H M RAJASHEKARA

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Educational Qualifications:

- Ph.D. in Computer Science (Bharathiar University, Coimbatore, 2018)
- MCA (Madurai Kamaraj University, Madurai, 2003)
- PGDCA (Pondicherry University, Pondicherry, 2001)
- DCO (IGNOU, New Delhi, 1997)
- B.Com. (Bangalore University, Bangalore, 1989)

Professional Trainings:

1. Two-Week DST Summer School on "Mathematical Morphology in Geosciences": Organised by Systems Science and Informatics Unit, Indian Statistical Institute, Bangalore, sponsored by SERB, Department of Science and Technology, Government of India and supported by Bangalore Section IEEE Geoscience and Remote Sensing Society Chapter, 24 March – 08 April 2015, Bangalore.

2. Five-Day Training – Workshop on Western Ghats Biodiversity using Free and Open Source Geospatial (FOSS4G) Tools: Organised by Karnataka State Council for Science and Technology, jointly with Sir M. Visvesvaraya Geospatial Chair and Energy and Wetlands Research Group, Centre for Ecological Sciences, Indian Institute of Science, Bangalore, 24-28 February 2014.

3. Five-Day Course on "Spatial Statistical Tools in Data Processing and Analysis": Systems Science and Informatics Unit, Indian Statistical Institute, Bangalore, 26-30, November 2012.

4. Course on "Mathematical Morphology in Image Analysis, GISci, Geomorphology": Systems Science and Informatics Unit, Indian Statistical Institute, Bangalore, 19-22, October 2010.

5. Cisco Routers Administration: Indian Institute of Hardware Technology (IIHT), Vijayanagar, Bangalore, November 2008 - February 2009.

6. Linux System Administration and Networking: Electronics Test and Development Centre, Government of India, Goa, June 7-11, 2005.

7. Solaris 8 System Administration Introduction Course: Frontier Business Systems Pvt. Ltd., Bangalore, March 10, 2001.

8. Internet Awareness Course: CNET Computer Education, Bangalore, April - May 1997.

9. Professional Training Course in Unix: Under Canada-India Institutional Co-Operation Project, MEI Polytechnic, Bangalore, 15/11/1996 - 15/12/1996.

10. How to Maintain Computers Yourself: Under All India Council for Technical Education, Government of India, Indian Service Machine, Bangalore, 3/11/1996

Research Publications:
International Journal:
1. K Nagajothi, **H M Rajashekara**, and B S Daya Sagar: Universal Fractal Scaling Laws for Surface Water Bodies and Their Zones of Influence, **IEEE Geoscience and Remote Sensing Letters**, 18(5), 781-785, 2021.
(DOI: 10.1109/LGRS.2020.2988119)

2. S Ashok Vardhan, N Rajesh, B S Daya Sagar and **H M Rajashekara**: Automatic Detection of Orientation of Mapped Units via Directional Granulometric Analysis, **IEEE Geoscience and Remote Sensing Letters**, 10(6), 1449-1453, 2013.
(DOI: 10.1109/LGRS.2013.2260127)

3. **H M Rajashekara**, Pratap Vardhan and B S Daya Sagar: Generation of Zonal Map from Point Data via Weighted Skeletonization by Influence Zone, **IEEE Geoscience and Remote Sensing Letters**, 9(3), 403-407, 2012.
(DOI: 10.1109/LGRS.2011.2169489)

National Journal:
4. M Krishnamurthy and **H M Rajashekara**: Current Trends in Wireless Technologies in Academic Libraries, **Defence Scientific Information & Documentation Centre (DESIDOC) Journal of Library and Information Technology**, 31(1), 41-48, 2011.
(DOI: 10.14429/DJLIT.31.1.763)

International Conference:
1. Mahantesh Kodli, **H M Rajashekara**, S Rama Subramoniam, and Ravi Jadi: Water Quality Studies in Urban Lakes using Sentinel 2A Data, IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2023), Pasadena, California, USA, 3671-3674, 16-21 July 2023.
(DOI: 10.1109/IGARSS52108.2023.10281762)

2. K Nagajothi, **H M Rajashekara**, and B S Daya Sagar: Quantitative Analysis of Watersheds Partitioned from Cartosat DEM of Lower Indus Sub-Basin via Multifractal Spectra, IEEE International Geoscience and Remote Sensing Symposium (Virtual Symposium due to DOVID-19 pandemic), Waikoloa, Hawaii, USA, 881 – 884, 26 September – 02 October 2020.
(DOI: 10.1109/IGARSS39084.2020.9323994).

