

Dr. Raj Kamal (b. 1949)

Ph.D. (1972) IIT Delhi
Member IEEE, Fellow IETE, LM CSI, ISTE and IAPT



Professor of Information Technology, Medi-Caps University,
and Director, Medi-Caps Institute of Science and Technology
Former Vice Chancellor and Professor in Computer Science and
Electronics, Devi Ahilya University, Indore 452001, M.P.
(NBA Expert Evaluator Since 2008)

Author of Famous Books McGraw-Hill Internet of Things, Embedded Systems,
Oxford Univ. Press Mobile Computing, Schaum Series TMH Computer Architecture
and Organization, Internet and Web Technology and Pearson Microcontrollers,

Author/Co-Author of International Journal Papers: 58, Grand Total Research
papers: 142)

Total 49 years plus Research experience since the age of 18; in areas of Internet of
Things, Cloud Analytics, Mobile Computing, Data Analytics, Data Visualization,
Apps Virtualization, Vehicular Technology Embedded Systems, Machine Learning
and Fuzzy Logic Based Expert Systems, Optical Communication, Spectroscopy, and
Material Science

Total 15 PhDs guided successfully,
7 PhDs guiding

Total Number of Papers: 142 (on November 01, 2015)

Published Papers 1990-2013 at Devi Ahilya University, Indore 83

Area: Machine Learning, Embedded Systems in Industrial Electronics, ,
Mobile Computing, Computer Science :

Papers 1972-1989 at Punjabi University, Patiala 45

1. International Reputed Top Rated journals: 30
2. List of National Publications related to development of new instruments,
systems, and equipments: 7
3. List of Popular Educational Articles: 08

Number of Papers 1967-1982 at I.I.T. Delhi- 11

Total 44 Years plus Teaching experience since the age of 23 (Unique distinction of
serving as Professor in five Subjects)

Expert National Board of Accreditation: Since 2008 in Subjects: Computer Science and Engineering, Information Technology, Electronics and Communication Engineering

ACADEMIC POSTS

1. Professor, **Information Technology**, Medi-Caps University, Pigdambar, Rau, Indore 453331 March 03, 2014- this date; Professor **Computer science**, Devi Ahilya University, Indore, – March. 13, 1989 – Feb. 28, 2014, Professor-in-Charge, 1996-2000 at Institute of Engineering and Technology, Devi Ahilya University, Indore, 1996-2000, Professor, **Physics**, Devi Ahilya University, Indore, – March 03, 1989 – March. 13, 1989;
2. Professor, **Computer Science and Engineering** and Dean Academics and R & D, GNEC, Hyderabad, from 1 Oct. 2007 to 15 Sept 2008 during leave period.;
3. Professor and Head, Department of **Electronics and Communication Engineering** and Director, “TIFAC Govt. of India Project for Excellence in Network Engineering”, AKCE now ‘Kalaslingam University’, Krishnanakoil, Srivilliputtur, Tamilnadu June 2002 – April 2004 during leave period.
4. Visiting Professor: Department of **Electrical Engineering Education**, King Mongkut Institute of Technology, Bangkok, Thailand, March to June 1997
5. Reader, **Physics**, Punjabi University, Patiala – Jan. 01, 1982 – Feb. 26, 1989; Lecturer Physics, Punjabi University, Patiala – June 01, 1972 – Dec. 21, 1981

ADMINISTRATIVE POSTS Experience 25 years since the age of 40

1. **Director**, M.I.S.T., Indore Since 14.03. 2014 to this date
2. **Director/Coordinator**, University Internal Quality Assurance Cell, Devi Ahilya University, Indore – Since Feb.2, 2011 to Feb.28, 2014
3. **Vice Chancellor**, Devi Ahilya University, Indore –Dec. 08, 2011 — June 27, 2012, March 20, 2009 — June 01, 2009, Aug. 5, 2006 — March, 5 2007; **Pro-Vice Chancellor/Rector**, Devi Ahilya University, Indore – Since Aug. 28, 2011 —June 27, 2012
4. **Head of University Teaching Departments in Electronics, Computer Science**, for the period 01.04.1990 to Feb. 2011 (except Jan1993 to April 1994, June 2002 to April 2004, Oct. 2007 to November 2008); Director, Center for Potential of Excellence in e-Management Studies, Feb. 2011 to Jan. 2012,
5. **Dean, Engineering Sciences**, 1992-1994

