

**Title: Granular Mining and Rough-fuzzy Computing: Data to knowledge and Big data issues.**

Sankar K. Pal,

Center for Soft Computing Research, Indian Statistical Institute, Kolkata

<http://www.isical.ac.in/~sankar>

The talk has two parts. First it describes –

- The role of pattern recognition in data mining and machine intelligence
- The characteristics of fuzzy sets and rough sets in handling uncertainties arising from overlapping regions/ concepts, and granularity in domain respectively
- Features of granularity computing
- The relevance of the integration of fuzzy sets and rough sets to result in a stronger paradigm for uncertainty handling

The second part deals with various mining applications such as in -

- Video tracking
- Bioinformatics (e.g., selection of relevant genes and miRNAs for cancer detection)
- Social network analysis (e.g., community detection)

Several examples and results would be provided to explain the aforesaid concepts. The talk concludes mentioning their relevance in handling Big data, the challenging issues and the future directions of research.

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