3. **H M Rajashekara**, K. Nagajothi, Ashok Vardhan Sanda and B. S. Daya Sagar: Categorization of hierarchically partitioned Waterbody-spread via Moran's Index, IEEE International Geoscience and Remote Sensing Symposium, Fort Worth, Texas, USA, 5567 – 5570, 23 – 28 July 2017.

(DOI: 10.1109/IGARSS.2017.8128265).

4. **H M Rajashekara**, Ashok Vardhan Sanda, B S Daya Sagar: Computations of Bi-Variable Spatial Relationships between the regions via Mahalanobis Distance, IEEE International Geoscience and Remote Sensing Symposium 2015, Milan, Italy, 4518 - 4521, 26 – 31 July 2015.
   (DOI: 10.1109/IGARSS.2015.7326832).

5. **H M Rajashekara** and M Krishnamurthy: "Wireless (Wi-Fi) Technologies for Libraries: Issues and Challenges", International Conference on Innovation Driven Librarianship: Expectations of Librarians and Library Users, SRM University, Kattankulathur, Tamil Nadu, 17-19 June 2010, Conference Papers Volume, pp. 409 - 417.

6. M Krishnamurthy and **H M Rajashekara**: "Institutional Repositories: Initiatives and Issues of Metadata", International Conference on Digital Libraries (ICDL): Shaping the Information Paradigm, The Energy and Resources Institute (TERI), New Delhi, 23-26 February, 2010, Conference Papers Volume 2, pp. 1298 - 1299.

7. M Krishnamurthy and **H M Rajashekara**: "Open Source Software and Digital Libraries, International Conference on Digital Libraries (ICDL)", The Energy and Resources Institute (TERI), New Delhi, December 5-8, 2006, Conference Papers Volume - Posters, pp. 963.

National Conference:
1. M Krishnamurthy and **H M Rajashekara**: "Open Source Software and Institutional Repositories: A Current Trend", UGC sponsored National Conference on Role of Open Source Software in Libraries, Cochin University of Science and Technology, Cochin, Kerala, 24-25 November 2009.

Teaching Experience:
- Worked as a teaching faculty member for the Computer Training Programs organized by Computer & Statistical Service Centre, Kolkata for Workers of ISI under the Professional Development Scheme of ISI:
  - Open Source Software for Office Management – OpenOffice (Writer & Calc), 22-29, March 2016, Bangalore.
  - Basic Computer Operations: 04-08 March 2013, Bangalore.
  - Linux & LibreOffice Tools: 09-16 January 2013, Bangalore.
  - Linux & Latex: 31 December 2012 - 04 January 2013, Bangalore.
  - Linux, LibreOffice, Latex: 06 December - 14 December 2012, New Delhi.
  - Advanced MS Word and Excel: 06 April - 05 May 2012, Bangalore.
  - Advanced MS Word and Excel: 04 - 11 January 2012, Bangalore.
  - Advanced MS Word and Excel: 22-30 December 2011, Bangalore.
  - Basic Computer Systems: 07-20 December 2011, Bangalore.
  - Basic Computer Systems: 28 March – 7 April 2011, Bangalore.

Project Work:
1. International Passengers Survey 2015:
   a. Designation: Nodal Co-ordinator (Bangalore Sector)

b. Commissioned by: Ministry of Tourism. Government of India
c. Conducted by: Indian Statistical Institute, Kolkata
d. Project Leader: Prof. Ashis Sen Gupta, Professor, Applied Statistics Unit.
e. Summary: The survey was conducted at 12 Airports in India which include the Airport of Bengaluru. The purpose of the Project is to collect information of International Passengers including Indians. The information being collected are the general details about (i) Entry & exit, (ii) Travel, (iii) Accommodation, (iv) Expenditure, (v) Places of visit, etc. Field Investigators have been appointed temporarily for conducting the Survey.