Awards

- I.I.T. Delhi Scholarship Award 1966-67 Aug. 01, 1966 – May 31, 1967; Council of Scientific and Industrial Research Fellowships Award 1967-1972 at I.I.T. Delhi – Aug. 01, 1967 – May 31, 1972;
- Swedish International Development Agency Fellowship Award - Post Doctoral Research Fellow (visiting scientist): Uppsala University, Sweden, Sept. 1978- June 1979, and Feb. 1984- May 1984;
- Visiting Professorship Award King Mongkut Institute of Technology, Bangkok, March to June 1997
- Visiting Scientist Fellowship Award ICTP, Italy January 1982-April 1982
- Best paper award in the field of Statistical Methodology by Indian Society of Agricultural Statistics Paper Rule Promotion: A New Fuzzy Approach for Drawing the Inferences in Rule-based Expert System by Savita Kolhe, Raj Kamal, Harvinder S Saini and GK Gupta published in Volume 65, No.3, December, 2011, pp 359-365

A. Authored/ Adapted/Published/ Books:

INTERNATIONAL REPUTED PUBLISHERS

1. Internet of Things– Internet of Things: Architecture, Design Principles and Applications, McGraw-Hill, (1st Ed. Expected August, 2016)
2. Embedded Systems - Architecture, Programming and Design, Raj Kamal - A Text Book, McGraw-Hill, First Edition:2003, , 2nd Edition May/June 2008, 3rd Edition, Sep. 2014 [US Reprint, McGraw-Hill, New York, USA, www.mhhe.com/kamal/emb3 McGraw-Hill, International, Singapore, May, 2004, and Tata McGraw Hill, New Delhi (First Print July 2003, Fifteenth Reprint March 2008), Translation in Mandarin (Chinese) by McGraw-Hill, Taiwan 2004, and by McGraw-Hill, South Korea. 2005]
3. Mobile Computing, Raj Kamal, www.oupinheonline.com Oxford University Press, 1st Edition, Oct. 2007; 2nd Edition, 2012, 3rd Edition (Expected February, 2015)
4. Digital Systems Principles and Design, Raj Kamal- A Text Book, www.pearsoned.co.in/Raj_Kamal Pearson Education, Singapore, Jan. 2007; 2nd Edition, (Expected Feb. 2015)
5. Computer Architecture, [Nicholas Carter (original author) and Raj Kamal (Adaptation/Revision author)] Published as Schaum Series

www.mhhe.com/carter/cao McGraw-Hill, International Indian Edition, 1st Edition May 2006, 2nd Edition 2010,

6. Microcontrollers. – Architecture, Programming, Interfacing and System Design,, Raj Kamal- A Text Book, www.pearsoned.co.in/Raj_Kamal Pearson Education, Singapore, First Edition and First Print, 2005, Translation in Mandarin (Chinese) by Pearson, Taiwan 2009, 2nd Edition, 2012
7. Digital Systems Principles and Design, Raj Kamal – A Text Book, www.pearsoned.co.in/Raj_Kamal Pearson Education, Anna Univ.Edition, 2012
8. Switching Theory and Logic Design, Raj Kamal - A Text Book, www.pearsoned.co.in/Raj_Kamal Pearson Education, JNTUK Edition, 2012,
9. Computer Programming and IT, [Two other authors and Raj Kamal]- a Text Book www.pearsoned.co.in Pearson Education, RTU Edition, 2011, Revision in process 2012
10. Internet and Web Technologies, Raj Kamal - a Text Book Published by Tata McGraw Hill, New Delhi (First Print Sept. 2002, Latest Print 2014,

NATIONAL PUBLISHERS

10. Concepts and Features of Microcontroller, Raj Kamal- 68HC11, 8051 and 8096 (includes Programmable Logic controllers) Latest Reprint 2004, Published by S. Chand & Co. First Recipient of UGC Best Publisher Award, 2002 (Web Site <http://www.schandgroup.com/>)
11. Digital Computer Electronics, Raj Kamal (Scholar Publs, Indore 1997)
12. Interface and Communication Electronics, Raj Kamal (Scholar Publs, Indore, 1996)
13. Basic Electronic Devices and Systems, Raj Kamal (Scholar Publs, Indore, 1995)

B. Books Edited:

Three Volumes (with Professor K. P. Maheshwari and Professor R. L. Sawhney)

- a. LASER and Optics b. Energy c. Plasma, Published by Wiley Eastern Limited, New Delhi. 1990.

