

# Dr A John Prakash<sup>B.E.,M.E.,Ph.D</sup>

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## Professional Interests

Cryptography, Network Security, Blockchain Technologies, Optimization, Machine Learning, Cloud Computing

## Courses Handled

Cryptography and Network Security, Blockchain Technologies, Problem solving and Python Programming, Nonlinear Programming, Dynamic Programming, Object Oriented Programming using C++, Machine Learning, Computer Networks

## Journal Publications

- [1] B Lydia Elizabeth, J Gayathri, S Subashini, and A John Prakash. "HIDE: hyperchaotic image encryption using DNA computing". In: *Journal of Real-Time Image Processing* (2022), pp. 1–15.
- [2] R Sathia Priya, A John Prakash, and V Rhymend Uthariaraj. "An Analytic solution for the Hadoop Configuration Combinatorial Puzzle based on General Factorial Design." In: *KSII Transactions on Internet & Information Systems* 16.11 (2022).
- [3] John Prakash Arockiasamy, Lydia Elizabeth Benjamin, and Rhymend Uthariaraj Vaidyanathan. "Beyond Statistical Analysis in Chaos-Based CSPRNG Design". In: *Security and Communication Networks* 2021 (2021).
- [5] A John Prakash and B Lydia Elizabeth. "Pindex: Private multi-linked index for encrypted document retrieval". In: *Plos one* 16.8 (2021), e0256223.
- [4] N Thilagavathi, A John Prakash, S Sridevi, and V Rhymend Uthariaraj. "TARA: Temperature Aware online dynamic Resource Allocation scheme for energy optimization in cloud data centres". In: *Turkish Journal of Electrical Engineering & Computer Sciences* 30.2022 (2021), pp. 1050–1066.
- [6] B Lydia Elizabeth and A John Prakash. "Verifiable top-k searchable encryption for cloud data". In: *Sādhanā* 45.1 (2020), pp. 1–16.
- [7] A John Prakash and B Lydia Elizabeth. "ASAKE: Adaptive Secure Authenticated Key Establishment Mechanism for Dynamic Networks". In: *Asian Journal of Information Technology* 15.18 (2016), pp. 3562–3576.
- [8] John Prakash A Rhymend Uthariaraj V Lydia Elizabeth B Ramya K. "T-Select : Trust based cloud provider selection". In: *International Journal of Applied Engineering Research* 10.1 (2015), pp. 979–996.
- [9] A John Prakash, B Lydia Elizabeth, and V Rhymend Uthariaraj. "Performance Evaluation of Multicrypt Encryption Mechanism". In: *American Journal of Applied Sciences* 9.11 (2012), pp. 1849–1861.

## Conference Publications

- [1] B Lydia Elizabeth, A John Prakash, and V Rhymend Uthariaraj. "TSED: Top-k Ranked Searchable Encryption for Secure Cloud Data Storage". In: *Advances in Big Data and Cloud Computing*. Springer, 2018, pp. 113–121.

- [2] A John Prakash, V Rhymend Uthariaraj, and B Lydia Elizabeth. "Efficient Key Management Protocol with Predictive Rekeying for Dynamic Networks". In: *Green High Performance Computing (ICGHPC), 2016 2nd International Conference on*. IEEE. 2016, pp. 1–6.
- [3] B Lydia Elizabeth, K Ramya, A John Prakash, and V Rhymend Uthariaraj. "Trustworthy mechanisms for selecting cloud service providers". In: *Recent Trends in Information Technology (ICRITT), 2014 International Conference on*. IEEE. 2014, pp. 1–5.
- [4] B Lydia Elizabeth, R Aaishwarya, P Kiruthika, M Nandini Shrada, A John Prakash, and V Rhymend Uthariaraj. "Bayesian based confidence model for trust inference in MANETs". In: *Recent Trends in Information Technology (ICRITT), 2011 International Conference on*. IEEE. 2011, pp. 402–406.
- [5] B Lydia Elizabeth, S Sudha, A John Prakash, and V Rhymend Uthariaraj. "An Improved Uncertainty Reduction Scheme Based on Bayesian Prediction in MANETs". In: *International Conference on Network Security and Applications*. Springer. 2011, pp. 249–257.
- [6] H Venkateswaran and A John Prakash. "Scalable Geographic Based Multicasting (SGBM) Protocol". In: *Trends in Computer Science, Engineering and Information Technology*. Springer, 2011, pp. 233–243.
- [7] A John Prakash and V Rhymend Uthariaraj. "Multicrypt: A provably secure encryption scheme for multicast communication". In: *Networks and Communications, 2009. NETCOM'09. First International Conference on*. IEEE. 2009, pp. 246–253.
- [8] A John Prakash and V Rhymend Uthariaraj. "Secure Authenticated Key Establishment Protocol for Ad Hoc Networks". In: *Network and System Security, 2009. NSS'09. Third International Conference on*. IEEE. 2009, pp. 87–94.
- [9] A John Prakash and V Rhymend Uthariaraj. "Multicast cryptosystem: A cryptosystem for secure multicast communication". In: *Network and Parallel Computing, 2008. NPC 2008. IFIP International Conference on*. IEEE. 2008, pp. 119–124.