Lecture:
1. Title: Design and Development of a Computational Framework for Spatio-Temporal Model, One-Day Discussion Meeting on 'Algorithms Based on Advanced Spatial Statistics in Geospatial Data Sciences, IEEE India Office, World Trade Centre, Brigade Gateway, Bangalore, 15-11-2018.

Resource Person:
1. Workshop: Ten-day Workshop on Research Methodology for Social Sciences: Emerging Trends and Counters Measures, organised by Documentation Research and Training Centre, Indian Statistical Institute, Bengaluru, 20-11-2019 to 29-11-2019.
   a. Topic: Document preparation using Linux and Latex (Theory and Practical).
   b. Sessions: Two sessions of 90 Minutes each.
   c. Date: 27-11-2019 (02:00 PM to 05:30 PM)

2. Workshop on Statistical Ecology and Related Topics, organized by Indian Statistical Institute, Bengaluru, 08-11 December 2016.

Review Work:
1. Journal: IEEE Transactions on Emerging Topics in Computing
2. Journal: IEEE – Access
3. Conference: IEEE CONECCT 2020
4. Conference: InGARSS 2023

Conferences/Seminars/Workshops organised:
1. Local Arrangements Chair: 2023 India IEEE Geoscience and Remote Sensing Symposium (InGARSS), organized by IEEE Geoscience and Remote Sensing Society (GRSS), hosted at the International Institute of Information Technology, Bangalore (IIITB), 10-13 December 2023.

2. Co-Ordinator: Online workshop on Improving Research Writing Using Grammarly, for Staff and Students of Indian Statistical Institute, Bangalore Centre, organized by Bridge People Technology Solutions Pvt. Ltd, from 11:00 AM to 12:00 PM, on 24-05-2022.

3. Co-Coordinator: 2-Day Workshop on Spatial Data Science and Curation: Spatial Data Science, organized by Technology Innovation Hub, Indian Statistical Institute, Kolkata, at Indian Statistical Institute, Bangalore, 24-25 June, 2021 (Virtual Workshop).

4. Member – Organising Committee: Ninth International Conference on "Advances in Pattern Recognition" (ICAPR 2017), organized by Electronics and Communication

Sciences Unit, Systems Science and Informatics Unit, R.C. Bose Centre for Cryptology and Security, Indian Statistical Institute, Bangalore, 27-30 December 2017.

Conferences/Seminars/Workshops attended:

1. Government e-Market Place (GeM): Participated in the GeM training session on 01-09-2023.

2. Digital India Week 22: Organised by Ministry of Electronics and Information Technology, Government of India, Gandhinagar, Gujarat, 04-06 July 2022.

3. 2-Day Workshop on Spatial Data Science and Curation: Spatial Data Science, organized by Technology Innovation Hub, Indian Statistical Institute, Kolkata, at Indian Statistical Institute, Bangalore, 24-25 June 2021 (Virtual Workshop).

4. Virtual Conference Pair on "Geospatial start-ups and Academia: Seeding, Nurturing and Growing, organised by IEEE-GRSS Kerala and Bangalore Chapters, on Friday, 11 September 2020.

5. Ninth International Conference on "Advances in Pattern Recognition" (ICAPR 2017), organized by Electronics and Communication Sciences Unit, Systems Science and Informatics Unit, R.C. Bose Centre for Cryptology and Security, Indian Statistical Institute, Bangalore, 27-30 December 2017.

6. One-day workshop on "Climate Change and Agriculture in India", organized by Economic Analysis Unit, Indian Statistical Institute, Bangalore, 28 March 2016.

7. 4th Annual NKN Workshop on "NKN at the Core of Cyber Space", organised by National Knowledge Network, at Jawaharlal Nehru Technological University (JNTU), Hyderabad, Telangana, 21-22 January 2016.