C. National Level Lessons Authored:

Authored Five Chapters on Fundamentals of Computers for Indira Gandhi National Open University, New Delhi in 1995.

B. Books Edited:

Three Volumes (with Professor K. P. Maheshwari and Professor R. L. Sawhney)

a. LASER and Optics b. Energy c. Plasma, Published by Wiley Eastern Limited, New Delhi. 1990.

C. National Level Lessons Authored:

Authored Five Chapters on Fundamentals of Computers for Indira Gandhi National Open University, New Delhi in 1995

ACADEMIC ACHIEVEMENTS

NEW INSTITUTIONS INITIATED AND PLANNED:

- Institute of Engineering Technology (in 1994-97) at Devi Ahilya University, Indore, [Other team members: Prof. S. K. Chitale and Dr. M. K. Sahu]
- International Institute of Professional Studies (in 1992) at Devi Ahilya University, Indore [Other team members: Prof. S. K. Chitale and Prof. R. D. Agarwal]

NEW CENTERS PLANNED AND STARTED: Information Technology Center at Devi Ahilya University Indore (One of the best center in India) [Other team members: Dr. Mrs. Vrinda Tokekar, Late Dr. M. K. Sahu, Dr. P. Kanungo, Dr. D. S. Bhilare]

NEW COURSES PLANNED AND STARTED:

1. M.Sc. Electronics- One of first six universities in Country Selected by UGC/Department of Electronics, Govt. of India in 1990
2. M. Tech. Mobile Computing UGC Innovative Programme First in Country in 2008
3. M. Tech. Embedded Systems First in Country in 2002
4. M. Tech. Spatial Information Technology First in Country in Computer and Electronics Discipline in 2007

PRESENT RESEARCH FIELD

- Internet of Things, Data Analytics and Visualisation, Cloud Computing, and Machine Learning Mobile devices
- Service Oriented Architecture

Ph.D. SCHOLARS PRESENTLY REGISTERED STUDENTS:

- 1 Mrs. Kirti Bhati (Panwar), “Data Analytics and Visualisation in Mobile Web and Cloud services”, Research Center: Electronics and Telecommunication

Engineering (Since Jan. 2015)

- 2 Surya Kant Soni “Apps Virtualisation and Data Analytics in SoA” (Research Center: School of Computer Science and IT, Co-guide: Dr. D. S. Bhilare (since Jan. 2015)
- 3 Mrs. Pritika Bahad, “Data Analytics and Visualisation of Data Streams in Mobile Computing environment” Co-Guide Dr. Mrs. Preeti Saxena (Research Center: School of Computer Science and IT) (Expected since Jan. 2015)
- 4 Rameez Raja Chowdhary “Dynamic Orchestration of Networked Robotic Systems Robots” (Research Center: Electronics and Telecommunication Engineering) Co-guide: Dr. Mrs. Manju Chattapadhaya (Since Dec. 2013)
- 5 Ms. Reena Gupta “Dynamic Orchestration in Service Oriented Architecture” (Research Center: School of Computer Science and IT) Co-guide: Dr. Ugrasen Suman (Since Jan. 2013)

Ph.D. COMPLETED WITH DR. RAJ KAMAL:

