Fixed Point Theory in Probabilistic and Fuzzy Structures

Overview

Fixed point theory in probabilistic metric spaces is a part of probabilistic analysis, which is a very dynamic area of mathematical research. It is important in random functional analysis, random differential equations theory and mathematics of fractals. In parallel, the fixed point theory on different fuzzy metric spaces has a developed literature, with applications to real life situations, as to colour detection problems.

Objectives:

The primary objectives of this course are as follows:

1. Cover the basic fundaments of Probabilistic and Fuzzy Metric Spaces.
2. Expose the students to current issues in fixed point theory in probabilistic and fuzzy metric spaces.
3. Initiate the students in theory of probabilistic Hyers-Ulam stability.
4. To foster the knowledge for evaluating and implementing the wide range of emerging and newly adopted methodologies and technologies in the field of Nonlinear Functional Analysis and in particular Metric Fixed Point Theory and Applications.
5. Expose students to current technologies and issues that are specific To Fixed Point Theory and Applications by using MATLAB (if time permits).
6. Familiarize with MATLAB Toolkits and some of very interesting techniques of Latex.

Course participants will learn these topics through lectures and hands-on experiments. Also case studies and assignments will be shared to stimulate research motivation of participants.

Course Schedule	**Fixed Points in Probabilistic Metric Spaces and Fuzzy Structures** **October 23 – 27, 2017** **Number of participants for the course will be limited to fifty only**
Modules	A: Probabilistic metric spaces, probabilistic normed spaces B: Need of Probabilistic Metric Spaces and few fixed point theorems in Probabilistic Metric spaces. C: Fuzzy metric spaces and fuzzy normed spaces. D: Understanding Probabilistic Menger Spaces with Examples. E: Fixed point theory in probabilistic and fuzzy metric spaces F: Applications of fixed point theory to Hyers-Ulam stability in probabilistic and fuzzy normed spaces.
You Should Attend If…	▪ You are a Post-Graduate with interest in Functional Analysis as well as General Topology. ▪ You are a research scholar and working in the area of Fixed Point Theory and Applications. Also interested to learn application of FPT in Probabilistic Metric spaces. ▪ You are a student or faculty from academic institution interested in learning how to do research in Fixed Point Theory and Applications in Fuzzy Metric spaces as well as to know Fuzzy structures. ▪ Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories. ▪ Students at all levels (B. Tech/M.Sc./M.Tech./PhD) or Faculty from reputed academic institutions and technical institutions.
Fees	**The participation fees for taking the course is as follows:** **Participants from abroad : US$ 500** **Industry/ Research Organizations: Rs. 5000.00** **Academic Institutions:** **Research Scholar: Rs. 3000.00** **Faculty Members: Rs. 4000.00** The above fee includes all instructional materials, **working lunch**, Coffee on breaks, computer use for tutorials and assignments, free internet facility. The participants will be provided accommodation with nominal charges on shared basis that to on request on first come first serve basis.

The Faculty

Dorel Miheţ is an Associate Professor of Mathematics in West University of Timişoara, Romania. His interest is in probabilistic analysis, nonlinear analysis, stability of functional equations, elementary mathematics and problem solving. He has an excellent track record with numerous publications in the area of Fixed Point Theory and Applications. He has published 82 papers in the international mathematical journals along with 02 books and 01 monograph.

P. P. Murthy is an Associate Professor in the Department of Pure and Applied Mathematics, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur(Chhattisgarh State). He has specialization in the area of Metric Fixed Point Theory and Applications and Cryptography. On his credit 55 research papers in internationally renowned mathematical journals.

Course Co-ordinator

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