8. ISI-CODATA International Seminar on "Data Science", organized by Documentation Research and Training Centre, Indian Statistical Institute, Bangalore and International Council for Science: Committee on Data for Science and Technology, Paris, France, at Indian Statistical Institute, Bangalore, 19-20 March 2015.

9. Third Annual Workshop on "Enhancing Research Collaborations through NKN", organised by National Knowledge Network, at Indian Institute of Technology, Guwahati, Assam, 15-17 December 2014.

10. Conference and Hands-on-Workshop on "IPv6", organised by ERNET India, Chennai, 02 May 2014.

11. Second Annual Workshop on "Enhancing Research Collaborations through NKN", Organised by National Knowledge Network, at Indian Institute of Science, Bangalore, 17-19 October 2013.

12. International Workshop on Open Science and Open Data (OSOD-2013), organised by Documentation Research and Training Centre (DRTC), Indian Statistical Institute,

Bangalore and Creative Commons, USA, at Indian Statistical Institute, Bangalore, 7 October, 2013.

13. Two-day IEEE-IISc Workshop on Research Methodologies and Technical Writing, organised by IEEE-IISc. Student Branch, Indian Institute of Science, Bangalore, 5-6 July 2013.

14. Conference and Hands-on-Training on "eduroam" organised by ERNET, Government of India, hosted by SRM University, Chennai, on 28 June, 2013.

15. Three-Day Workshop on "Mathematical Morphology and Pattern Recognition: Theory and Applications", Systems Science and Informatics Unit, Indian Statistical Institute, Bangalore, 26-28 March 2013.

16. International Seminar on "Cyber Security" organised by Department of Computer Applications, Bharathiar University, Coimbatore, Tamil Nadu, 09 March 2013.

17. Technical Workshop on "National Knowledge Network", organised by National Informatics Centre, Government of India, held at NIMHANS's Convention Centre, Bangalore, 18 April 2012.

18. "Bhuvan Workshop", organised by National Remote Sensing Centre, Indian Space Research Organisation, held at Bangalore University, Bangalore, 17 March 2012.

19. Workshop on "Advanced Methods in Spatial Data Processing and Analysis" organized by Systems Science and Informatics Unit, Indian Statistical Institute, Bangalore, 06-07 March 2012.

20. International Seminar on "Research in Computers: Why, What and How?", organized by Department of Computer Applications, Bharathiar University, Coimbatore, Tamil Nadu, 10 February 2012.

21. Two-Day Workshop on Honouring Professor Jean Serra, organized by Systems Science and Informatics Unit, Indian Statistical Institute, Bangalore, 25-26 October 2010.

Webinars attended:
1. "Quest Data Protection Solutions - How Quest Data Protection Solutions offer Cloud-ready data recovery software for a hybrid data centre, talk by Mr. Zabiulla Naregal, Solutions Consultant, Technobind, organized by Cito Infotech Pvt. Ltd., Bangalore, on Wednesday, July 7 2021 at 3:00 PM - 4:00 PM IST.
2. "Intel India Conclave for Leaders in Education '21", 21-22 October, 2021 (Virtual).
3. "Geospatial start-ups and Academia: Seeding, Nurturing and Growing", organized by IEEE GRSS, 11-09-2020.
4. "Earth Observation and Geospatial Applications – Indian Experience", Bhoo-Mandal Talk Series, IEEE-GRSS Chapter, Bangalore, 10 July 2020.

Memberships:
1. Member, Organizing Committee, Ninth International Conference on Advances in Pattern Recognition (ICAPR-2017), being held during 27-30 December 2017, at Indian Statistical Institute, Bangalore.