- 6 Ms. Archana Chaudhary, “Performance Study of Machine Learning Techniques for Mobile Intelligent Systems) (Research Center: School of Computer Science and IT) (Submitted May, 2016)
- 7 Mrs. Shweta Agarwal, “Object Based Architecture of Orchestrator for Service Oriented Architecture, Robotics and Control Systems” (Research Center: School of Computer Science and IT) (2015)
- 8 Mrs. Supriya Kelkar: “Development and Analysis of Data Reduction Algorithms for Automotive Multiplex System Systems/In-Vehicle networks with specific reference to CAN 2.0 protocol. (Research Center, Electronics and Communication Engineering) (2014)
- 9 Mrs. Preeti Saxena, “XML filters for messaging based mobile and spatial information services” (Research Centre: School of Computer Science and IT) (2014)
- 10 Mrs. Aradhana Goutam (Pandey), “Orchestrator Model for System Security” (Research Centre: School of Computer Science and IT) as main guide; Co-guide: Dr. Mrs. Maya Ingle, (2013)
- 11 Mr. R. P. Mahajan, “A study in Solution of Financial Engineering Problems using Quantum Computing and AI Techniques, ” (Research Centre: School of Computer Science and IT) (2012)
- 12 Ms. Savita Kolhe, “Standardization of Intelligent Information Systems for

- diseases diagnosis in crops” (Research Centre: School of Computer Science and IT) as main guide; Coguides: Dr. H. S. Saini and Dr. G.K. Gupta (Research Center School of Computer Science and IT) (2011)
- 13 Mr. Chandrakant Khairnar: “Code and Energy Efficiency for software defined radios for mobile applications” as co-guide but as main initiator (Research Center, Electronics and Communication Engineering) (2009)
 - 14 Mr. Harvinder Singh Saini, “Web based fuzzy expert Information System for Pest Management”, as main guide (Research Centre, School of Computer Science and IT) (2002)
 - 15 Mr. Gilbert Akin Ibitola, “Computer Assisted Systems for Agricultural Applications”, (Research Centre: School of Computer Science and IT) as main Guide (1996)
 - 16 Mr. Sarang Medhakar, “Guided Laser Beams in Nonlinear media”, (Research Center Physics) as co-guide (1995)
 - 17 Ms. Usha Mahajan, “A study of heating and cooling potential of earth Completed Structures” as coguide (Research Center: Energy Studies and Environment) (1994).
 - 18 Lovleen Kaur (Research Center: Department of Physics, Punjabi University Patiala)
 - 19 Manjeet Singh (Research Center: Department of Physics, Punjabi University Patiala) (1989)
 - 20 Meera Rani (Research Center: Department of Physics, Punjabi University Patiala) (1986)
 - 21 Satpal Singh Sekhon (Research Center: Department of Physics, Punjabi University Patiala) (1981)
 - 22 Naval Kishore, as co-guide (Research Center: Department of Physics, IIT Delhi) (1982)

Appendix- A

IMPORTANT ACTIONS AS Vice Chancellor Indore in Third Tenure (07/12/2011 to 27/06/12)

1. His Excellency Visit for Inauguration of Academic Staff College Guest House 14.12.2011, Hon'ble MP 06.01.2012 and Hon'ble Minister Visit 24.03.2012
2. Initiated all round activities for Academic Quality and Excellence Year 2012, and steps and planning started for improving University Grade in NAAC accreditation in Cycle 3
3. Series of Cultural Programs from 06.01.2012 to this date: Sugam Sangeet, Gazal, Kabir Sandhya, Orchestra, University Band first public appearance, Cultural Activities competition, Desh Bhatki Geet Competition,
4. Series of Seminars and Conferences in School of Studies and Institutes from 06.01.2012 to June 27, 2012:
5. DAVV-NTPC Foundation Establishment of "ICT centre for students with disabilities" 16.01.2012 MOU signed
6. XIIth Plan 2012-17 to the UGC expected to award grant of Rs. 50 Crores submitted in March 2012
7. Strengthening of New Centers- (a) Devi Ahilya Shodh Peeth (b) Career and Counseling Cell (c) Centre of Potential for Excellence in e-Management (d) Centre for Studies on Women in Backwards Areas (e) Centre for Study of Natural Resources in Backwards Areas
8. New steps— (i) Virtual Class room set at IET and classes were held under National Mission of Education Through ICT on Research Methodology, delivered by IIT Bombay, June 25, 2012 to 04.07.2012 (ii) Writing and film preparation University Golden 50 years History,(iii) Setting Records and Archives and (iv) Ph.D. Cell for effective implementation of new regulations of UGC for maintenance of minimum standards for the Ph.D. and M. Phil.
9. University Cultural Centre Auditorium Up-gradation
10. University Gyan-Vani FM Radio Station Additional Equipment
11. Strengthening Wi-Fi Infrastructure across all Class rooms, and Networking Equipment
12. Three hundred Computers being introduced for use of ICT, Printers & UPS, High Speed Scanners, High Speed Data Transfer Mobile Devices and Tablet Computers for Administrative Sections of the University; Series of Career Counseling activities— English Classes, Lectures and activities including lectures of Personalities Sri Sri Ravi Shankar, Sandeep Manudhane,
13. Steps being taken to significantly strengthen the faculty and employees strength in the University and their promotions by submitting requirements to State Govt..
14. Initiated University Notices on Web Notices since 1.1.2012
15. Introduction of new workload norms for the Faculty as per new UGC Regulations, Introduction of Performa based Assessment of the Faculty as per new UGC Regulations and Introduction of Code and Ethics as per new UGC regulations. VC's thorough examination of Self Appraisal reports and Performa Based Assessment Reports

