Dr. Sanjay K. Chaturvedi

Professor and Former Head, SCSQR, IIT Kharagpur-721 302 | +919434032495 | DOB: August 24, 1964
Link: http://www.iitkgp.ac.in/department/RE/faculty/re-skcrec| email: skcrec@hijli.iitkgp.ac.in,
B. E.'88 (Electrical Eng. IIT Roorkee), M. E.'90 (System Engineering & Operations Research, Electrical Eng., IIT Roorkee), Ph. D.'03 (Reliability Engineering, IIT Kharagpur)

Academic (See Annexure-I)

1. **NERIST Itanagar (1992-2003):** Taught UG level Electrical Eng. subjects in Electrical Eng Department **(Annexure I-III)**
2. **At IIT Kharagpur (2003-Contd…)** **(Annexure I & II)**

Course Taught Only at IIT Kharagpur 2003 onward)	
o **M. TECH. (RECENT YEARS FEEDBACK/NO OF STUDENTS-YEAR)**	o **B. TECH. (SOME PAST_FEEDBACKS/NO OF STUDENTS)**
• Reliability Estimation and Life Testing (4.44/19-2022, 4.29/12-2021, 4.46/26-2020, 4.21/16-2019, 4.17/14-2018, 4.43/28-2017, 4.20/10-2016) • Maintenance Engineering (4.26/9-2021, 4.19/28-2020, 3.47/13-2019, 4.19/12-2018, 4.01/13-2017, 4.73/23-2016, 4.23/9-2015) • Reliability Simulation Laboratory (4.32/25-2020, 3.66/13-2019, 3.99/2018, 4.63/21/2017,4.15/9-2016) • Reliability Engineering (4.51/27-2020, 4.17/19-2019, 4.23/16-2018) • Repairable System Modelling and Analysis (3.75/2-2021) • Reliability Testing Laboratory (OLD-FB: 4.09/12, 3.47/6, 4.56/21) • Reliability Analysis and Prediction (OLD-FB: 3.75/26, 3.89/20) • Reliability Design • Seminar-I & II	• Introduction to Reliability Engineering (OLD-FB: 3.29/17, 3.47/6) • Principles of Reliability Engineering (NA/8-10) • Operations Research (Elective) (NA/80-110) • Operations Research-I (NA/80+) o **M. TECH COURSE DEVELOPMENT/PROPOSAL** • (i) Reliability Engineering, (ii) Advanced Reliability Engineering, and • (iii) Reparable System Analysis
Text Book: 1. *Repairable Systems Reliability Analysis: A Comprehensive Framework, John Wiley & Sons Inc, 2020 (Co authored with RN Rai and Nomesh Bolia)* 2. Network Reliability: Measures and Evaluation, Scrivener Publishing (Wiley Partner), USA, 2016. *100 copies sold in its first year.* **Monograph**: 3. Mobile Ad Hoc Network: Reliability Measures and Evaluation, ISBN No: 978-3-659-91776-9, Lambert Academic Publishing, Germany, **2016**, Co-bauthor Dr. N. Padmavathy.	
• Member, IEC,TC56 (WG-1 and WG-2), 2022-23 • Member, BIS, Reliability of Electronic and Electrical Components and Equipment Sectional Committee, LITD 02 • Member, Centre of Excellence for Rapid and Alternative Energy Mobility (RAEM), Gautam Buddha University, Greater Noida India. • Member, Specialist National Committee for defining the Certification Mechanism for Gaganyaan • **Listed in Top Feedback**: Laboratory Courses (Category: 10 or More Respondents) Reliability Simulation lab (RE69004) in **2016** • **ICECCT SVSCE BEST PAPER AWARD** Performance evaluation of mobile ad hoc network using Monte Carlo simulation with failed nodes, (ICECCT 2017), February 22-24, **2017**, SVS College of Engineering, Co-authored with N. Padmavathy and J. Rama Charana Teja.	

Research Guidance

· **Ph. D. Total**- 10 (Completed), 5 *(*running), **M. Tech**. Thesis: 80 (completed-2023), 3- Running (2023-24)
· **Publication**- 108 (65 J + 32 Conf. + 8 Book Chapters+3 books): **(See Annexure-II)**

Sponsored Research and Consultancy

· **Research** − 6 (4 PI+ 2 Co PI), 2 as Co PI continued) **(See Annexure-I)**
· **Consultancy**-24 (21-PI + 3 Co PI) (**(See Annexure-I)**
· **Total Value:** ~INR 385.39 Lakhs (PI ~225 + CO PI ~INR160) (i.e., CONSULTANCY: ~ INR 245.39 & RESEARCH: ~INR 140)

Outreach

· Coordinated and delivered 10-lectures to a 50-hour online Short term course entitled "Certified Reliability Engineering (CRE) course for DIQA officers", May 1- May 13, 2023 for 40 officers.

· Organized Online 'Distinguished Speaker Series on QRAMS: January 2022- December 2022

· **Conference/Workshop organized:** Web Workshop *on Robust Engineering and optimization, Feb 24, 2021, Special Lecture on Quality* by Prof. P. K. Ray during May 11-14 May **2017** (Participants 25), *Curriculum, Vision & Mission of SC School of Quality & Reliability*, May 8, **2017** (Participants 15), *Fuzzy sets and Fuzzy logic in Informatics*, January 29, **2016** (Participants 57),

· *Moderator Session* 11D, RAMS **2014**, The 61th Annual RAMS® Innisbrook Golf & Spa Resort Palm Harbor, Florida, USA

· *Finance Chair*, INCRESE 2005, INCRESE 2006, and INCRESE 2007

Dr. Sanjay K. Chaturvedi

- **Editorial Board: Managing Editor,** Int J of Life Cycle Reliability and Safety Engineering, **Associate Editor**: International Journal of System Assurance Engineering and Management (2023-…), Int J of Reliability and Safety (2020-contd.), **Co-Editor-in-Chief,** International Journal of Performability Engineering (**2017**-), **Editorial/advisory board member** Journal of Graphic Era University (JGEU),(**2017**-), **Editorial Board Member,** International Journal of Mathematical, Engineering and Management Sciences (IJMEMS), (**2016**-continued), **Assistant Editor-in-Chief,** International Journal of Performability Engineering (**2016**), **Regional Editor (South Asia),** International Journal of Performability Engineering (**2014- 2015**), **Editor (in group 2),** International Journal of Performability Engineering (2009-2014), **Associate Editor**, International Journal of Performability Engineering (2005-2008), **Coeditor** for the proceedings of INCRSE 2007, INCRESE 2006, and INCRESE 2005

- **Member:** Member, IEC-TC56/WG1 & 2, Member, BIS, Reliability of Electronic and Electrical Components and Equipment Sectional Committee, LITD 02, Member, Specialist National Committee for defining the Certification Mechanism for Gaganyaan, Technical Committee Member (PHM18 Doctoral Symposium); Technical Committee Member (*International Conference on Reliability, Safety and Hazard (ICRESH) 2019*), **Member Peer Selection Committee** (faculty), NITTTR, Chandigarh, Nov. 2018, Member 'course development modules on reliability engineering: Tasks & Audience Analysis-2018', TVSE Hosur, Bengaluru; IEEE Senior Member (**2016**); IEEE Local Chapter: Assistant Secy (2018-19), Executive Committee Member, (**2016- contd…**) and Chair, Industrial Relation (**2017**), Sectional Committees of Electronics and Information Department (LITD-02) of BIS whose scope is standardization in the field of availability, reliability, maintainability and maintenance support for electronic components and support; Invited expert member for Brain Storming Workshop for Centre of Dependability Engineering (**BS-CDE 2017**) Organized by IIT BHU, during February 10-11, **2018**; **Expert Committee Member** on Reliability Procedures and Practices, ASL, DRDL, Hyderabad.

