

## Dr. Malay Kumar

Assistant Professor  
Department of Computer Science and Engineering  
Indian Institute of Information Technology, Dharwad  
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## PARTICULARS

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### EDUCATION

#### National Institute of Technology Raipur, Chhattisgarh, India

*PhD in Computer Science and Engineering* 2014- Jan-2019

- *Thesis Title: Harnessing the Cloud for Secure and Efficient Outsourcing of Data and Application*

#### National Institute of Technology Kurukshetra, Haryana, India

*M.Tech. in Computer Engineering* 2010-2012

- *Thesis Title: Study and Implementation of Modelling Units for Hindi Speech Recognition*

#### University Institute of Engineering and Technology, CSJM University Kanpur, India

*B.Tech. in Computer Science and Engineering* 2006-2010

### ACADEMICS HONORS

- **PhD Scholar**, National Institute of Technology, Raipur (2014-2018).
- **UGC-NET Qualified** in June-2015.
- **M.Tech. Scholar**, National Institute of Technology, Kurukshetra (2010-2012).
- **Gate Qualified**, 93.5 Percentile in 2010.

### PUBLICATION

#### Journal Publications

S. No.	Journal Article Details
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|------|---|
| [J1] | <b>Kumar, Malay</b> , Meena, Jasraj. and Vardhan, Manu. (2017). Privacy preserving, verifiable and efficient outsourcing algorithm for matrix multiplication to a malicious cloud server. <i>Cogent Engineering</i> , Taylor & Francis 4(1), 1–20. ( <b>Scopus, Thomson Reuters E-SCI</b> ).                |
| [J2] | <b>Kumar Malay</b> , Meena Jasraj, and Vardhan Manu. (2017). Privacy Preserving, Verifiable and Efficient Outsourcing Algorithm for Regression Analysis to a Malicious Cloud. <i>Journal of Intelligent and Fuzzy Systems</i> , IOS Press, DOI: 10.3233/JIFS-169281 ( <b>Scopus, SCI Indexed, IF-1.63</b> ) |
| [J3] | Meena, Jasraj, <b>Kumar Malay</b> , and Vardhan Manu. (2016) “Cost Effective Genetic Algorithm for Workflow Scheduling in Cloud under Deadline Constraint”, <i>IEEE Access</i> , IEEE, ( <b>Scopus, SCI Indexed, IF-4.0</b> )   |
| [J4] | <b>Kumar Malay</b> , Vardhan Manu. (2017). Data confidentiality and integrity preserving outsourcing algorithm for Matrix-Chain Multiplication to a malicious cloud server. <i>Journal of</i>   |

Intelligent and Fuzzy Systems, IOS Press, Netherlands, DOI:10.3233/JIFS-169422 (**Scopus, SCI Indexed, IF-1.63**).

- [J5] **Kumar Malay**, Vardhan Manu. (2017). Privacy Preserving and Efficient Outsourcing to Public Cloud: A Case of Statistical Analysis, International Journal of Information Security and Privacy, IGI Global, USA (In-Press) (**Scopus, Thomson Reuters E-SCI**).
- [J6] Meena Jasraj, **Kumar Malay**, Vardhan Manu, and Jain Sanjeev,, “A Systematic Review on Effective Workflow Scheduling Algorithms in Cloud Under Deadline Constraint,” IJCTA-International J. Control Theory Appl., vol. 9, no. 41, pp. 1160–1170, 2016. (**Scopus Index**)
- [J7] **Kumar Malay**, Vardhan Manu. (2018). A comprehensive survey on security and privacy issues of publicly delegable algorithms, International Journal of Pure and Applied Mathematics, 118 (Special Issue 9), pp. 33-44. (**Scopus Index**)
- [J8] Kumar, M., Aggarwal, R. K., Leekha, G., & Kumar, Y. (2012). Ensemble feature extraction modules for improved Hindi speech recognition system. *International Journal of Computer Science Issues (IJCSI)*, 9(3), 175. (**Scopus Index**)
- [J9] **Kumar Malay**, Vardhan Manu. Secure Computation as a Service: The Case of Large-Scale System of Linear Equation, Journal of Integrative Neuroscience (Under Review)
- [J10] **Kumar Malay**, Vardhan Manu. A novel publicly delegable secure outsourcing algorithm for large-scale matrix multiplication, Journal of Personal and Ubiquitous Computing (Under Review)