16. Planned Six Departments Solar Power stations to save electricity of Rs. 11 lakhs per year being undertaken
17. Online Enrollment and Online Examination Forms; Planned All forms and collection of fees on-line from 01.07.12
18. Continuance of steps for new Look Sports Fields, Excellent Canteen Infrastructure and Indian Coffee House and New Women Hostel's expansion, New School of Commerce building, Institute of Engineering and Technology Girls Hostels, Faculty and Officers' quarters and Academic Staff College Participants' Guest House
19. Emphasis on Student Feedback and Actions based on that
20. Hostel Feedback Rigorously Introduced and Actions based on that
21. Plan presented by the School of Studies in AQAR 2010-11 being implemented
22. Infrastructure and Equipment in School of Studies under UGC plan
23. Examination and Results on Time in January 2012 and May-June 2012
24. VC appreciation certificates to dedicated employees and faculty
25. Nine Executive Council Meetings 19.12.2011, 21.01.2012, 04.02.2012, 11.02.2012, 03.03.2012, 24.03.2012, 27.03.12, 13.04.12 and 28.04.12; One Academic Council Meeting 20.12.2011, One or two Meetings every month of Standing Committee of Academic Council, Academic Planning and Evaluation Board (held after 2009) 27.12.2011, Building Committee Meeting (held after 15 months) 03.01.2011 and next 03.05.12. Finance Committee Meetings- Four numbers

IMPORTANT ACTIONS AS Vice Chancellor Indore in Second Tenure (2-1/2 months 20/03/2009 to 01/06/2009)

1. Arranged Internal Quality Assessment and External Quality Assessment of All Departments in April-May 2009)
2. Steps to significantly strengthen the faculty strength in the University School of Studies, Energy, Statistics, IIPS, IMS, Computer Science, Management, Education, Pharmacy,
3. VC appreciation certificates to dedicated employees and faculty
4. Planned and Organised Lectures for 3 days during July 17-19, 2009 (inaugurated by Padan Bhushan Dr Anil Kakodkar) Lectures of 25 National Award (Dr. Shanti Swarup Bhatnagar Award given by President of India every year in Mathematical, Physical, Biological and Engineering Sciences) Winning Scientists at University.

IMPORTANT ACTIONS AS Vice Chancellor Indore in First Tenure (7 months 05/08/2006 to 05/03/2007)

