

**WORKSHOPS AY 2022-23**

Name of the Workshop: Research Presentation – Fire Evacuation Simulation Modelling using MATLAB

Date: 16th June 2023

Venue: Varkey Studio, SMEF's BRICK School of Architecture

Name of the Expert: Dr. Meera Shirolkar

Introduction of Expert:

Dr. Meera Shirolkar graduated from Shivaji University in 1998, and M. E. (Town and Country planning) from Savitribai Phule Pune University in 2001. Her broad area of research is 'Disaster Management' particularly 'Fire safety of health care buildings' on which she has completed Ph.D. from Savitribai Phule Pune University. She is associated with IIT Kanpur as invited resource person for 'Earthquake Resistant Design Strategies' workshop since 2009. She has 4 journal publications and presented 15 papers in conferences at national and International level. Currently she is research guide under Savitribai Phule Pune University and 3 candidates are pursuing research under her guidance. She is professor and Ph.D. Research Center coordinator in Maharshi Karve Stree Shikshan Samstha's Dr. Bhanuben Nanavati College of Architecture for Women

Brief of the Workshop:

This workshop on "Research Presentation-- Fire Evacuation Simulation Modelling using MATLAB" was intended to introduce the nature of research to the students of First Year, M. Arch in Design & Project Management. Having exposure to research in architecture, these students required to widen their perspective. Dr. Meera Shirolkar was approached to conduct the workshop, as her thesis in Fire Evacuation Simulation Modeling using MATLAB is an example to diversity that one could explore in interdisciplinary research.

Summary of the inputs given:

Dr. Shirolkar Commenced the session with the introduction to the workshop; highlighting its intent to introduce interdisciplinary research to management students and use of software applications in enhancing response of design to fire accidents. She further discussed the need of Simulation tools to aid with evacuation.

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Prior to simulation, it was important to understand the typology-based complications, occupant behaviors, and parameters for programming the simulation. She had programmed the identified parameters in MATLAB wherein through a graphical plugin, she defined built space, obstructions, paths free of obstructions and occupants with varying behavior.



With these she connected the components of her research, formulation of research proposal and methodology. In her research structure, she defined the typology, user characteristics, fire characteristics, Design responses etc. Further in the discussion she stressed on the importance of understanding variables in the research and the pitfalls of omitting to address confounding variables.

The session ended with QnA session on the Simulation Process and Research Methodology.



**WORKSHOPS AY 2022-23****Key Takeaways for the students:**

- Exposure to interdisciplinary research as applicable to management graduates
- Importance of formulating well defined research methodology
- Importance of identifying and monitoring variables.
- Role of Simulation tools in enhancing design performance

Co-ordinated by: Ar. A Raghunandan & Ar. Farhana Kapadia (Research-I & Softlab II course coordinators)

Students' Attendance:

Students Attendance – Workshop – “Research presentation by Dr. Meera Shirolkar”	
First Year Semester II – M. Arch DPM	
S. No.	Student Name
1	Aakanksha Admane
2	Ankita Chankhore
3	Pranav Pawar
4	Somesh Munde
5	Akansha Sonawane
6	Leena Jagtap
7	Srushti Padir