL ENGINEERS.2020