1. Convocation held in University after 17 years in which seven eminent personalities of the Country were awarded honorary doctorates [Narayanmurthy, Verghese Kurien, Rahul Bajaj, S. Ramadorai, Karshanbhai Patel, Shiva Nadar] and initiated first time award of Gold Medals and Ph.D. degrees at Convocation
2. Organized Many cultural programs- Garba competition, Ramayana and Krishna Leela, with Dance and Songs, Meera Bhajans, Skits and Drama, Invited Famous

singer: Kavita Krishnamurthy

3. Introduction of Painting classes as a part of personality development
4. Lectures series held- "Listen to top Experts".
5. Initiated Computerization of Student processes, e-submission of all University forms and fees and on-line University services
6. Personal cash awards and VC appreciation certificates to students, dedicated employees and faculty.
7. Introduced Wi-Fi facilities in Campus and Hostels
8. Top grade Information Technology Centre, office and computer laboratories infrastructure
9. Digital Library
10. Medical services in hostels and started concept of health file for students
11. Over 100 high-tech International class rooms with LCDs, Internet and Computers
12. Introduction of student and hostel feed back, strengthening of teaching faculty, etc.
13. Planned and Organised Lectures for 3 days during March 07-09, 2007 (inaugurated by Dr R. Chidambaram) about 25 National Award (Dr. Shanti Swarup Bhatnagar Award given by President every year in Mathematical, Physical, Biological and Engineering Sciences) Winning Scientists at University. First time such unique conferences in the country.
14. Radio Frequency Surveillance System in University Library
15. Annual Indian National Science Academy Conference
16. Internet laboratory for blind
17. Eye surgery of poor patients (400) by Mobile van donated by UK
18. Radio News and Educational Programs broadcast from University
19. Complete solar energy based plant installation for School of Energy by Tata Energy
20. Start of new Computer Science, e-technologies and Information Technology building of Rs. 7 crore, Electronics Building Extension of Rs. 1 crore, New Girls hostel-105 seated Rs. 1.5 crore, Health Center and day care center Rs. 40 lakhs
21. Computer classes for above 600 poor students at nominal cost Rs. 50 per month in University Auditorium by Dr Raj Kamal, Mrs. Preeti Saxena and Mrs. Sharadha Masih for 3 months 12 hours/week on Computer Architecture, Java and C/C++, respectively)
22. Total 305 Items in Executive Council in 7 months, First Executive Council 89 Items.

PUBLICATIONS Appendix B.

(Books: 14, International Journal Papers: 58, Grand Total Research papers: 141)

D. Total Number of Papers: 142

D1. List of Research papers List of Research papers at Present University: 83

142. A Hybrid ensemble for classification in multiclass datasets: An application to oilseed disease dataset. Computers and Electronics in Agriculture, Archana Chaudhary, Savita Kolhe, Rajkamal, 2016. 124, 65-72, Elsevier, Impact Factor = 2.09)

141. Adaptive Fault Diagnosis Algorithm for Controller Area Network (AFDCAN), Supriya Kelkar, Raj Kamal, IEEE Transactions on Industrial Electronics, Vol. 61, Issue 10, 5527-5537, Oct. 2014. Impact Factor 6.8

140. Future Embedded Systems, Raj Kamal, Proc. of National Conference of Advances in Electronics, Feguesson College, Pune, Sept. 19, 20, 2014

139. Archana Chaudhary, Savita Kolhe, Raj Kamal, Machine learning classification techniques: A comparative study, International Conference on Advances and Development in Engineering and Technology (ICADET) organized by Institute of Research and Development (IRD) India at Malwa Institute of Technology, 8th -9th of February, Indore, 2013. (Also in International Journal on Advanced Computer Theory and Engineering)

138. Machine learning techniques for Mobile Intelligent Systems: A study, Archana Chaudhary, Savita Kolhe, Raj Kamal, IEEE International conference on Wireless Optical Communications Network (WOCN), organized by IIT Indore and Aurbindo Institute of technology, 20th -22nd September, Indore, 2012.

137. Performance of Machine learning techniques in teaching learning process, Archana Chaudhary, Savita Kolhe, Raj Kamal, IEEE sponsored National Conference on Innovative Trends in Soft Computing (ITSC – 2013) organized by Oriental University, 25th – 26th of October, Indore, 2013.

136. Comparative Study of Machine learning techniques using WEKA, Archana Chaudhary, Savita Kolhe, Raj Kamal, IEEE sponsored National Conference on Mechtronics and Computing Technology & Management (RAMCTM-2013) organized by Indore Institute of Science & Technology , IEEE and VIRSA Wave Simtech, 16th June, Indore, 2013.