- **Reviewer**: Notably for IEEE Transaction on Reliability; IIE Transaction, International Journal of Reliability and System Safety; International Journal of Quality and Reliability Management; International Journal of Performability Engineering; International Journal of System Science; International Journal of Failure Analysis; International J of Reliability Eng and System Safety; Quality and Reliability; International Journal of Zhejiang University-SCIENCE A; Defense Science Journal; INCRESE 2005, INCRESE 2006, and INCRESE 2007.

- **Short-term course: Co-Coordinator: Module 2:** *Predict & estimate reliability at Component and Product level* **& 4:** *Evaluate & improve Maintainability and Establish service frequency and the task in each frequency based on reliability data of subsystems* **of the School organized STC modules at TVSE Hosur, Bengaluru (2018-19).** **Coordinator:** *Software Reliability*, April 18-20, 2011, *Recent Advances in Reliability Prediction, Estimation and Testing*, June 22-25, 2010*, Product Reliability Assurance and Assessment*, August 4-6, 2008

- **Invited Lectures/Lecture Delivered (in STCs): Module 4:** "Evaluate & improve Maintainability and Establish Service frequency and the task in each frequency based on reliability data of subsystems" , and **Module 3:** "Plan and develop reliability based tests and use reliability software tools" of TVSE, February 25- 28, 2019, , PI: Prof. V. N. A. Naikan, **Module 2: "Predict & estimate reliability at Component and Product level"** **of TVSE, September 21-22, 2018, PI: Prof. V. N. A. Naikan,** *Module 1:* "Understand & apply reliability models on Product / Equipment" of TVSE, **September 17-20, 2018**, PI: Prof. V. N. A. Naikan, RAMS 2018 for Railways at SCSQR, IIT Kharagpur, July 2018 PI: Prof. N. K. Goyal, **Others:** CQA**,** Pune**,** Tata Hitachi Construction Company, Jamshedpur, DIQA (Bangalore), RCI (Hyderabad), DRDL (Hyderabad), DRDO (Panagarh), CG(Mumbai), VIZAG Steel Plant (Vishakhapatnam), NITTTRI (Kolkata) and in several STC organized by Reliability Engineering Centre, IIT Kharagpur.

Administrative and others

- **SCSQR/REC/Institute:** Chairman, Rajbhasa Vibhag (2022-24)**,** Head*(Dec 31st 2018-Dec 2021), Faculty Advisor, TnP In charge, Library I/C and Central Library Representative, Computer Lab I/C, and Environmental Testing Lab I/C (2004-2007), Tabulator and Time-Table In charge, Annual Report Preparer,* **Team Member Anti Ragging Squad** (Night Vigilance), **Institute Representative** *for GATE Examination*, **Assistant warden**, RK Hall, IIT Kharagpur July 2006-October 2009*.

Career Vision

Since I had chosen engineering teaching as my profession, I would like to be known as an excellent researcher and teacher in the area of my activity and at the same time contribute to the best of my capabilities to the nation-building by carrying out projects of importance in my area. I would like to be a well-known, respected professional and leader in my area of activity not only in my country but across the world, while at the same time become the kind of teacher that inspires the students to nation building by educating them and encouraging them to do their best.

    As a faculty of IIT, I want to do the following in the coming three years:

- **As HoS:** Keeping in view of the premise of 4-P over which this Centre has been upgraded to the School of Quality and Reliability in 2016 through a generous grant from IIT an alumnus, Dr. Subir Chowdhury, there is a need to strengthen the school in the areas where not only it improves its own reputation and proves its niche in Q & R further, but also supports the efforts of the Institute administration to improve its rating in international scenario.
  - o There are talks on with ISRO, NSTL, OFB, EEPC India, Eaton and John Deere on Project/Consultancy/STC/MoU fronts.
  - o A budget of INR1.81 has been proposed to strengthen our existing labs + furnishing our place of relocation.
  - o Plan to attract good faculty in Quality area side + 1 or 2 in Reliability Engineering side

Dr. Sanjay K. Chaturvedi

- **As a teacher:** Keeping in view the current thrust in RAMS and dependability/performability, I have already proposed/modified three new courses incorporating some recent trends and methodologies in their syllabus dealing with modeling and analysis of current complex systems. As a result, I want to take this challenge as an opportunity and have sent a proposal to write a textbook on reparable system reliability along with my co-authors as we feel that there is still lack of good books for engineers and managers. However, based on the departmental needs and requirements, I want to contribute in others areas too. I also plan to enhance the capability of our Reliability Simulation Lab by equipping with more simulation tools in the area of RAMS.

- **As a researcher:** The current need of research in my areas of interest is developing reliability assessment methodologies for system with dynamic topology such as communication networks, multi-phase systems or multi-state systems. Most of the problems in these area fall under NP-hard/complete. Besides, the basic tools and techniques such as FMEA or Allocations can also be further improved with the availability of new tools and techniques in mathematical sciences. As a researcher, I want to augment my contribution in this area.

- I shall also explore the application of deep/machine learning concepts, Bayesian Belief Network, which appears to be very much immerging and promising application tools in my area of interest.

- Recently, started collaborating with researchers in my domain at Curtin University, Australia. Could publish 1 paper whereas 2- are under review. Also exploring the possibility of collaborating with Electrical Engineering Department at IIT Kharagpur for the reliability modelling and analysis of converters for particle accelerators.

- I shall continue guiding PhDs, executing research and consultancy projects and disseminating research outcomes in the journals of repute in the areas of my interest.

I intend to achieve this goal by working my way up the ladder with determination and grit while gaining the respect of my coworkers and students. I am sure IIT administration would help me achieve this goal.

