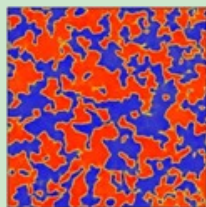


Prasad Perlekar

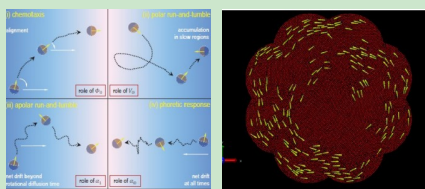
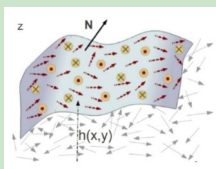
The group studies turbulence in a variety of multi-phase phenomena such as binary mixtures,



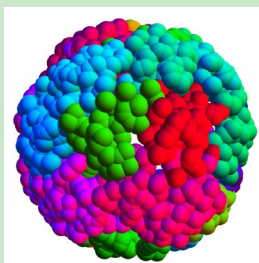
planktons in the ocean, and particulate matter in air.

Sriram Ramaswamy

The group's research areas are nonequilibrium, soft-matter and biological physics .



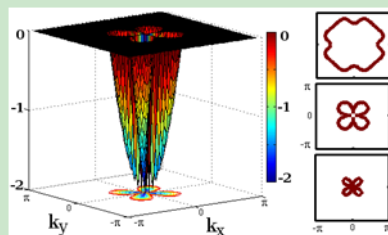
Surajit Sengupta Our current research focuses on the structure and properties of colloids with complex interactions and under confinement, dislocation dynamics and the emergence of plastic behaviour, and the structure of driven and active matter such as driven solids and chromosomes in the cell nucleus.



Subodh R. Shenoy

Current interests include i) re-equilibrations of the strain order parameter of structural phase transitions, after a deep temperature quench; ii)

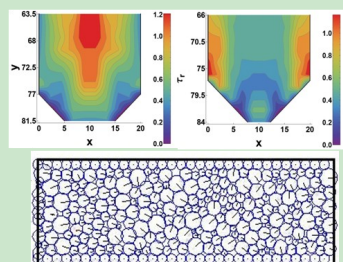
Josephson tunneling phenomena of Bose-Einstein



Condensates in double-well traps.

Shubha Tewari - The group studies how disordered assem-

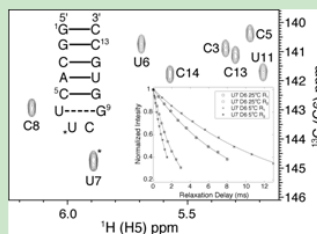
blies of non-thermal materials such as grains and foam move from flowing,



or mobile states to static, or jammed states.

Pramodh Vallurupalli - We study the conformational dynamics of proteins and nucleic acids in solution.

We will mainly use NMR and also develop new NMR techniques supplemented with computational simulations.



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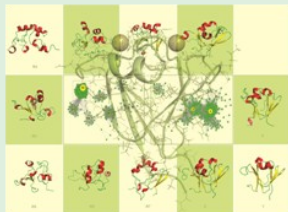
TCIS IN-HOUSE SYMPOSIUM 5 Nov 2014



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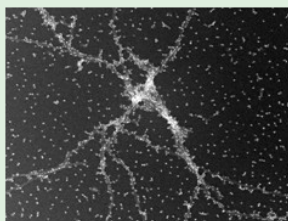
K.V.R. Chary

The group focuses on the development of new NMR methods to determine structure, dynamics and interaction of biologically important macromolecules.

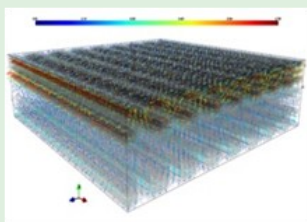


Kanchan Garai

Many proteins and peptides self-assemble to form fibrillar structures known as amyloids which are extremely resistant to thermal or chemical destabilization. We do biophysical studies on amyloids that are involved in diseases and functions. Finally we want to prepare novel nanobiomaterials using protein self assembly.

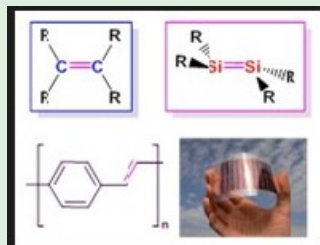


Rama Govindarajan The group is interested in fluid mechanics with emphasis on flow stability, and on particulate flows.



