

**MSMM'21: Multiscale Simulations and Mathematical Modelling of complex biological systems (online)**  
**March 01 - 06, 2021**

Inaugural Session by **Prof. M. Jagadesh Kumar**, Vice-Chancellor, Jawaharlal Nehru University on Monday, 01 March at 08:00 AM

*\*All times are in Indian Standard Time (IST)*

*\*Each lecture will be of 40 minutes duration, followed by a 15-minutes question-answer session.*

| Date          | 1 <sup>st</sup> Session  | 2 <sup>nd</sup> Session  |
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| Mon, March 01 | <b>08:00 - 08:15 AM</b><br><b>Inauguration</b><br><b>08:15 - 09:15 AM</b> (Session Chair: <a href="#">Prof. Shandar Ahmad</a> )<br><b>Speaker: Prof. Shoji Takada</b> , Kyoto University, Japan<br>(Title: Diverse nucleosome dynamics revealed by molecular dynamics simulations) | <b>05:00 - 06:00 PM</b> (Session Chair: <a href="#">Prof. Andrew M Lynn</a> )<br><b>Speaker: Prof. Dieter W. Heermann</b> , Heidelberg University, Germany<br>(Title: The Interaction of Chromatin with multi-Cys2His2 Zinc Finger Proteins) |
| Tue, March 02 | <b>08:00 - 09:00 AM</b> (Session Chair: <a href="#">Prof. Naidu Subbarao</a> )<br><b>Speaker: Prof. R. Murugan</b> , IIT Madras, India<br>(Title: Theory on the rate of site-specific DNA-protein interactions)  | <b>05:00 - 06:00 PM</b> (Session Chair: <a href="#">Prof. Rajarshi Chakrabarti</a> )<br><b>Speaker: Prof. Ralf Metzler</b> , University of Potsdam, Germany<br>(Title: Non-Gaussian transport in soft and biological matter)                 |
| Wed, March 03 | <b>08:00 - 09:00 AM</b> (Session Chair: <a href="#">Prof. R.K. Brojen Singh</a> )<br><b>Speaker: Prof. Ranjith Padinhateeri</b> , IIT Bombay, India<br>(Title: Physical models to understand chromatin organization and inheritance of epigenetic information)                     | <b>05:00 - 06:00 PM</b> (Session Chair: <a href="#">Prof. Neelanjana Sengupta</a> )<br><b>Speaker: Prof. Bin Zhang</b> , MIT, USA<br>(Title: Phase Separation in Genome Organization)  |

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| Thu, March 04 | <p><b>08:00 - 09:00 AM</b> (Session Chair: <a href="#">Prof. Anirban Chakraborti</a>)<br/> <b>Speaker: Prof. Sanjay Kumar, Banaras Hindu University, India</b><br/> <b>(Title: Dynamical transition in DNA)</b></p>                              | <p><b>05:00 - 06:00 PM</b> (Session Chair: <a href="#">Prof. Pallavi Somvanshi</a>)<br/> <b>Speaker: Prof. Davide Michieletto, University of Edinburgh, UK</b><br/> <b>(Title: Modelling the Topological Regulation of Genomes)</b></p>  |
| Fri, March 05 | <p><b>08:00 - 09:00 AM</b> (Session Chair: <a href="#">Prof. Sobhan Sen</a>)<br/> <b>Speaker: Prof. Debashish Chowdhury, IIT Kanpur, India</b><br/> <b>(Title: Rulers, timers and transport for length control in long cell protrusions)</b></p> | <p><b>05:00 - 07:00 PM</b> (Session Chair: <a href="#">Prof. Indira Ghosh</a>)<br/> <b>05:00 - 06:00 PM</b><br/> <b>Speaker: Prof. Supratim Sengupta, IISER Kolkata, India</b><br/> <b>(Title: The RNA world: Exploring the evolutionary pathways leading to the origin of life)</b><br/> <b>06:00 - 07:00 PM</b><br/> <b>Speaker: Prof. Athi N. Naganathan, IIT Madras, India</b><br/> <b>(Title: A Hierarchy of Coupling Free Energies Underlie the Thermodynamic and Functional Architecture of Protein Structures)</b></p>                                 |
| Sat, March 06 | <p><b>08:00 - 09:00 AM</b> (Session Chair: <a href="#">Prof. A. Krishnamachari</a>)<br/> <b>Speaker: Prof. Saikrishnan Kayarat, IISER Pune, India</b><br/> <b>(Title: The rotary mechanism of GTP hydrolysis by the McrBC endonuclease)</b></p>  | <p><b>05:00 - 07:00 PM</b> (Session Chair: <a href="#">Prof. Srabanti Chaudhury</a>)<br/> <b>05:00 - 06:00 PM</b><br/> <b>Speaker: Prof. Biman Jana, Indian Association for the Cultivation of Science, India</b><br/> <b>(Title: Modeling the effects of disease related mutation and anesthetic drug molecule binding on kinesin functionality.)</b><br/> <b>06:00 - 07:00 PM</b><br/> <b>Speaker: Prof. Sarah Harris, University of Leeds, UK</b><br/> <b>(Title: Mesoscale modelling of Molecular Motors with Fluctuating Finite Element Analysis)</b></p> |