A. Academic

S. No.	Designation	Employer	Duration
1.	Head	Subir Chowdhury School of Quality and Reliability	2018-2021
2.	Professor	Indian Institute of Technology, Kharagpur	April 2018- Contd…)
3.	Assoc. Professor	Indian Institute of Technology, Kharagpur	October 2011- April 2018
4.	Asstt. Professor	Indian Institute of Technology, Kharagpur	Dec. 2003 – October. 2011
5.	Sr. Lecturer	North Eastern Regional Institute of Science and Technology, Nirjuli-791 109 (Itanagar) Arunachal Pradesh	Since February 19 1998- Dec. 2003
6.	Lecturer	North Eastern Regional Institute of Science and Technology, Nirjuli-791 109 (Itanagar) Arunachal Pradesh	February 1992- January 1998
7.	From August 4, 1999 to July 14 2002, I had been a research scholar at Reliability Engineering Centre, Indian Institute of Technology, Kharagpur- 721 302 (W.B.) India, where I did my Ph. D. work under Prof. K. B. Misra.		

a) Subjects Taught at UG/PG Level

PG

- Repairable System Modelling and Analysis
- Reliability Estimation and Life Testing
- Maintenance Engineering
- Reliability Analysis and Prediction
- Reliability Design
- Neural Networks & Applications

UG

- Introduction to Reliability Engineering
- Principles of Reliability Engineering
- Operations Research (at IIT, Elective)
- Operations Research-I
- Introduction to Digital Electronics
- Computer Programming in C/C++
- Network Analysis
- Computer & Application
- Electrical Machines
- Electrical Machine Design
- Power System Analysis
- Digital Hardware Design

b) Editor, Reviewer and Member in Organizing Committees

Editor

1. **Managing Editor,** Int J of Life Cycle Reliability and Safety Engineering (2020-Contd…)
2. **Associate Editor,** Int J of Reliability and Safety (2020-cont.)
3. **Co-Editor-in-Chief,** International Journal of Performability Engineering (2017-2018)
4. **Editorial/advisory board member** Journal of Graphic Era University (JGEU),(2017-contd…)
5. **Editorial Board Member,** International Journal of Mathematical, Engineering and Management Sciences (IJMEMS), (2016-continued)
6. **Assistant Editor-in-Chief,** International Journal of Performability Engineering (2016)
7. **Regional Editor (South Asia),** International Journal of Performability Engineering (2014- 2017)
8. **Editor (in group 2),** International Journal of Performability Engineering (2009-2014)
9. **Associate Editor**, International Journal of Performability Engineering (2005-2008)
10. **Coeditor** for the proceedings of INCRSE 2007, INCRESE 2006, and INCRESE 2005.

Reviewer

1. IEEE Transaction on Reliability
2. IIE Transaction
3. Int J of Risk and Reliability Part O
4. International Journal of Reliability and System Safety
5. International Journal of Quality and Reliability Management,
6. International Journal of Performability Engineering,
7. International Journal of System Science
8. International Journal of Failure Analysis
9. International J of Reliability Eng and System Safety
10. Quality and Reliability International
11. Journal of Zhejiang University-SCIENCE A
12. Defense Science Journal
13. INCRESE 2005, INCRESE 2006, and INCRESE 2007

Conference/Workshop Committee/Webinar Member//Chairperson/Coordinator

1. Organized Online 'Distinguished Speaker Series on QRAMS: January 2022- December 2022, wherein 23 eminent experts in QRAMS domain delivered their talks for the benefits of the QRAMS students/researchers/consultants/engineers/scientists community.

2. Organized a 2-days 9May 31 – June 1 2018) visit of Prof. Lance Fiondella, Department of Electrical and Computer Engineering, University of Massachusetts, Dartmouth, USA.
3. Organized a talk and interaction program of Prof. Lance with students of all levels, May 21-June 2, 2018.
4. Organized a Lecture by Dr. Soumen Roy, Sc G, DRDL Hyderabad.
5. As Prof. I/C TnP, organized interviews at the School for recruitment for job/intern conducted by Philipps India and Cummins India.
6. Three day long "Special Lecture on Quality by Prof. P. K. Ray" at SC School of Quality & Reliability during May 11-14 May 2017 (Participants 25)
7. A day long workshop on 'Curriculum, Vision & Mission of SC School of Quality & Reliability", May 8, 2017, Committee Room, IIT Kharagpur (Participants 15)
8. A day long workshop on 'Fuzzy sets and Fuzzy logic in Informatics, January 29, 2016 at SN Bose auditorium, IIT Kharagpur (Participants 57)
9. Moderator Session 11D, RAMS 2014, The 61th Annual RAMS® Innisbrook Golf & Spa Resort Palm Harbor, Florida, USA
10. Session Controller, in International Conference on Theoretical, Applied, Computational and Experimental Mechanics organized by Aerospace Engineering, IIT Kharagpur, Dec 2007.
11. Chaired a Technical session in INCRESE 2007 at Udaipur.
12. Finance Chair, INCRESE 2005, INCRESE 2006, and INCRESE 2007

c) Invited Talks/Lectures

1. *Reliability Engineering Perspective and Reliability Prediction*, Workshop on Quality and Reliability, Integrated Test Range (ITR), Chandipur, Balasore, Orrisa, June 23, 2009.
2. *Communication Network Reliability Evaluation*, IETE Local Chapter, 510 Army Base Workshop, Meerut, June 27, 2009.
3. *Maintenance, Maintainability and Availability, Lecture in STC on RCM at Kolkata, July 13-15,2009*

