


# Cluster Innovation Centre



...Evolving Senses  
Dissolving Boundaries...

संकुल  
नवप्रवर्तन  
केंद्र

| Title  | Dr.       | First Name   | Sunita | Last Name | Negi        | Photograph  |
|--|-----------|--|--------|-----------|-------------|---|
| Designation  |           | <b>Assistant Professor</b>   |        |           |             |  |
| Address  |           | <b>Cluster Innovation Centre, Rugby Sevens Building, University Stadium, University of Delhi, Delhi - 110007</b> |        |           |             |   |
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|  | Residence |  |        |           |             |   |
|  | Mobile    | <b>+91-09910893535</b>   |        |           |             |   |
| Email  |           | <b>negisunita.81@gmail.com</b>   |        |           |             |   |
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| <b>Educational Qualifications</b>  |           |  |        |           |             |   |
| Degree   |           | Institution  |        |           | Year        |   |
| Ph.D.  |           | <b>Institute for Plasma Research (IPR), Gandhinagar Gujarat</b>  |        |           | <b>2010</b> |   |
| M.Phil. / M.Tech.  |           |  |        |           |             |   |
| PG   |           | <b>Hindu College, University of Delhi, Delhi</b>   |        |           | <b>2005</b> |   |
| UG   |           | <b>ARSD College, University of Delhi, Delhi</b>  |        |           | <b>2003</b> |   |
| Any other qualification  |           | <b>UGC-CSIR NET with JRF</b>   |        |           | <b>2005</b> |   |
| <b>Career Profile</b>  |           |  |        |           |             |   |
| <ol style="list-style-type: none"> <li>1) <b>Assistant Professor (Physics) at Cluster Innovation Centre, University of Delhi since July 2012.</b></li> <li>2) <b>Post Doctoral Fellow at Sabanci University, Istanbul, Turkey from 2011-2012.</b></li> <li>3) <b>Post Doctoral Fellow at Institute for Plasma Research, Gandhinagar, India from 2010-2011.</b></li> </ol>  |           |  |        |           |             |   |
| <b>Areas of Interest / Specialization</b>  |           |  |        |           |             |   |
| <ol style="list-style-type: none"> <li>1) <b>Understanding and Solving problems related to the field of Computational Bio-Physics, Physics and Biology.</b></li> <li>2) <b>Problems related to Computational Nanoscience, Nanotechnology and Material science using Atomistic simulation techniques like Molecular Dynamics (MD).</b></li> <li>3) <b>Data Analysis Techniques like FFT, SVD and Bispectral Analysis.</b></li> <li>4) <b>Molecular Mechanics (MM), Density Functional Theory (DFT), Monte Carlo techniques etc.</b></li> </ol>  |           |  |        |           |             |   |
| <b>Subjects Taught</b>   |           |  |        |           |             |   |
| <ol style="list-style-type: none"> <li>1) <b>Physics of Motion ( Cluster Innovation Centre, University of Delhi, Delhi)</b></li> <li>2) <b>Computational Biology ( Cluster Innovation Centre, University of Delhi, Delhi)</b></li> <li>3) <b>Computational Nanoscience (Sabanci University, Istanbul, Turkey)</b></li> <li>4) <b>Digital Electronics (Cluster Innovation Centre, University of Delhi, Delhi)</b></li> </ol>  |           |  |        |           |             |   |
| <b>Publications Profile</b>  |           |  |        |           |             |   |
| <ul style="list-style-type: none"> <li>➤ <b>Sunita Negi, "Effect of calcium ion removal, change in ionic strength and temperature on the conformation change of Calmodulin protein at physiological pH", Submitted to Journal of Physical chemistry, 2013.</b></li> <li>➤ <b>Sunita Negi, Ayse Ozlem Aykut, Ali Rana Atilgan and Canan Atilgan, "Calmodulin Readily Switches Conformation upon Protonating High pKa Acidic Residues", <i>Journal of Physical Chemistry B</i>, (2012), 116 (24), pp 7145-7153.</b></li> <li>➤ <b>Canan Atilgan, Ayse Ozlem Aykut, Ali Rana Atilgan and Sunita Negi, Exploring pH dependent landscape shifts in proteins, <i>Biophysical Journal</i>, (2012), vol. 102, issue 3, p. 450a.</b></li> <li>➤ <b>Sunita Negi, Ali Rana Atilgan and Canan Atilgan, "Driving Calmodulin Protein towards Conformational Shift by Changing Ionization States of Select Residues", <i>Journal of Physics: Conference Series</i>, 402 012047 (2011).</b></li> </ul> |           |  |        |           |             |   |

