



Dr. A. Murali M Rao, M.Tech., PhD (Comp. Sc & Engg.)
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Profile in Brief

Name : Dr. A. Murali M Rao
Current Position : Director, Computer Division
Organization : Indira Gandhi National Open University, New Delhi, India

1) Educational Qualifications

- Ph.D in Computer Science from Central University of Hyderabad, India
- M.Tech. in Computer Science from Jawaharlal Nehru Technological University (JNTU), Hyderabad, India
- B.Tech. in Computer Science & Engineering from Nagarjuna University, A.P, India
- MA in Distance Education, Indira Gandhi National Open University (IGNOU), New Delhi
- Post Graduate Diploma in Distance Education, IGNOU, New Delhi

2) Positions held at various Organizations with Capacities

- Director, Computer Division, IGNOU, since 13th July, 2022
- Head, Computer Division, IGNOU (February 2016 to 12-07-2022) : 6 Yrs + 5.4 M
- Joint Director, Computer Division, IGNOU (March 2007 to 31-01-2016) : 8 Yrs + 10 M
- Systems Programmer, Computer Centre, University of Hyderabad : 8 Yrs + 11 M
- Jr. Manager (Computers), The NSL Ltd. A.P State Govt. Industry : 1 Y + 8 M
- Software Engineer, The CAD-CAT Computer Consultancy & Training : 3 Yrs

3) Professional Experience (Technical, Research, Academic, and Administrative): 28+ years

a) Technical (Systems, Networking, Databases, Security and Software Development)

Technical Proficiency in Design, Development, Implementation and Management of Software Applications & Database Systems in a Secure Networked Environment. Configured and Commissioned modern Computing & Network Infrastructure, Network services and Security devices at various Organizations.

i) Operating Systems Known and Used

Sun Solaris, UNIX, Linux, Windows and DOS

ii) Software Development

Designed, Developed and implemented various integrated Software Systems at various Institutions, where worked.

iii) Database Management

Knowledge in SQL, ORACLE and MS-Access

iv) Web Technologies

Knowledge in

- WAMP (Windows, Apache, MySQL, PHP)
- LAMP (Linux, Apache, MySQL, PHP) & Other Web Technologies

v) Networking

- Configured and Commissioned various Network Services viz. Proxy (SQUID), Domain Name System (DNS), DHCP and FTP
- Structured Cabling Campus Network
- VLAN implementation for network segmentation and security control.
- Hands on exposure in Design and Commissioning of modern Computing & Network Infrastructure for any Academic Institution/Organization

vi) System & Network Security and Policy

- Configuring and Management of Security Devices (Firewall, IPS) and development of Security Policy
- Implementing Multi-domain Security at Network, System and Application Domains
- Policy design, development and enforcement of ACLs to secure Computing & Network Infrastructure.
- Implementation of Web-based Application Software security in compliance with OWASP guidelines
- Adequate knowledge in designing of VLANs & VPNs.
- Designed and developed ICT policy that suits for various Academic and other Organizations.

b) Research

- As a *Researcher*, working in the area of emerging Educational Technologies, System & Network Security (Intrusion Detection) and Cloud Computing & Virtualization. Developed a monitoring tool for detection of security violations at System, Network and Application/services domains.
- As a *Reviewer*, reviewing research papers of various National and International conferences.

- Several research papers have been presented on National & International Conference daises on System & Network Security and Cloud Security & Virtualization and Educational Technologies.
- Have Research Publications (27) and many are published by IEEE Computer Science, ACM, University Press and Scientific Journal on Education Technology and other.
- As a *Co-Investigator*, obtained a research project entitled “*Investigation on Model-based Intrusion Detection Approach for providing Secure Access to University Computing Resources*” funded by University Grants Commission (UGC) under major research projects scheme.

c) Academic

- As a *Guest Faculty*, taught various Computer Science & Engineering subjects of Post-graduation (M.Tech, MBA, MCA and M.Sc) at Central University of Hyderabad and IGNOU, New Delhi. Special Lectures in ICT Domain through Edusat (Gyan Darshan) for various sections of the Society
- As a *Programme Coordinator*, designed, developed an academic programme entitled “*PC Hardware and Networking*” at IGNOU, and launched in the year 2010.
- As an *Examiner*, involved in confidential activities in respect of conducting Viva-voce, paper setting & evaluation and other for students of Post-graduation and Graduation Programmes.
- As a *Project Supervisor*, guided many projects for students of M.Tech, MBA and MCA Programmes
- As a *Course Writer*, written course material on various topics in the area of Computer Science and on System & Network Security.
- As an *Academic Expert*, Member of Academic Council Standing Committee of IGNOU, Member of Academic Council, Manav Rachna International Institute of Research & Studies (MRIIRS), Faridabad.
- As *Subject Domain Expert*, Member of Curriculum Design Committees for various Diploma, Graduate and Post Graduation Courses.