d) Research and Consultancy Projects as PI/Co-PI

1.	QRAMS modelling and analysis of futuristic UAV systems, ADE, Bengaluru	~43 Lakhs (May 28, 2023- April 30, 2025)
2.	Data Collection Framework, FMEA/FMEA and Reliability Estimation of CET 65 E **(June 2022), NAI, Thiruanantpuram**	~8 Lakh (Sept 15, 2020- March 31, 2023)
3.	FMEA/FMECA of RM-III Flight Vehicle (RudraM), RCI, Hyderabad	~ 20 Lakh (April 25, 2021- June 30, 2022)
4.	Reliability Study of Rustam II, ADE, Bengaluru	~10 Lakh (Nov 13, 2020-May 12, 2021)
5.	Reliability Analysis of 2kw Air Cycle Machine Based Liquid Cooling System for Pod Application, BHEL (Prof VNA)	~13.5 Lakh (Sept 01, 2020-April 30, 2021)
6.	FMEA/FMECA and reliability prediction/estimation of assault rifle –Ghatak, RFI, Ichhapur	~24 Lakh (Oct 16, 2019-Nov 30, 2020)
7.	Reliability Growth Study of ASTRA Missile, DRDL, Hyderabad	~7.5 Lakh (Nov 01, Dec 31, 2019)
8.	Development of Reliability Engineering Framework for Indian Railways Rolling Stock (NKG, VNA, SKC, Anirudh Gautam of RITES), (Research), DST+Railways	~72 Lakh (May 3, 2016 – Feb 17, 2021)
9.	Reliability Assessment of L40 Stage Assembly and Integration Process, KCSTC, Kalpana Chawla Space Technology Cell. (VNA, SKC, NKG)	~20 Lakh (May 9, 2016- Nov 04, 2018)
10.	Reliability Study of Akash-NG System, DRDL Hyderabad	~7 Lakh (January 2018-June 2018)
11.	Reliability Analysis of Electronics Power Conditioner (EPC) For Space Application, MTRDC, Bengaluru	~8 Lakh (July 1, 2016-April 30, 2017)
12.	Reliability Studies on Electronics Power Conditioning (EPC) of Microwave Power Module, MTRDC, Bangalore	8.34 Lakh(01-04-2015-31-05-2016)
13.	Reliability Prediction of Degaussing System, L & T Mumbai	~ 6 Lakh (Dec. 2016- February 2017)
14.	Reliability Work Package for Project LR-SAM, DRDL Hyderabad	9.55 Lakh (1/3/2015- 31/12/2015)
15.	Application of RAMS concepts for HHP (4500hp) Diesel Locomotives, (Prof VNA).	~8.7 Lakh (08-01-2015-30-09-2015)
16.	Preliminary Risk Analysis of Hypersonic Technology Demonstrator Vehicle, DRDL Hyderabad	~10 Lakh (September 2014-Apri 2015)
17.	Reliability Package for Project Garuda, DRDL Hyderabad	20 Lakh (October 2012-Feb 2014)
18.	Reliability Prediction and FMEA/FMECA of Tandem CFF for Paratroopers, DEBEL Bangalore	10 Lakh (June 2012-May 2013)
19.	Reliability of CG Products, Crompton & Greaves, Mumbai	7.8 Lakh (August 2012 – July 2013)
20.	Reliability of CG Products, Crompton & Greaves, Mumbai	7. 8 Lakh (August 2011-July 2012)
21.	Reliability Prediction and FMEA/FMECA of Submarine Escape Suit, DEBEL Bangalore	10 Lakh (June 2011- May 2012)
22.	Reliability Package for Project Garuda, DRDL Hyderabad	13.5 Lakh (2009-2011)
23.	Reliability Modelling and Analysis of Integrated Test Range, DRDO, Balasore, Odisa.	10 Lakh (October 2009-August 2010)
24.	Reliability Prediction and FMEA/FMECA of LSS, DEBEL Bangalore	8 Lakh (August 2009-June 2010)
25.	Reliability Package for Project Garuda, DRDL Hyderabad	8 Lakh (October 2008-September 2009)
26.	Reliability Prediction of Data Link Systems, DEAL Dehradun	8.50 Lakh (1 Year, Jan 2008-Dec 2008)
27.	RAMS for ASTRA	11.0 Lakh (1 Year) June 2007- May 2008)
28.	Reliability Package for Project Garuda, DRDL Hyderabad	8.0 Lakh (1 Year)May 2007- April 2008)
29.	Infrastructural Development in Environment Testing Laboratory, FIST-DST Program	36.5 Lakh (5 years) March 2006- 2011
30.	Reliability Evaluation of Communication Networks with Heterogeneous Link-Capacity, SRIC, IIT Kharagpur	1.75 Lakh (2 years) May 2004-May 2006.

B.   Administrative and others

a)   Departmental, Institutional and other Responsibilities at IIT Kharagpur
1.   Chairman, Rajbjasha Vibhag (2022-
2.   Head, SCSQR (Dec 2018-Dec 2021)
3.   Assistant warden, RK Hall, IIT Kharagpur (July 2006-October 2009)
4.   Computer Lab I/C, REC and Environmental Testing Lab I/C (2004-2007).
5.   Library I/C and Central Library Representative from REC. (2005- Feb 2019)
6.   Faculty Advisor, and TnP I/c REC (2005-Feb 2019)
7.   Tabulator and Time-Table Incharge, REC.
8.   Annual Report Preparer, REC
9.   Institute Representative for GATE Examination .
10.   Team Member Anti Ragging Squad (Night Vigilance)

b)   Administrative and other Responsibilities at NERIST, Itanagar (1992-2003)

S. No.	Responsibility	From-To	Period	Remark
1.	Coordinator ET Cell and I/C Email Section	July 2003- Dec. 2003	5 months	Re-appointed after 1998. Left NERIST to Join Reliability Engg Centre, IIT Kharagpur
2.	Member, Academic Committee,	August 2003-Dec. 2003	4 months	
3.	Coordinator, ET Cell	July 2003-Dec.'2003		
4.	I/C, PC Lab Electrical Engineering	July 2003-Dec.'2003	5 months	
5.	Hostel Warden	May 2003- Dec.'2003	7 months	
6.	Coordinator, B. Tech Projects (Electrical Engineering Department)	August 2002- Dec.'2003	1.5 years	
7.	Vice-President, NERIST Alumni Association	December 2002- Dec.'2003	1 year	
8.	Vice-Chairman, NERIST Entrance Examination	Jan 1996- April 1998	2-year, 3 months	
9.	Incharge, E-mail Section, NERIST	December 1995- April 1998	2-years, 4 months	
10.	Coordinator, Educational Technology Cell, NERIST	December 1995- April 1998	2-years, 4 months	Created under MHRD Sponsored project. Transformed it to a sate-of-the-art facility in nearby areas.
11.	Incharge, Advance Central Computing Facility, NERIST	January 1996-July 1999	3-years, 6 months	Founder Incharge
12.	Incharge, Computer lab (Electrical Department)	January 1994-July 1997	3-years, 6 months	Founder Incharge
13	Incharge, DOE Lab	January 1996-July 1999	3-years, 6 months	
14	Incharge, Electrical Workshop, Electrical Eng. Department	July 1994-September 1996	2-years, 2 months	

c)   Member (Committees at NERIST) during 1996-1998
- Academic Committee
- NERIST Entrance Examination Committee
- Computer Maintenance Committee.
- Library Committee.
- EPABX Committee.
- Xerox M/C Committee.
- Advisory Board Member, NERIST Newsletter.
- Student Disciplinary Committee
- ISTE local Chapter

ANNEXURE-II: Publications (Total 108): Citations: 1588, h-20, i-39 (Google Scholar May 2023)
3(Book) +8 (Book Chapter) + 65 (Journal Papers) + 32 (Conference Papers)

1. **Books-3**

   1. Book 1: Repairable Systems Reliability Analysis: A Comprehensive Framework, John Wiley & Sons Inc, 2020 (Co authored with RN Rai and Nomesh Bolia)

   2. Book-2: Network Reliability: Measures and Evaluation, Scrivener Publishing (Wily Partner), USA, 2016. http://www.scrivenerpublishing.com/cart/title.php?id=298

   3. Book-3: Mobile Ad Hoc Network: Reliability Measures and Evaluation, ISBN No: 978-3-659-91776-9, Lambert Academic Publishing, Germany, 2016

4. **Book Chapters-8**

   1. *Grey Wolf Optimizer: A Powerful Nature Inspired Technique For System Reliability Optimization,* in Reliability analysis: Binary and Multi-state systems." CRC press under the series "Advanced Research in Reliability and System Assurance Engineering, (Ed.) Akshay Kumar, Rajesh S. Prabhu Gaonkar and Prof Yury Klochkovco-authored with Gaurav Khanna, Priyansh Singh and Aman Thapliyal