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- S. Negi and S. Chaturvedi, "Normal mode analysis of a Single-Walled Carbon nanotube based on Molecular Dynamics : A Singular Value Decomposition study", *International Journal of Nanoscience* 9, 1-16 (2010).
- S. Negi, M. Warriar and S. Chaturvedi, "Determination of useful parameter space for a nanometer scale motor stimulated by an external electric field", *Computational Material Science* 50, 761-770 (2010).
- S. Negi, M. Warriar, K. Nordlund and S. Chaturvedi. "Molecular Dynamic simulations of a double-walled carbon nanotube motor subjected to a sinusoidally varying electric field", *Computational Material Science* 44, 979-987 (2009).
- S. Negi, M. Warriar, K. Nordlund and S. Chaturvedi, "Molecular Dynamics simulations of carbon nanotubes interacting with a graphite surface", *J. Comput. Theor. Nanaosci* 5, 318-353 (2008).

## Conference Organization/ Presentations (in the last three years)

- Conference on Computational Physics (CCP2010), 24<sup>th</sup> - 27<sup>th</sup> June 2010, Trondheim, Norway (Oral presentation)
- International Conference On Molecular Materials (MOLMAT2010), 4<sup>th</sup> - 8<sup>th</sup> July 2010, Montpellier, France (Poster presentation)
- ICTP workshop on Nano-Opto-Electro-Mechanical Systems, 6<sup>th</sup> - 10<sup>th</sup> September 2010, Trieste Italy (Poster Presentation)
- 18<sup>th</sup> Statistical Physics Days, 30<sup>th</sup> June - 2<sup>nd</sup> July 2011, Sabanci University, Tuzla, Istanbul, Turkey (Oral Presentation)
- 19<sup>th</sup> Statistical Physics Days, 28<sup>th</sup> June - 30<sup>th</sup> June 2012, Sabanci University, Tuzla, Istanbul, Turkey.
- Conference on Computational Physics (CCP2011), 30<sup>th</sup> Oct - 4<sup>th</sup> Nov 2011, Tennessee, United States of America (Oral presentation)
- INDO-GERMAN Workshop on Advanced Materials for Future Energy Requirements - 2012, University of Delhi, November 29 - 30 2012.
- International Conference on Protein Folding and Diseases I-ISC 2012, December 08-10 2012, Jamia Millia Islamia, New Delhi.

## Research Projects (Major Grants/Research Collaboration)

- Young Scientists Award by Department of Science and Technology (DST), Govt. of India (2013).
- TUBA Doctoral-Research Program (TUBA-DSAP) 2011-2012, Turkish Academy of Sciences.

## Awards and Distinctions

- Young Scientists Award by Department of Science and Technology, Govt. of India (2013).
- TUBA Doctoral-Research Program (TUBA-DSAP) 2011, Turkish Academy of Sciences.
- Fellowship to visit Norway and France by Department of Science and Technology, Govt. of India (2010).
- Qualified UGC-CSIR National Eligibility test with JRF (2005).
- Life time member of Plasma Science Society of India (PSSI).
- Topper of Atma Ram Sanatan Dharma College, University of Delhi, New Delhi, BSc Hons. (Physics), 2000-2003 batch.

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## Association With Professional Bodies

**Life time member of Plasma Science Society of India (PSSI)**

## Other Activities

**Other than doing teaching & research, I am very fond of playing badminton and basket-ball.**

Signature of Faculty Member