Some of the Courses Taught

- Computer Networks
- System and Network Security
- Information Technology Project Management (ITPM)
- High Speed Networks
- Data Warehousing & Data Mining
- Algorithms
- Database Management Systems
- Data and File Structures
- Operating Systems
- Programming Methodology
- Progarmming Languages
- Computer Organization, System Analysis and Design

d) Administration

As an *Administrator*, has been administering the Division/Department for smooth functioning of day to day operations in various capacities at different Organizations (Director, Head, Joint Director, Manager and Team Leader).

4) In Various Committees and Roles played

As a Chairman, Convener, Member and Evaluator for various Recruitment selection committees, Admission selection committees, Projects review committees, Doctoral review committee, Projects implementation committees, and many more of the University and other Institutions.

5) Books/ Chapters Written

Chapter Name	Course Name	Publisher/Year	ISBN
Introduction to Network Administration	Network Programming & Administration	Indira Gandhi National Open University (IGNOU) 2013	ISBN-978-81-266-6483-2
Network Administration Activities			
Network Configuration & Settings			
Network Management & Security			
OSI and TCP/IP Models	Fundamentals of Computer Networks	IGNOU 2012	ISBN: 978-81-266-6363-7
Internetworking Devices			
Install Your Operating System (Windows/LINUX)	Laboratory Course	IGNOU 2009	ISBN-978-81-266-4062-1

6) Training & Consultancy

- *As a Trainer*, conducted many training Programmes on ICT for Staff of various levels at Institutions. Designed and conducted many training programmes and developed training material.

7) Member in Professional Bodies

Member in the following professional bodies:

- Senior Member, IEEE
- Chairperson, Executive Committee of IEEE Computer Society, Delhi Chapter, India
- Member, Executive Committee, IEEE Technology and Engineering Management Society (TEMS), Delhi Chapter, India

8) Talks on Electronic and Digital Platforms

As a *Domain Expert*, has been delivering live sessions through DD Gyan Darshan Education TV Channel and other Digital Platforms on various themes, in linkage with the current and emerging Information & Communication Technologies (ICTs). Some of the themes presented are on emerging Educational Technologies, Cyber Security, IT Act, Artificial Intelligence, Internet of Things (IoT), Industry 4.0, IT Project Management (ITPM), Online Banking, Cyber Attacks Landscape, Data Science and many others.

9) Social Work

As a *Volunteer*, introduced and implemented many Programmes for benefit of the Community such as Literacy Campaign, Job oriented Programmes for deprived youth and many more.

10) Research Publications

1. A. Murali M Rao and Sitara Anumotu. The Changing Cyber Threat Landscape and Emerging Security Technologies to protect the IT Systems. Proceedings of Innovative Technologies and their Applications in Higher Education - Engineering ISBN 978-93-92042-32-4, Annamalai University, Chennai, 2022.
2. A. Murali M Rao. "Emerging Educational Technologies: A Boon to Shape the Future Prospects of Distance Education System". Proceedings of the International Conference on Distance Education and Educational Technology (ICE-CDOL 2020), held online during 10-11, December 2020, JMI, PP 49-57, ISBN:788194-314776, New Delhi, 2020.
3. A. Murali M Rao. "IoT: Security Issues and Challenges". Proceedings of 2nd International Conference on ICT for Digital, Smart and Sustainable Development, 27-28, February 2020, PP 97-101, ICIDSSD-2020, Jamia Hamdard, New Delhi, 2020. Published by European Alliance for Innovation (EAI), ISBN 978-1-63190-292-5, ISSN: 2593-7642, <https://eudl.eu/proceedings/ICIDSSD/2020>.
4. A. Murali M Rao. "OpenApp: An Intelligent Mobile Digital Assistant to Support Open and Distance Learning". Proceedings of International Conference on Equipping the unequipped: Empowerment through Knowledge, BRAOU – IDEA-2018, Hyderabad, 10-12, November 2018
5. A. Murali M Rao and B Rupini. "ICT Enabled Skill-based Programmes for Empowerment of Marginalised Women in Rural India through Open Distance e-Learning". IOSR Journal Of Humanities And Social Science (IOSR-JHSS) Volume 22, Issue 8, Ver. III (August. 2017) PP 18-21 e-ISSN: 2279-0837, p-ISSN: 2279-0845. www.iosrjournals.org, August 2017
6. A. Murali M Rao. "Learning Analytics: A Dynamic Innovative Approach using ICT to Improve Teaching and Learning in Distance Education". Proceedings of PCF-8, 8th Pan Commonwealth Forum International Conference, 27-30 November, 2016, Kuala Lumpur, Malaysia
7. A. Murali M Rao, B Rupini and Sushmitha Baskar. "Skill Development in Environmental Sector through Open and Distance Learning using Information & Communication Technologies". International Journal of Multidisciplinary Educational Research, ISSN 2277-7881, Vol 5, Issue5(4), May 2016, pp 87-98
8. A. Murali M Rao. "Role of Cloud and Mobile Services for effective implementation of e-Governance in India". Proceedings of 41st Skoch Summit on Transformative Governance, 24th Thinkers Writers Forum, PP 71-82, 22- 24, September 2015, New Delhi.
9. A. Murali M Rao. "Technology-Centric Open Distance Learning Support System: A Holistic Approach". Scientific Journal of Education Technology, ISSN: 2164-2826(print),ISSN: 2167-0188(online), pp. 15-20, Vol.4, Iss.2, April, 2014
10. A. Murali M Rao. "Web-based Application Development: A Security Perspective " Proceedings of Creative Sparks of Innovation", NCIDE, IGNOU, New Delhi, ISBN: 978-81-266-6603-4, pp 278-283, October, 2013
11. A. Murali M Rao, "Security Issues and Challenges in Adopting Software as a Service". Published in Proceedings of Indo-Russian Round table Conference held during 16-18, October, 2012, New Delhi, India, 2012.