   2. *Tribute to a Dedicated Teacher and Researcher of Performability Engineering,* in Frontiers of Performability Engineering - In honor of Prof. K. B. Misra on his 80th Birthday, Durga R. Karanki, Eds. Springer, 2022, coauthored with D. R. Karanki

   3. *Integrated Fuzzy MCDM Frameworks in Risk Prioritization of Failure Modes in Frontiers of Performability Engineering -* In honor of Prof. K. B. Misra on his 80th Birthday, Durga R. Karanki, Eds. Springer, 2022, co-authored with Soumava Borala,b, Yiliu Liuc, and Ian Howard

   4. *On Modeling and Performability Evaluation of Time Varying Communication Networks,* Handbook of Advanced Performability Engineering Ed. Krishna B Misra), Springer, 161-190, coauthored with Gaurav Khanna and Sieteng Soh (2021)

   5. *Time varying communication networks: Modelling, reliability evaluation and optimization,* In: Ram M., Pham H. (eds) Advances in Reliability Analysis and its Applications. Springer Series in Reliability Engineering. Springer, Cham. pp. 1-30, coauthored with Gaurav Khanna and Sieteng Soh (2020)

   6. *A Hybrid AI-based Conceptual Decision-Making Model for Sustainable Maintenance Strategy Selection.* In Advanced Multi-Criteria Decision Making for Addressing Complex Sustainability Issues, IGI Global – Indexed in SCOPUS. DOI: 10.4018/978-1-5225-8579-4.ch004. Co-authored with Boral, S., Naikan, V. N. A., Howard, I. M, (2019).

   7. *Reliability: An Imperative Challenge of Mobile Ad hoc Network,* in Advances in Reliability and System Engineering, Part of the series Management and Industrial Engineering pp 87-119, DOI 10.1007/978-3-319-48875-2_40, Print ISBN 978-3-319-48874-5, Online ISBN 978-3-319-48875-22 December 2016 Co-authored with Padmavathy N.

   8. *MIP: A Versatile Tool Reliability Design of a System (pp. 521-531), Handbook of Performability Engineering, Misra, Krishna B. (Ed.), XLVIII,* 1316 p. 408 illus., Hardcover, ISBN: 978-1-84800-130-5, Springer London, 2008, Co-authored with K. B. Misra.

5. **Journal-65**

   1. *Hierarchical Reliability Modelling and Analysis of Life Support System of Fighter Aircraft, IJMEMS, Co-authored with Anubhav Tandon and Vidhya Bhushan Verma, (2023)*

   2. *A Machine Learning Approach to Predict the k-Coverage Probability of Wireless Multihop Networks Considering Boundary and Shadowing Effects, vol. 226, #120160, Co-authored with J Nagar, S Soh, and Abhilash Singh,* **2023**

   3. *Performance Assessment and RUL Prediction of Power Converters under the Multiple Components Degradation Journal, Microelectronics Reliability, vol. 144, # 114958,* **co-authored with** *Akanksha Chaturvedi and Monalisa Sarma,* **2023**

   4. *On Design and Performance Analysis of Improved Shuffle Exchange Gamma Interconnection Network Layouts,* **Journal of Supercomputing (SUPE),** https://doi.org/10.1007/s11227-022-04735-6, **co-authored with** *Gaurav Khanna and Mohammed Othman,* **2022**

   5. *An analytical framework with border effects to estimate the connectivity performance of finite multihop networks in shadowing environments, Cluster Computing volume 25, pages 187–202, Co-authored with J Nagar and S Soh (2022)*

   6. *Wireless Multihop Network Coverage Incorporating Boundary and Shadowing Effects, IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), DOI: 10.1080/02564602.2021.1968963, Co-authored with J Nagar and S Soh (2021)*

   7. *An integrated interval type-2 fuzzy sets and multiplicative half quadratic programming-based MCDM framework for calculating aggregated risk ranking results of failure modes in FMECA. Process Safety and Environmental Protection, vol. 150, pp. 194-222, co-authored with Boral, S., Howard, I., McKee, K., and Naikan, V. N. A. (Jun. 2021)*

   8. *Multi-component maintenance grouping optimization based on stochastic dependency. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability. 235(2):293-305, Coauthored with Vimal Vijayan (Aug 2020)*

   9. *An analytical model to estimate the performance metrics of a finite multihop network deployed in a rectangular region," Journal of Network and Computer Applications, vol. 149, 102466, Co-authored with J Nagar and S Soh (2020).*

10. *A novel hybrid multi-criteria group decision making approach for failure mode and effect analysis: An essential requirement for sustainable manufacturing, Sustainable Production and Consumption, 21, 14-32, co-authored with Boral, S., Howard, I., McKee, K., and Naikan, V. N. A.. (Jan. 2020)*

11. *Connectivity analysis of finite wireless multihop networks incorporating boundary effects in shadowing environments, IET Communication, Vol 14(20), pp. 3686-3698, Co-authored with J Nagar and S Soh (Dec. 2020).*

12. *Multi-component maintenance grouping optimization based on stochastic dependency, Proceedings of Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability, https://doi.org/10.1177/1748006X20947511, Coauthored with Vimal Vijayan, (2020)*

13. *On Enumeration of Spanning Arborescences and Reliability for Network Broadcast in Fixed-Schedule Dynamic Networks, IEEE Transactions on Network Science and Engineering, Vol 7(4), pp. 2980-2996, Coauthored with G. Khanna, S. Soh and K.-W. Chin (Dec. 2020)*

14. *A failure interaction model for multicomponent repairable systems, Proceedings of Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability, Vol 234(3), 470-486, Coauthored with Vimal Vijayan, and Ritesh Chandra (2020)*

15. *Two-terminal reliability analysis for time-evolving and predictable delay-tolerant networks, Recent Advances in Electrical & Electronic Engineering, 13(2), pp. 236-250, coauthored with Gaurav Khanna and Sieteng Soh (Apr. 2020)*

16. *An Integrated Approach for Fuzzy Failure Modes and Effects Analysis using Fuzzy AHP and Fuzzy MAIRCA, Int. J. Engineering Failure Analysis, Vol 108, 104195, Co-authored with Ian Howard, Soumava Boral. Kristoffer McKee, V. N. A Naikann (Jan. 2020)*

17. *A Case-Based Reasoning System for Fault Detection and Isolation: A Case Study on Complex Gearboxes, Journal of Quality in Maintenance Engineering, Vol. 25, Issue 32, pp. 213-235, Co-authored with Soumava Boral and V.N.A. Naikan (2019),*

18. *Reliability evaluation of mobile ad hoc networks by considering link expiration time and border time. International Journal of System Assurance Engineering and Management. Volume 10, pp. 399-415, Co-authored with Gaurav Khanna and Sieteng Soh (2019)*

19. *On Computing the Reliability of Opportunistic Multi-Hop Networks with Mobile Relays. Quality and Reliability Engineering International. Volume 35, Issue 4, pp. 870-888 DOI: 10.1002/qre.2433, Co-authored with Gaurav Khanna and Sieteng Soh (2019)*