## Invited Talks

- [1] *Virtualization Techniques on 26-05-2021 and 27-05-2021*. Faculty Development Training Programme on Cloud Computing. ICAM Loyola College of Engineering and Technology, Chennai, 2021.
- [2] *Mobile Commerce*. Faculty Development Training Programme on Mobile Computing. Department of Information Technology, MIT Campus, Anna University, 2016.
- [3] *Multicast Systems*. Faculty Development Training Programme on Computer Networks. Department of Computer Technology, MIT Campus, Anna University, 2015.
- [4] *Cloud Defined*. AICTE-QIP Short Term Course on Cloud Computing Technologies on 03-04-2013. Anna University, 2013.
- [5] *Cloud Viirtual Infrastructure Managers on 04-04-2013*. AICTE-QIP Short Term Course on cloud Computing Technologies. Anna University, 2013.
- [6] *Fundamentals of Modern Key Management Technique on 05-03-2009*. AICTE-QIP Short Term Course on Recent developments in network security. Anna University, 2009.

## Programme Organized

- [1] *Member online committee – First International Conference on Software Defined Networking between 09-08-2019 and 10-08-2019*. Indian Institute of Technology - Madras, TANFINET, CSI, Anna University. 2019.

- [2] *National Level Short Course on AICTE-QIP Sponsored Short Term Course on Cloud Computing Technologies*. Anna University. 2013.
- [3] *National Level Short Course on Foundation Course in Cuecent BPMS*. Anna University. 2013.
- [4] *National Level Short Course on Workshop on BPMS*. Anna University. 2013.
- [5] *National Level Short Course on AICTE-QIP Sponsored Short Term Course on Recent Trends in Computer Networks*. Anna University. 2011.

## Programme Participated

- [1] *12 Week NPTEL Online Certification Course on Secure Multiparty Computation between September and December 2021*. IISc and MHRD. 2021.
- [2] *12 Week NPTEL Online Certification Course on The Joy of Python Programming between September and December 2021*. IIT Ropar and MHRD. 2021.
- [3] *12 Week NPTEL Online Certification Course on Computational Number Theory and Algebra between September and December 2020*. IIT Kanpur and MHRD. 2020.
- [4] *ATAL Academy Online FDP on Blockchain between 05-10-2020 and 09-10-2020*. National Institute of Technology Meghalaya. 2020.
- [5] *AICTE-AU Sponsored Faculty Development Training Programme on GE8151 Problem Solving and Python Programming between 13-05-2019 and 17-05-2019*. Computer Centre, MIT Campus, Anna University. 2019.
- [6] *Short-term Course on Blockchain Technology-Business Innovations and Applications between 11-03-2019 and 15-03-2019*. National Institute of Technology Tiruchirappalli in association with 8 Industries. 2019.
- [7] *GIAN Course on High Performance Computing Concepts and Practice between 08-10-2018 and 13-10-2018*. Department of Computer Science, National Institute of Technology Calicut. 2018.
- [8] *Two-Day Saptahaant Shikshak Prashikshan on Introduction to Machine Learning between 16-12-2017 and 17-12-2017*. Indian Institute of Technology, Kharagpur. 2017.
- [9] *Workshop on Research and Development Project Proposals - Awareness, Needs and Benefits on 26-02-2014*. Anna University. 2014.
- [10] *National Level ISTE Workshop on Writing Effective Conference Papers between 18-02-2012 and 19-02-2012*. Anna University. 2012.
- [11] *International level Workshop on Recent Trends in Stochastic Modelling and Mathematical Finance between 22-12-2011 and 24-12-2011*. Anna University. 2011.
- [12] *National Level ISTE Workshop on Database Management between 13-12-2010 and 23-12-2010*. Anna University. 2010.
- [13] *National Level ISTE Workshop on effective teaching/learning of Computer Programming between 14-12-2010 and 24-12-2010*. Anna University. 2010.
- [14] *National Level short course on Computer Networks: Fundamentals to State-of-the-art Technologies between 18-02-2008 and 29-02-2008*. Anna University. 2008.
- [15] *National Level short course on Recent Trends in Grid Computing between 03-03-2008 and 15-03-2008*. Anna University. 2008.

- [16] *National Level workshop on Thesis writing for Research Scholars between 04-12-2008 and 05-12-2008.* Anna University. 2008.
- [17] *National Level workshop on Adhoc Networks between 22-03-2007 and 23-03-2007.* Anna University. 2007.

