IIT BOMBAY



PhD position available

Form-Finding and Load Analysis

Tensile Membrane Structures by Stochastic Optimisation

Looking for applicants with :

• MTech/ME with Structural Engineering or Applied Mechanics as specialization

Or

BTech/BE in Civil/Mechanical/Aerospace Engineering with CGPA 9 and above (or equivalent in percentage)

Requirements

- Basic knowledge of fundamentals of computational structural/solid mechanics, numerical methods, and finite element analysis
- Good coding skills (mandatory), preferably in Python
- Basic knowledge of probability and statistics
- Familiarity with optimization techniques (preferred)
- Familiarity with any Linux OS (preferred)

Head ring Warp Fill Square base minimise $U = f(\alpha) = f(g(\mathbf{u}))$ subject to $R \le \epsilon$



As part of the work, the researcher is expected to :

- Write own codes (in Python) for numerical operations, finite element analysis, statistical analysis/uncertainty quantification, and (stochastic) optimization
- Use FE packages like Abaqus in a multi-processor environment/cluster and write scripts (bash, Python) for interfacing
- Use Rhinoceros and Grasshopper for membrane analysis
- Use tools/packages/libraries like LaTeX, git/github, Inkscape, Matplotlib

INTERESTED CANDIDATES

Write to: sghosh@civil.iitb.ac.in (Subject : PhD candidate for TMS form-finding) Please attach resume (2-4 pages) with information relevant to this project