20. *A Comprehensive Survey on Multi-Hop Wireless Networks: Milestones, Changing Trends and Concomitant Challenges, Wireless Personal Communications: An International Journal archive, Volume 101 Issue 2, July 2018, pp. 677-722 Co-authored with Gaurav Khanna.*

21. *Reliability Evaluation of Time Evolving Delay Tolerant Networks based on Sum-of-Disjoint Products, Reliability Engineering and System Safety, Vol. 171, pp. 136-151, March 2018, Co-authored with Gaurav Khanna and Seiteng Soh*

22. *Experimental Validation of Reliability-Based Design Optimization Models for Designing EMI Shielding and Absorbing Structures, Journal of Electromagnetic Waves and Applications, Manuscript, Vol 36 (2), 2018, pp. 215-228, Co-authored with Heeralal Gargama and A. K. Thakur.*

23. *Microwave Characterization of Nickel based Nanocomposites—High EMI Shielding and Radar Absorption Capability, Modern Physics Letters B, Vol. 31 (32), Nov 2017, pp. 1750301, Co-authored with Heeralal Gargama and A. K. Thakur*

24. *Asymptotic Analysis of 2-Layer D-BLAST with Group Zero Forcing Detection in General Channels, IET Communications, Vol. 11 (15), pp. 2282-2288, Nov 2017, Co-authored with S. Rajarajan*

25. *Design of Fault Tolerant Shuffle Exchange Gamma Interconnection Network Layouts, Journal of Interconnection Networks (JOIN), Vol. 17, No. 2, World Scientific, 2017, Co-authored with Gaurav Khanna and Rajesh Mishra.*

26. *On Throughput-Reliability Tradeoff of Two-Layer D-BLAST Transmission Scheme, Wireless Personal Communications, Volume 90 Issue 1, September 2016, pp. 339-367, Co-authored with S. Rajarajan.*

27. *4DGIN-3: A New Design Layout of 4-Disjoint Gamma Interconnection Network, Journal of Parallel and Distributed Computing, Vol. 98, pp. 40-47, 2016, Co-authored with Gaurav Khanna,, Rajesh Mishra*

28. *A Systematic Approach for Evaluating the Reliability Metrics of MANET in Shadow Fading Environment using Monte Carlo Simulation, International Journal of Performability Engineering, Vol. 12, Issue 3, pp.265-282, May 2016, co-authored with N. Padmavathy.*

29. *Polyvinylidene Fluoride/Nanocrystalline Iron Composite Materials for EMI Shielding and Absorption Applications, Journal of Alloys and Compounds, Vol. 654, pp. 209-215, 2016, co-authored with H. Gargama and A. K. Thakur*

30. *Enumeration of Minimal Cutsets for Directed Networks with Comparative Reliability Study for Paths and Cuts, Quality and Reliability Engineering International, Vol. 32, pp. 555-565, 2016, Co- authored with Rajesh Mishra and M. A. Saifi. (John Wily and Sons)*

31. *Reliability Assessment of Functionally Graded Material under Thermal Loading, JAST: Journal of Aerospace Sciences and Technologies, a journal by Aeronautical Society, Vol. 65, No. 4, 476-487, Nov. 2015 Co-authored with S. C. Pradhan, and Viswanath*

32. *Polyvinylidene Fluoride/Nickel Composite Materials for Charge Storing, Electromagnetic Interference Absorption, and Shielding Applications, Journal of Applied Physics 117 (22), 2015; doi: 10.1063/1.4922411, co-authored with H. Gargama and A. K. Thakur.*

33. *Reliability Evaluation of Capacitated Mobile Ad Hoc Network using Log-Normal Shadowing Propagation Model, International Journal of Reliability and Safety, Vol. 9, No. 1, pp. 70-89, 2015, coauthored with N. Padmavathy*

34. *Reliability Evaluation of Mobile Adhoc Networks: With and Without Mobility Considerations, in Procedia computer science, Elsevier, 46, 2015, pp. 1126-1139, coauthored with N. Padmavathy.*

35. *Comment on "An Efficient Method based on Self-Generating Disjoint Minimal Cut-Sets for Evaluating Reliability Measures of Interconnection Networks" (International J of Performability Engineering, Vol. 10 (3), pp. 303-312, 2014), International Journal of Performability Engineering, Vol. 10, No. 7, 2014, pp. 771-774, co-authored with Suparna Chakroborty and N. K. Goyal.*

36. *Reliability Based Design of Multilayered Composites for Electromagnetic Shielding Applications, International Journal of Performability Engineering, Vol. 10, No. 3, 2014, pp.251-262, co-authored with H. Gargama and A. K. Thakur.*

37. *Reliability-based Design Optimization of Electromagnetic Shielding Structure using Neural Networks and Real-coded Genetic Algorithm, Proceedings of the Institutions of Mechanical Engineering, Part C: Journal of Mechanical Engineering Science, Vol. 228, No. 18, 2014, pp. 3471-3481, co-authored with H. Gargama and A. K. Thakur.*

38. *Reliability-based Design Optimization Scheme for Designing Electromagnetic Shielding Structures, Journal of Electromagnetic Waves and Applications, Vol. 28, No.6, pp. 765-776, 2014, co-authored with H. Gargama and A. K. Thakur.*

39. *Multi Phase System Reliability Analysis using Excel, International Journal of Performability Engineering, Vol. 10 No. 2, pp.143-154, 2014, co-authored with Sarma P. S., Damodar Garg and Sudhangshu Chakravorty*

40. *Fuzzy Arithmetic based Reliability Allocation Approach during Early Design and Development, Expert Systems with Applications, Vol. 41, No. 7, pp. 3444-3449, 2013, co-authored with Venu Sriramdas and Heeralal Gargama*

41. *Multi Phase Reliability Analysis with Variable Phase duration and Variable Phase Sequence, Reliability: Theory and Application, RT & A #04(31) Vol. 8 , No. 4, pp. 21-29, 2013, co-authored with Sarma P. S., Damodar Garg and Sudhangshu Chakravorty.*

42. *Reliability-based Design Optimization of Broad-band Microwave Absorbers, Journal of Electromagnetic Waves and Applications, Vol. 27, No.11, pp. 1407-1418, 2013, http://dx.doi.org/10.1080/09205071.2013.810124, co-authored with H. Gargama and A. K. Thakur.*

43. *Evaluation of Mobile Ad Hoc Network Reliability using Propagation-based Link Reliability Model, Reliability Engineering and System Safety, Vol. 115, pp. 1-9, 2013, co-authored with N. Padmavathy.*

44. *The Influence of Scenario Metrics on Network Reliability of Mobile Ad Hoc Network, International Journal of Performability Engineering, Vol. 9, No. 1, 61-74, 2013, co-authored with N. Padmavathy.*

45. *On the Design and Reliability Analysis of Electromagnetic Absorbers using Real-Coded Genetic Algorithm and Monte Carlo Simulation, Progress in Electromagnetics Research B, Vol. 43, 169-187, 2012, coauthored with H. Gargama and A. K. Thakur.*