## Selected responsibilities and committees

- [1] *Deputy Director - Computing, RCC, Anna University, 2019 - till.*
- [2] *Deputy Director, KDC, Anna University, 2014 - 2018.*
- [3] *Coordinator, MATLAB, Microsoft & Adobe Campus Access, Anna University*
- [4] *Coordinator, TNEA Facilitation Centre, Govt. of TN, 2022*
- [5] *Coordinator, Establishment of Data Centre, Anna University, 2022 - till*
- [6] *Coordinator, Digital Valuation System, Anna University, 2019*
- [7] *Coordinator, Common Course Committee - GE5153 - Python Programming, 2022,2023*
- [8] *Member, Technical Programme Committee, 10th IEEE International Conference on Computing Sustainable Global Development, IndiaCom 2023 - 2022*
- [9] *Member, National Advisory Committee, IEEE International Conference on Electronic Systems & Intelligent Computing (ICESIC-2022) - 2022*
- [10] *Member, Advisory Board, International Conference on Innovative Trends in Information Technology ICITIIT-20 - 2020*
- [11] *Member, Local Purchase Committee, RCC, Anna University, 2021 - till*
- [12] *Member, Biometric system technical committee, Anna University, 2022 - till*
- [13] *Member, AU e-Governance software development, Anna University, 2021 - till*
- [14] *Member, Anna University Companies Inspection Committee, Anna University, 2020 - till*
- [15] *Member, Anna University Affiliated Colleges Inspection Committee, 2016 - till*
- [16] *Member, Advisory Committee, ACM/CSI/IEEECS Research & Industry Symposium on IoT Cloud For Societal Applications (IoTCloud'21) - 2021*
- [17] *Member, Organising committee, First International Conference on Software Defined Networking, organised by IITM, TANFINET and Anna University - 2019*
- [18] *Member, Online TNEA Process Design, Govt. of TN, 2014.*

## Selected Department Consultancy

2020 - till	<b>Online Counselling Application</b> Anna University Admissions Anna University	Designed, Developed and Implemented using PHP, Postgres, Vuejs
2020 - till	<b>Online Counselling Application</b> Tamil Nadu Common Admissions (TANCA 2020) Government of Tamil Nadu	Designed, Developed and Implemented using PHP, Postgres, Vuejs
2019	<b>Digital Valuation System (DVS)</b> Additional Controller of Examinations (University Departments) Anna University	Designed, Developed and Implemented using Golang, Postgres, Vuejs

2018	<b>Online Counselling Application</b> Tamil Nadu Engineering Admissions (TNEA 2018) Government of Tamil Nadu	Designed, Developed and Implemented using PHP Postgres, Vuejs
2018 - till	<b>Virtual Research Lab</b> Ramanujan Computing Centre Anna University	Central Computing infrastructure for HPC, Deep Learning and Scientific Programming
2016 - 2018	<b>Datacentre Migration</b> Knowledge Data Centre Anna University	Migration Architecture Design and Build from SPARC to x86 Architecture
2015 -2018	<b>Anna University Webcast</b> Knowledge Data Centre Anna University	Developed and Implemented
2014 - 2018	<b>Anna University Payment Gateway</b> Knowledge Data Centre Anna University	Security application testing, Server Architecture design and build

## Awards

*Senior Research Fellowship (SRF), MHRD-CSIR, India, 2007- 2009.*

## Professional Membership

*Member-IEEE, Member-ACM, Member-IACR.*

## Software Development Skills

C, C++, Python, PHP, Javascript, Golang, Postgres, VueJs, HTML, Bootstrap, Material design lite

## Doctoral Guidance

- [1] S Irene, Search over Surveillance Security Systems (Pursuing)
- [2] M Nandhini, Secure Machine Learning Algorithms for Cloud (Pursuing)

## Education

2007 - 2013	<b>Ph.D. in Information and Communication Engineering</b> , CEG, Anna University Thesis: <i>Secure Key Management Techniques for Group Management</i> Supervisor: Prof. V Rhymend Uthariaraj Year of passing : 2013
2002 - 2004	<b>M.E. Digital Communication and Networking</b> , AKCE, Anna University Thesis: <i>IPv4 and IPv6 transition techniques</i> Supervisor: Prof Raj Kamal Year of passing : 2004 Class Obtained :First
1996 - 2000	<b>B.E. Electrical and Electronics Engg.</b> , KLNCE, Madurai Kamaraj University Year of passing : 2000 Class Obtained :First

## Employment

2021 -	Associate Professor, Ramanujan Computing Centre, <b>Anna University</b>
2018 - 2021	Assistant Professor (Sl.Gr), Ramanujan Computing Centre, <b>Anna University</b>
2013 - 2018	Assistant Professor (Sr.Gr), Ramanujan Computing Centre, <b>Anna University</b>
2009 - 2013	Assistant Professor, Ramanujan Computing Centre, <b>Anna University</b>
2004 - 2007	Lecturer, Department of Information Technology, <b>St Peters Engineering College</b>