12. A. Murali M Rao, "The Role of Cloud and Mobile Communications Services in Distance Learning". Accepted in 12th Thinkers & Writers Forum Summit, Skoch Development Foundation, New Delhi, 28th March 2012.
13. A. Murali M Rao, "Issues and Challenges in a Cloud Computing Environment". Accepted. To be published in proceedings of International Conference on Computer Applications, ICCA-2012 by ACM. The conference to be held during 27-31, Pondicherry, India, January, 2012.
14. A. Murali M Rao , "ICT in Open Distance Learning: Issues and Challenges". Proceedings of the Sixth Pan-Commonwealth Forum on Open Learning (PCF6), pp 202-203, Kochi, India, 24th – 28th November 2010.
15. A. Murali M Rao , "Digital Library Security: A Layered Approach". Proceedings of International Conference on Digital Libraries, ICDL 2010, pp 1167-1171, Volume 2, New Delhi, 23-26 February, 2010.
16. A. Murali M Rao , "Web-enabled User Support Services System in Distance Learning". Proceedings of International Conference on Interaction Sciences: Information Technology, Culture and Human, ICIS 2009, pp 86-90, The ACM International Conference Proceeding, Vol I, ISBN 978-1-60558-710-3, Seoul, Korea, 24-26 November, 2009.
17. A. Murali M Rao and Hrushiksha Mohanty, "Design Issues of Policy Enforcer to Secure Multi-Domain Environment". Proceedings of International Conference on Information Technology, ICIT-2008, pp 199-200, IEEE Computer Society, IEEE ISBN 978-0-7695-3513-5/08 , Bhubaneswar, December, 2008.
18. A. Murali M Rao and Hrushiksha Mohanty, " A Resource Centric Approach for Detection of Security Violations" . Proceedings of National Conference on Methods and Models in Computing, NCM2C-2008, Jawaharlal Nehru University, New Delhi, December, 2008
19. A. Murali M Rao and Hrushiksha Mohanty, " Policy Enforcer: An Online monitoring Tool for Detection of Security Violations in a Multi Domain Environment". Proceedings of National Conference on Computer Science & Information Technology, CSIT-2008, pp 7-13, Ghaziabad, February 2008.
20. A. Murali M Rao , "Policy-based Approach to Secure Unix Operating System Family". Proceedings of Indian Conference on Intelligent Systems, ICIS-2007, pp 22-29, Chennai, 2007.
21. A. Murali M Rao and Hrushiksha Mohanty, "Policy Manager: A toolkit to Specify and Manage Security Policies". Proceedings of National Conference on Information and Communication Technology, NCICT-2007, pp 197-200,. Thanjavur, Tamilnadu, 2007.
22. A. Murali M Rao , "Policy Specification and Enforcement for Detection of Security Violations in a Mail Service". Proceedings of 9th International Conference on Information Technology, ICIT-2006, pp 172-175, IEEE Computer Society, IEEE ISBN 0-7695-2635-7/06 , Bhubaneswar, India, 2006.
23. A. Murali M Rao and Hrushiksha Mohanty, "Detecting Security Violations: A Policy-based Approach". Proceedings of 1st National Conference on Recent Advances in Computing, NCRAC-2006, pp 327-334, Coimbatore, India, 2006.
24. A. Murali M Rao and Hrushiksha Mohanty, "Intrusion Detection Systems: A Taxonomy". Accepted in CISSE 2006 online E-Conference, 2006.
25. A. Murali M Rao. "A Survey on Intrusion Detection Approaches". Proceedings of 1st International Conference on Information and Communication Technologies, ICICT-2005, pp 233-240, IEEE Computer society, IEEE ISBN 0-7803-9421-6/05, Institute of Business Administration, Karachi, 2005.

26. Murali M Rao and Hrushikesh Mohanty, "Disk Watch Agent of a Distributed Intrusion Detection System". Proceedings of the 7th International Conference on Information Technology, CIT-2004,. University Press, 81-7371-519X, pp 307-316, Hyderabad, 2004.
27. A. Murali M Rao and C. Ravindra Kumar, "Mobile Computing for GIS Applications". Proceedings of the National Conference on Geographic Information Systems, pp 15-20, Acharya N G Ranga Agricultural University, Hyderabad, 2001.

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