46. *Design and Optimization of Multilayered Electromagnetic Shield using a Real-Coded Genetic Algorithm, Progress in Electromagnetics Research B, Vol. 39, 241-266, 2012, coauthored with H. Gargama and A. K. Thakur.*

47. *Earlier Software Defects using Fuzzy Logic, International Journal of Performability Engineering, Vol. 8, No. 4, pp. 399-408, 2012, co-authored with D. K. Yadav and R. B. Misra.*

48. *Reliability Analysis of Generalized Multi-State k-out-of-n Systems, Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 226(3) pp. 327-336, 2012. DOI: 1748006X11422623, Co-authored with S. Hussain Basha, Suprasad V. Amari, and Ming J. Zuo.*

49. *Reliability Allocation for Fault Tolerant Software, IJERT, Vol. 1, Issue 5, July 2012, Coauthored with Krishna K. Singh.*

50. *Criticality Assessment Models for Failure Mode Effects and Criticality Analysis, IEEE Transactions on Reliability, Vol. 60, Issue 1, pp. 102-110, 2011 Co-authored with Heeralal Gargama.*

51. *Prioritization of Maintenance Tasks on Industrial Equipment for Reliability: a Fuzzy Approach, International Journal of Quality & Reliability Management, Vol. 28 Issue 1, pp.109 – 126, 2011. Co-authored with Kumar Vijay Edwin.*

52. *A Cutsets based Unified Framework to Evaluate Network Reliability Measures, IEEE Transaction on Reliability, Vol. 56, No. 4, pp. 658-666, 2009. Co-authored with Rajesh Mishra*

53. *Global Reliability Evaluation using g-Minimal Cutsets, International Journal of Performability Engineering, Vol. 5, No. 3, pp. 251-258, April 2009. Co-authored with Rajesh Mishra*

54. *An Efficient Approach to Enumerate SCG arising in CRNR Evaluation, Quality Technology and Quantitative Management- An International Journal. (Special Issue: Statistical Reliability Modeling and Optimization), Vol. 6, pp. 43-54, 2009. Co-authored with Rajesh Mishra*

55. *Comments on: An Improved Algorithm for Connectivity Analysis of Distribution Networks, International Journal of Reliability Engineering and System Safety, (doi:10.1016/j.ress.2008.08.007), Vol 94, No. 3, pp. 783, 2009. Co-authored with Rajesh Mishra*

56. *True Degradation Estimation of Industrial Equipment with Fuzzy Sets: A Case Study, International Journal on Risk and Reliability Part O, I Mech E (10.1243/1748006XJRR201), Vol. 223, No. 2, pp. 167-179, 2009. Co-authored with Kumar Vijay Edwin.*

57. *Maintenance of Industrial Equipment-Degree of Certainty with Fuzzy Modelling using Predictive Maintenance, International Journal of Quality and Reliability Management, Vol. 26, No. 2, pp. 196-211, 2009. Co-authored with Kumar Vijay Edwin and A. W. Deshpande.*

58. *Reliability Estimation of Complex Technical Systems with Dependency Modeling: A Fuzzy Approach, Journal of Uncertain System, Vol. 2, No. 4, pp. 281-289, 2008. Co-authored with Kumar Vijay Edwin.*

59. *Failure Probability Estimation using Fuzzy Fault Tree Analysis with PDM Data in Process Plants, International Journal of Performability Engineering, Vol. 4, No. 3, pp. 271-284, 2008. Co-authored with Kumar Vijay Edwin and A. W. Deshpande.*

60. *Irredundant Subset Cut Generation to Compute Capacity Related Reliability, International Journal of Performability Engineering, Vol. 3, pp. 243-256, 2007.*

61. *SNEM:A New Approach to Evaluate Terminal Pair Reliability of Communication Networks, Int. Journal of Quality in Maintenance Engineering, Vol. 11, No. 3, pp.239-253, 2005. Co-authored with N. K. Goyal and R. B. Misra*

62. *An Efficient Multi-variable Inversion Algorithm for Reliability Evaluation of Complex Systems using Path Sets, International Journal of Reliability, Quality and Safety Engineering, Vol. 9, No. 3, 237-259, 2002. Co-authored with K. B. Misra.*

63. *A Hybrid Method to Evaluate Reliability of Complex Networks, International Journal of Quality and Reliability Management, Vol. 19, No. 8/9, pp. 1098-1112, 2002. Co-authored with K. B. Misra.*

64. *An Efficient Algorithm to Evaluate Reliability of General SP-Systems, in R & D Quality Quest Journal, Feb. 03 issue, Defense Research and Development Organization, India. Co-authored with K. B. Misra.*

65. *A Multistate Markovian Representation of Degraded Hazard Model, , Published in R & D Quality Quest Journal, March 2001, Defense Research and Development Organization, India. Co-authored with G. K. Routh and K. B. Misra.*

6. Conferences-32

1. *Hierarchical Reliability Modelling and Analysis of Life Support System of Fighter Aircraft, 1st International Conference on Mathematical Methods and Techniques in Engineering and Sciences (ICMMTES 2022) December 9-10, 2022, Graphic Era Deemed to be University | Graphic Era Hill University, Dehradun, India (2022 Online mode), coauthored with Anubhav Tandon and Vidhya Bhusan Verma*

2. *Reliability Prediction of Power Converters at Accelerated High Temperature using Weibull Proportional Hazard Model, 1st International Conference on Mathematical Methods and Techniques in Engineering and Sciences (ICMMTES 2022) December 9-10, 2022, Graphic Era Deemed to be University | Graphic Era Hill University, Dehradun, India (2022 Online mode), coauthored with Akanksha Chaturvedi and Monalisa Sarma*

3. *Graphical models for missing data analysis in reliability. Proceedings of the 30th European Safety and Reliability Conference and the 15th Probabilistic Safety Assessment and Management Conference. ESREL2020-PSAM15 Organizers. Published by Research Publishing, Singapore. ISBN: 978-981-14-8593-0; doi:10.3850/978-981-14-8593-, Coauthored with Vimal V.*

4. *An Integrated Approach for Fuzzy Failure Mode and Effect Analysis Using Fuzzy AHP and Fuzzy MARCOS, 2020 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM), pp. 395-400, Coauthored with S Boral, IM Howard, K McKee, VNA Naikan*

5. *Performance Evaluation of Mobile Ad Hoc Network using Monte Carlo Simulation with Failed Nodes, IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT 2017), SVS College of Engineering, Coauthored with N. Padmavathy and J. Ram Chandra Teja. SVSCE Best Paper Award in the Track EC.*

6. *Reliability Evaluation of Mobile Ad Hoc Networks: With and Without Interference, 7th IEEE International Advance Computing Conference (IACC-2017), 2017-01-05 - 2017-01-07, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India, co-authored with CH Venkateswara Rao, N Padmavathy.*

