

## Dr. Vinay Kumar

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Contact Address Department of Computer Science and Engineering,  
NIT Jamshedpur, Jamshedpur, Jharkhand, India. 9454690527  
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Research Interests Software Engineering, Reliability and Safety Analysis of Computer based Systems.

Education Ph.D., Computer Science and Engineering, November 2017

Indian Institute of Technology (Banaras Hindu University), Varanasi, India.

- CGPA = 7.5 (Course work)
- Specialization: Reliability & Safety Analysis of Computer Based Systems.
- Thesis Topic: Safety Analysis of Computer Based Systems using stochastic modeling.
- Advisor: Prof. Anil Kumar Tripathi (IIT BHU)
- Co-advisor: Dr. Lalit Kumar Singh (NPCIL, Mumbai)

M.Tech., Computer Science and Engineering, May 2013

National Institute of Technology - Durgapur, Durgapur, India.

- CGPA = 8.00
- Specialization: Data Security
- Topic: Matrix Formulation of NTRU Algorithm using multiple Public keys from Matrix Data Bank for High Degree polynomials.
- Advisor: Prof. D. Ghosh (NIT Durgapur)

B.Tech., Computer Science and Engineering, May 2010.

Haldia Institute of Technology, Haldia, West Bengal.

- CGPA = 8.00
- Project: Traffic light control system using microcontroller.

Computer Skills **Languages** - C, C++, Java, Matlab, HTML.

**Platforms** - Windows/Linux.

**Miscellaneous** - L<sup>A</sup>T<sub>E</sub>X, Origin, MS Office.

Refereed Journal Publication	<ol style="list-style-type: none"> <li>1. Ashish Kumar Maurya, Kashish Modi, <b>Vinay Kumar</b>, Nenavath Srinivas Naik, Anil Kumar Tripathi. "Energy-aware scheduling using slack reclamation for cluster systems." Cluster Computing, pp.1-13, July 2019 (Online). [SCI, Impact factor: 1.851]</li> <li>2. <b>Vinay Kumar</b>, Lalit Kumar Singh, Pooja Singh, Karm Veer Singh, Ashish Kumar Maurya, and Anil Kumar Tripathi. "Parameter estimation for quantitative dependability analysis of safety-critical and control systems of NPP." IEEE Transactions on Nuclear Science 65, no. 5, pp.1080-1090, May 2018. [SCI, Impact factor: 1.428]</li> <li>3. <b>Vinay Kmar</b>, Lalit Singh, and Anil Tripathi. "Reliability Analysis of safety-critical and control systems: A state-of-the-art review," IET Software (online published, August 2017). [SCI, Impact factor: 0.733]</li> <li>4. <b>Vinay Kumar</b>, Lalit singh, Pooja Singh, and A.K. Tripathi, "Analysis of safety critical systems using transformation of UML into state space models: A Case Study of NPP", IEEE Software ISSN 0740-7459, volume: 34, no.4 (July 2017), pp. 38-47. [SCI, Impact factor: 2.19]</li> <li>5. <b>Vinay Kumar</b>, Lalit singh, and A.K. Tripathi, "Transformation of deterministic models into state space models for safety analysis of safety critical systems: A case study of NPP", Annals of Nuclear Energy, Elsevier Journal ISSN 0306-4549, volume: 105 (July 2017), pp. 133-143. [SCI, Impact factor: 1.312]</li> <li>6. <b>Vinay Kumar</b>, Lalit singh, and A.K. Tripathi, "A Probabilistic Hazard Assessment Framework for the Safety-critical and Control Systems: A Case Study For a Nuclear Power Plant", Nuclear Technology Journal ISSN 0029-5450 (ANS), volume: 197 no. 1 (January 2017), pp. 22-28. [SCI, Impact factor: 0.60]</li> </ol>
Training/ Seminars Attended or Participated	<ul style="list-style-type: none"> <li>▪ Second Security and Privacy Symposium (SPS-2014) at IIT Kanpur.</li> <li>▪ 3 months short term training course in Infosys Campus Connect Program, 2009.</li> <li>▪ 6 weeks industrial experience working of Telecom / Networking, 2009.</li> <li>▪ 4 weeks short term training course on Network Management IIM Calcutta, 2008.</li> </ul>
Miscellaneous	<ul style="list-style-type: none"> <li>▪ MHRD Scholarship during M.Tech [2011-13] and Ph.D. [2013- till today].</li> <li>▪ Four Times Gate Examination Qualified [2010, 2011, 2012, 2013].</li> <li>▪ Two Times Qualified UGC NET Examination [December 2012 and July 2013].</li> </ul>
Teaching Experience	<p>Teaching Assistant, [2012-16]</p> <p><b>CS 01 - Introduction to Computing</b> with Sanghita Bhattacharjee 1st Yr. Undergraduate Course, NIT Durgapur.</p> <p><b>CSO 102 - Computer Programming</b> with Dr. Sanjay K. Singh 1st Yr. Undergraduate Course, IIT (BHU).</p> <p><b>CSE 4107 – Software Engineering.</b> with Dr. Anil K. Tripathi 4th Yr. Undergraduate Course (elective), IIT (BHU).</p>
	<p><b>CSE 5107 – Advance Software Engineering.</b> with Dr. Anil K. Tripathi</p>

5th Yr. IDD Course (elective),  
IIT (BHU).

Subject Taught, [2018-19]

**CS502- Computer Networks**

**CS305- Computer Organization and Architecture**

**CSG7123- Software Engineering**