135. Performance Examination of Feature Selection methods with Machine learning classifiers on mobile devices, A. Chaudhary, S. Kolhe, Rajkamal, International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, Vol. 1, Issue 8, November 2013, pages 354-358. [Impact Factor 1.112]
134. Machine Learning Techniques for Mobile Devices: A Review, A. Chaudhary, S. Kolhe, Rajkamal, International Journal of Engineering Research and Applications, Vol. 3, Issue 6, Nov-Dec 2013, pages 913-917. [Impact Factor 1.325]
133. Performance Evaluation of feature selection methods for Mobile devices, A. Chaudhary, S. Kolhe, Rajkamal, International Journal of Engineering Research and Applications, Vol. 3, Issue 6, Nov-Dec 2013, pages 587-594.[Impact Factor 1.325]
132. Supriya Kelkar and Rajkamal, "Comparison of Quotient Remainder Compression Algorithm with Enhanced Data Reduction Algorithm for Automotive Applications," (Communicated)
131. Implementation of Data Reduction Technique in Adaptive Fault Diagnosis Algorithm for Bus based Controller Area Network, Supriya Kelkar, Raj Kamal, Accepted for presentation at International Conference of Circuits, Systems, Communication, and IT Applications (CSITA), Mumbai, April 4-5, 2014 and proceeding to be published a IEEE Explore
130. Boundary of Fifteen Compression Algorithm for Controller Area Network Based Automotive Applications, Supriya Kelkar, Raj Kamal, Accepted for presentation at International Conference of Circuits, Systems, Communication, and IT Applications (CSITA), Mumbai, April 4-5, 2014 and proceeding to be published a IEEE Explore.
129. Dual Message Based Improved Quotient Remainder Compression Algorithm for Automotive Applications, Supriya Kelkar, Raj Kamal, (Communicated)
128. Specification for security orchestration, Aradhana Goutam, Raj kamal, Maya Ingle Proceedia Engineering, Volume 38, pp. 429-441, Elseveir, 2012
127. An Orchestrator design for matrix multiplication through Strassen's Algorithm Shweta Agrawal, Raj Kamal, International Conference on Advances in Computer Science (ACS 2013), NCR INDIA, December 2013 on Elsevier track. ISBN:978-93-5107-193-8.
126. An efficient Information Filtering Middleware for Location Based Services, Preeti Saxena and Raj Kamal, Accepted, 8th International Conference on Computing for Sustainable Global Development (INDIACom-2014)

125. A new approach to Filtering of XML streaming Data, Preeti Saxena and Raj Kamal, Elsevier Journal, 2014 (in Print), (Presented at 4th International Conference on Advances in Engineering and Technology, AET-2013, NCR INDIA, 13-14, Dec. 2013)
124. System Architecture and Effect of Depth of Query on XML Document Filtering using PFilter, Preeti Saxena and Raj Kamal, IEEE Explore, ISBN: 978-1-4799-0190-6, pp. 192 – 195, doi: 10.1109/IC3.2013.6612188 (Presented at 6th International Conference on Contemporary Computing, IC3-2013, Noida, India, 8-9 Aug. 2013)
123. Specification of Security Orchestration, Aradhana. Goutam, Raj Kamal, M. Ingle Journal Procedia Technology, Elsevier, ISSN: 2212-0173, Pages 429-441, 2012.
122. Emerging Technologies in Random Access Memories, Manju K. Chattopadhyay, Raj Kamal, International Journal of Advances in Engineering Science and Technology, 2(1), pp.84-88, 2013 ISSN: 2319-1120
121. Knowledge Management in Expert System of Crop diseases, Savita Kolhe, Raj Kamal, Harvinder Singh and G.K. Gupta, International Journal on Advanced Computer Theory and Engineering ISSN (Print) : 2319 – 2526, Volume-2, Issue-4, 2013 [Also awarded best paper award].
120. Control area network based quotient remainder compression-algorithm for automotive applications, Supriya Kelkar, Raj Kamal, in *proc. of IECON 2012*, 38th Annual Conference of the IEEE Industrial Electronics Society, Montreal, Canada, October, 2012. 978-1-4673-2420-5, 2012
119. Comparison and Analysis of Quotient Remainder Compression Algorithms for Automotives, Supriya Kelkar, Raj Kamal, in *proc. of INDICON 2012, IEEE International Conference*, Kochi, India, December, 2012, IEEE Explore, pp. 802-807, 978-1-4673-2272-0/12/\$31.00,©2012
118. Service Integration towards Security Orchestration, Aradhana Goutam, Raj kamal, Maya Ingle, International Association of Computer Science and Information Technology Press (IACSIT Press) IJIT 2012 Vol.2(2), pages 179-184 [International Conference on Information and Education Technology (ICIET'12, Mumbai, 20th Jan 2012] 2(2), pages 179-184, 2012 Impact 1.23 Impact 4.8030 on the scale of 10, ISSN: 2010-3689.
117. Strategic Approach towards System Security using Orchestration, Aradhana. Goutam, Raj Kamal, M. Ingle, International Journal of Research in Management & Technology (IJRMT), Volume1 Number 2, December, 2011, pp135-140, ISSN: 2249-9563.
116. An Orchestrator Model for System Security, Aradhana. Goutam, Raj Kamal, M. Ingle International Conference on Computing, Communication and Control, Springer,