2. Senior Member (2012), IEEE Geoscience and Remote Sensing Society (IEEE-GRSS).

3. Founding Member, Bangalore Section IEEE-GRSS Chapter.

4. Treasurer/Webmaster, Bangalore Section IEEE-GRSS Chapter (2013-2017).

5. Member, Technical Advisory Committee (IT Infrastructure), Central University of Karnataka, Gulbarga, Karnataka.

6. Member-Convener, Computer Committee, Indian Statistical Institute, Bangalore.

7. Member (Technical), E-Procurement Committee, Indian Statistical Institute, Bangalore.

8. Member-Convener, Committee for disposal of E-Waste and other unused items, Indian Statistical Institute, Bangalore.

9. Member, Fact Finding Committee, Indian Statistical Institute, Bangalore.

10. Convener, Disposal Committee, Indian Statistical Institute, Bangalore.

Travel Grant Awards:
1. IEEE-GRSS Travel Grant Award (to attend International Geoscience and Remote Sensing Symposium - 2023 in Pasadena, California, USA, 16-21 July 2023).

2. DST-SERB International Travel Grant Award (to attend International Geoscience and Remote Sensing Symposium - 2017 in Fort Worth, Texas, USA, 23-28 July 2017).

3. IEEE-GRSS Travel Grant Award (to attend International Geoscience and Remote Sensing Symposium - 2017 in Fort Worth, Texas, USA, 23-28 July 2017).

4. ISI-International Travel Grant Award (to attend International Geoscience and Remote Sensing Symposium - 2015 in Milan, Italy, 26-31 July 2015).

5. IEEE-GRSS Travel Grant Award (to attend International Geoscience and Remote Sensing Symposium - 2015 in Milan, Italy, 26-31 July 2015).

Functions and Key Responsibilities:
(a) Research Work
- Research topics: Geographical Information Systems, Spatial Social Science, Computational Social Systems, Open Source and Information Technology.

(b) System Administration Work:
- Designing, installing and maintaining physical network architecture and infrastructure for LAN, Wi-Fi (Wireless LAN), Intranet and Internet.

- Designing, installing, configuring and maintenance of the following:
  - Mail Server, Web Server, DNS Server, Application Server, Accounts Server, Library Server.
  - Workstations, Desktop Computers, Laptops, Peripherals and centralized UPS Systems.
  - Router, Firewall Devices, Switches, Wireless Access Points.
  - Software (Operating Systems Software, Programming Software, Statistical / Mathematical / Econometric Software, Anti-Virus, Utilities, etc.)
- Designing and updating the Web Pages of the Institute (http://www.isibang.ac.in).
- Diagnosing and troubleshooting computer hardware and software-related problems.
- Data Backup and Data recovery from the computers.
- Annual Maintenance Contracts, Hardware / Software purchases processing.
- Supervising the maintenance of Air-Conditioning equipment and EPABX Telephone System.
- Assisting the Head of the Centre, Heads of different Units and faculty members concerning the above works whenever required.
- Supervising and guiding the AMC Engineers in maintaining computers and peripherals.
- Supervising up-gradation of Computers / Peripherals / Software.
- Hands-on practical training on PC Operation, Software installation, MS Office Suite, E-mail, Internet, Web Design etc. to the staff (including some faculty members) and students of ISI.
- Assisting faculty members of the different Units in conducting their training programs. This includes installing and configuring the hardware like PCs, Laptops (including participants), LCD Projectors, Networking, UPS Systems, software, etc. Helping the Training Participants to use the PCs, Laptops, and software (General/Statistical/ Mathematical / Econometric) installed on the PCs and Laptops.
- Member of the team in developing customized software for the Institute to meet the requirements of 'Accounts Management'.
- Liaison with different agencies for smooth functioning and management of Computer Centre and Computer Labs and other Computer equipment.
- Providing technical assistance to the Heads of different Units during hardware/software purchase or upgrade.
- Keeping abreast of the latest state-of-the-art technologies available from Internet/Books / Magazines, etc.
- Attending Computer related problems beyond office hours and on holidays whenever required.
- Computer Hardware/Software purchase processing and AMC related administration.
- Maintenance of Computer Hardware and Software Inventory.
- Maintenance of Central Computer Centre's accounts.
- Organizing Computer Committee meetings and preparing minutes of the meetings.
- Any other special duties assigned by the Head of the Centre from time to time.