#### Book Chapter

##### S. No. Book Chapter Details

- [B1] **Kumar, M.**, Vardhan, M. (2017). Data confidentiality and integrity preserving outsourcing algorithm for system of linear equation to a malicious cloud server. Handbook of Research on Big Data Management and the Internet of Things for Improved Health Systems, IGI Global
- [B2] **Kumar Malay**, Vardhan Manu. (2018). A novel publicly delegable secure outsourcing algorithm for large-scale matrix multiplication, International Conference an Engineering Vibration, Communication and Information Processing, Lecture Notes in Electrical Engineering Series in Springer

#### Conference Publication

##### S. No. Conference Article Details

- [C1] **Kumar M**, Tirpathi A, Vardhan M, “Reliable and Secure Data Availability in Distributed Cloud Data Storage using Optimal Exact – Regenerating Codes”, National Conference on Advances in Computing Applications, IJCA pp. 23-29.
- [C2] **Kumar, M.**, Meena, J., Vardhan, M., & Jain, S. (2016, August). Secure and Efficient Regression Analysis Outsourcing Algorithm for Cloud Server. In *Proceedings of the International Conference on Advances in Information Communication Technology & Computing* (p. 63). ACM.
- [C3] **Kumar, M.**, Meena, J., Singh, R., & Vardhan, M. (2015, October). Data outsourcing: A threat to confidentiality, integrity, and availability. In *Green Computing and Internet of Things (ICGCIoT), 2015 International Conference on* (pp. 1496-1501). IEEE.

- [C4] **Kumar, M.,** Meena J., Vardhan, M. Secure and Efficient Delegation of System of Linear Equation to a Malicious Cloud Server. *In 4<sup>th</sup> International Conference on Electronics and Communication Systems (ICECS)*, IEEE, Coimbatore, India-2017

## SHORT TERM COURSES AND WORKSHOPS

- Short Term Training Program on Matlab & Simulink, organized by Mathworks, 24-Feb-2015
- Short Term Training Program on Cloud Computing, organized by MANIT Bhopal, 28-29 March-2015
- Short Term Training Program on Next Generation Computing, organized by NIT Kurukshetra, 27-June-2016 to 01-July-2016

## COMPUTER SKILLS

- Programming Language: C/C++, Matlab, Python, PHP, MySQL, Java Script, HTML and CSS.
- Cloud Platform: Amazon EC2, Google Compute Engine, Microsoft Azure.
- Operating System: Windows, Linux.

## POST PHD EXPERIENCE

- Assistant Professor in the Department of Computer Science and Engineering, IIIT Dharwad, 01-Aug-2019 to Till Date.
- Assistant Professor in the School of Computer Science, UPES Dehradun, 13-July-2018 to 30-July-2019

## PERSONAL PROFILE

- **Father Name:** Harish Chandra Jaiswal
- **DOB:** 24-FEB-1988
- **Sex:** Male
- **Nationality:** Indian

## REFERENCES

- Dr. Manu Vardhan, Assistant Professor, Department of Computer Science and Engineering, National Institute of Technology Raipur Chhattisgarh, email- [mvardhan.cs@nitrr.ac.in](mailto:mvardhan.cs@nitrr.ac.in), ph-9479146956.
- Dr. Sarsij Tripathi, Assistant Professor, Department of Computer Science and Engineering, National Institute of Technology Raipur Chhattisgarh, [email-stripathi.cs@nitrr.ac.in](mailto:email-stripathi.cs@nitrr.ac.in), ph-7906854316.
- Dr. Awadesh Kumar Singh, Professor, Department of Computer Science and Engineering, National Institute of Technology Kurukshetra, Haryana, [email-aksingh@nitrr.ac.in](mailto:email-aksingh@nitrr.ac.in), ph- 9416570992.

## Declaration

I hereby declare that all the statements made above are true to the best of my knowledge and belief.

MALAY KUMAR