Germany, Volume 125, Part 1, 195-199, 2011. Springer, Germany, Volume 125, Part 1, 195-199, 2011. IJESM, Vol. I Issue II, Jul-Dec 2011, pp. 120-126

115. Analytical study of auto run Worm killer: A strategic approach, Aradhana Goutam, Raj Kamal, Maya Ingle, International journal of Engineering Sciences and Management, 1(2) , pp. 120-125, 2011 ISSN No. 2231-3273

114. Study of autorun worm : an analytical approach Towards Orchestrator model for system security, Aradhana Goutam, Raj Kamal, Maya Ingle CIT Journal of Research, Volume 1, Issue 4, Pages 83-88, Impact Factor, 0.569, ISSN : 0976-3244

113. XML – based Data Model for Location Based Services, Preeti Saxena, Raj Kamal, International Conference on Issues and Challenges in Networking, Intelligence and Computing Technologies (ICNICT- 2011), Ghaziabad, India, Sept. 2-3, 2011

112. A decision centric approach using orchestrator model for system security, Aradhana Goutam, Raj Kamal, Maya Ingle, CIT International journal of Engg. & Research, 1(1), pp. 62-68, 2011, ISSN 2230-9144

111. An intelligent multimedia interface for fuzzy logic based inference in crops, Savita Kolhe, Raj Kamal, Harvinder S. Saini and G. K. Gupta, Expert System with Applications, 38:12 (2011) pp. 14592-14601. (5-Year Impact Factor = 3.162)

110. Rule Promotion: A new fuzzy logic approach for drawing inferences in Rule Based expert System, Savita Kolhe, Raj Kamal, H.S. Saini ,and G.K.Gupta, www.isas.org.in/isas Journal of Indian Society of Agricultural Statistics, 65(3) (2011) 359-365 [NAAS Impact Rating 5.1]

109. Data Diversity of a distributed Honeynet based malware collection system, Saurabh Chamotra, Rakesh Kumar Sehgal, Dr. Raj Kamal ,J.S.Bhatia, International Conference on Emerging Trends in Networks and Computer Communications (ETNCC-2011),IEEE, ISBN: 978-1-4577-0239-6

108. Deployment of a Low Interaction Honeypot in an Organizational Private network, Saurabh Chamotra, J.S.Bhatia , Dr. Raj Kamal, Dr. A. K. Ramani International Conference on Emerging Trends in Networks and Computer Communications (ETNCC-2011) ISBN: 978-1-4577-0239-6

107. Honeysand: An Open Source Tools Based Sandbox Environment for Bot Analysis and Botnet tracking, Saurabh Chamotra, Dr. Raj Kamal, Mr Rakesh Kumar Sehgal, International Conference on Communication and Networks (Conference CoMNeT-2011)),Published in special issue with IJCA.

106. Multi-output LFSR Kernel Architecture and low power design for the Link Encryption in Bluetooth and WiMax Protocols in Software Defined Radios, C N

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