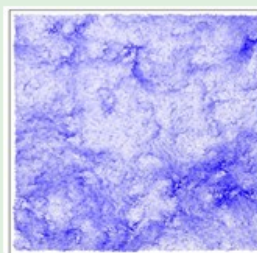
Anukul Jana

Different electronic configurations of C and Si make alkenes into planar and disilenes non-planar molecules. This kind of anomaly is observed in general for 2nd row main-Group elements with their heavier congeners. Our research will be based on this theme.



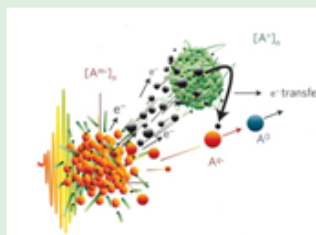
Smarajit Karmakar

The group focuses on dynamics of supercooled liquids, glass transition and mechanical properties of amorphous solids.



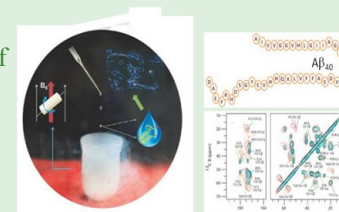
M. Krishnamurthy

We work at the frontier of intense laser-matter interactions by exciting matter with intense femtosecond laser pulses and study atomic and plasma physics. At TCIS we have set up an ultrashort laser that produces 5fs pulses with more than 1.5 mJ energy per pulse at a KHz rate. Several experimental stations are being developed for laser matter studies.



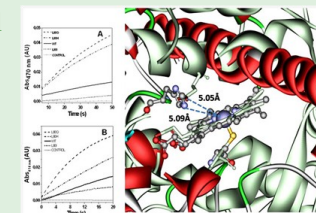
P.K. Madhu

The group specialises in improvement of resolution and sensitivity of solid-state NMR spectroscopy.

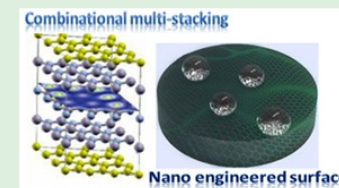


The group also uses solid-state NMR to understand biophysical properties of amyloids, membranes, zeolites, and catalytic materials.

Shyamalava Mazumdar - The group is interested in Rational design of a thermostable artificial peroxidase that could replace HRP in enzyme-linked immunosorbent assay (ELISA) kits.



T.N. Narayanan- I am interested in combinational multi-stacking and ordered arrangements of nanostructures, and in probing their interface using tools such as electrochemistry, mechanical analysis, spectroscopy and microscopy.



TCIS In-House Symposium

| | | |
|--|-------------|--|
| Introduction | 9:00-9:10 | Sriram Ramaswamy, Director, TCIS |
| Session I Session Chair: Ram Gopal | 9:10-10:40 | T. N. Narayanan Harsh Soni Rama Govindarajan Debabrata Sinha M. Krishnamurthy Himanshu Singh |
| Tea Break & Poster Session | 10:40-11:30 | 2nd Floor |
| Session II Session Chair: G. Rajalakshmi | 11:30-12:55 | Bappaditya Chandra Anukul Jana Sharath Jose Pramodh Vallurupalli Suropriya Saha Shubha Tewari |
| Group Photo | 12:55-13:05 | In front of TCIS |
| Lunch | 13:05-14:00 | 1st Floor |
| Post-Lunch Introduction | 14:00-14:05 | K. V. R. Chary |
| Session III Session Chair: G. Velmurugan | 14:05-15:30 | Srikanth Sastry S. Mazumdar Ananyo Maitra Prasad Perlekar K. R. Prathyusha |
| Tea Break & Poster Session | 15:30-16:30 | 2nd Floor |
| Session IV Session Chair: P. K. Madhu | 16:30-17:30 | Surajit Sengupta Ram Gopal Sunita Patel Smarajit Karmakar |
| Concluding Remarks | 17:30-17:35 | Surajit Sengupta, Dean, TCIS |
| High Tea | 17:35-18:00 | 3rd Floor |

Wednesday, 05 November 2014
3rd Floor Large Seminar Hall