7. *On Throughput-Reliability Tradeoff Analysis of General Fading Channels, IEEE International Conference on Microelectronics, Computing and Communication (MicroCom 2016), NIT Durgapur, January 23-25, 2016. Coauthored with Rajarajan S.*

8. *Reliability Evaluation of Mobile Ad Hoc Network: With and Without Mobility Considerations, International Conference on Information and Communication Technologies, (ICICT 2014), Kochi, Dec 3-5, 2014, Co-authored with Padma N.*

9. *Electromagnetic Interference Shielding Structures Design: A Reliability-Based Design Optimization Scheme, proceedings of International Conference on Quality Management 2014, Raipur, published by International Proceedings of Economics Development, pp. 91-95, 2014, 317-328, 2011. Co-authored with H. Gargama and A. K. Thakur.*

10. *Forecasting Time-Between-Failures of Software using Fuzzy Time Series Approach, Fuzzy Information Processing Society (NAFIPS), 2012 Annual Meeting of the North American, 10.1109/NAFIPS.2012.6291059 , pp. 1-8. Co-authored with D. K. Yadav and R. B. Misra.*

11. *Electromagnetic Interference Shielding Design using Real-Coded Genetic Algorithm and Reliability Evaluation in X-Band, International Conf. on SocProS 2011, Series: Advances in Intelligent and Soft Computing, Springer, ISBN 978-81-322-0490-9, Vol. 131, pp. 317-328, 2011. Co-authored with H. Gargama and A. K. Thakur.*

12. *Equipment Health Management through Information Fusion for Reliability, RAMS 2011, Florida, U. S. A. Co-authored with Edwin V. Kumar*

13. *Equipment Degradation Monitoring for Sustained Reliability, RAMS 2011, Florida, U. S. A. Co-authored with Edwin V. Kumar and A. Shyamsunder.*

14. *Network Reliability: Techniques and Challenges, presented in the International Conference on Statistics, Probability, Operations Research, Computer Science and Allied Areas (IISA-ISPA-2010), Visakhapatnam(AP), January 4-8, 2010*

15. *Reliability- An Imperative Challenge of Mobile Ad hoc Network, in the Proceedings of International Conference on Sensors and Related Networks, (SENNET-09), Vellore, Tamil Nadu, (India), Vol-II, pp. 654-657, December 8-10, 2009. Co-authored with Padma N.*

16. *Reliability Prediction of Multi-Release Software using Information from the Previous Releases, in proceedings of 4th International Conference on Quality, Reliability and Infocom Technology (ICQRIT), December 18-20, Delhi, pp. 131-132, 2009. Co-authored with D. K. Yadav and Misra R. B.*

17. *Early Software Defects Prediction using Software Engineering Metrics and Fuzzy Logic, in proceedings of 4th International Conference on Quality, Reliability and Infocom Technology (ICQRIT), December 18-20, Delhi, p. 104, 2009. Co-authored with D. K. Yadav and Misra R. B.*

18. *Focus on Reliability of Process Equipment in India, in the proceedings of National Conference on Condition Monitoring(NCCM), Visakhapatnam (AP), India, December 4-5, 2009. Co-authored with Edwin V. Kumar.*

19. *Minimal Cutset Enumeration in Directed Networks and Reliability Measures, in proceedings of 3rd IEEE International Conference on Industrial and Information Systems (ICIIS 2008), IIT Kharagpur (India), during December 8-10, 2008. Co-authored with Rajesh Mishra.*

20. *Information Fusion on Reliability of Industrial Equipment using Fuzzy-Stat Modeling and Evidence Measures, International Conference on present practices and future trends in Quality and Reliability, INCONQR08 (Jan'08), ISI, Kolkata. Co-authored with Kumar Vijay Edwin.*

21. *An Integrated Approach for Network Reliability Evaluation, in the proceedings of 40th ORSI Convention, University of Delhi, Jan. 4-6, 2008, New Delhi, 2008. Co-authored with Rajesh Mishra.*

22. *Prioritization of Maintenance Tasks on Industrial equipment for Reliability: A Fuzzy Approach, in the proceedings of INCRESE 2007 (Dec 17-19, 2007), Udaipur. Co-authored with Kumar Vijay Edwin.*

23. *Optimal Design of Backbone Topology for a Communication Network Layout using Genetic Algorithm, in proceedings of 4th International Conference on Theoretical, Applied, Computational and Experimental Mechanics, IIT Kharagpur, India, December 27-29, 2007. Co-authored with Rajesh Mishra.*

24. *Optimal Design of Communication Network Layout using Genetic Algorithm, in proceedings of International Conference on Modeling and Simulation, CIT Coimbatore, Vol. II, pp. 1228-1233, August 2007. Co-authored with Rajesh Mishra.*

25. *Application of Predictive Maintenance Technology for Failure Rate Modeling of Electric Motors in Process Industry, proceedings of 2nd International Conference on Reliability and Safety Engineering (INCRESE), Chennai (India), pp. 278-288, December 2006. Co-authored with Kumar Vijay Edwin.*

26. *An Efficient Approach to Enumerate SCG arising in CRNR Evaluation, Proceedings of 2nd Asian International Workshop on Advance Reliability Modelling, Busan (Korea), pp. 11-23, August 2006. Co-authored with Rajesh Mishra.*

27. *Irredundant Subset Cut Generation to Compute Capacity Related Reliability, Proceedings of 12th ISSAT Conference on Reliability and Quality in Design, Chicago (USA), pp. 81-86, August 2006.*

28. *Reliability Estimation of Electric Motor using Predictive Maintenance Technology in Process Plant, Proceedings of National Conference on Condition Monitoring organized by Condition Monitoring Society of India, Vishakapatnam, 2006. Co-authored with Kumar Edwin Vijay and V. S. rao.*

29. *Integrated Equipment Health Assessment in Process Industries for Reliability using Predictive Maintenance Technology, Proceedings International Conference on Reliability and Safety Engineering (INCRESE), Dec 21-23, Bhubaneswar, 2005. Co-authored with Kumar Edwin Vijay*

30. *SNEM:A New Approach to Evaluate Terminal Pair Reliability of Communication Networks, proceedings of Asian International Workshop on Advanced Reliability Modelling (AIWARM2004) held 0n August 26-27 at Hiroshima, Japan, 2004. Co-authored with N. K. Goyal, and R. B. Misra.*

31. *An Alternative Implementation of SVI for Obtaining Minimal Terms for System Reliability Expression, presented in National Conference on Reliability and Quality in Space Technology, ReQUEST-2003 to be held on Nov. 28-29, 2003 at ADA, Bangalore. Co-authored with K. B. Misra.*

32. *Reliability Evaluations of Complex Networks, presented in National Conference on Quality Engineering in Aerospace Technologies QUEST 2001, India held on Nov. 23-24, 2001 at ISRO, Thiruvananthapuram. Co-authored with K. B. Misra.*

Dr. Sanjay K. Chaturvedi

ANNEXURE-III: Miscellaneous

- Conferences/Course Attended
  - 12th ISSAT Conference on Reliability and Quality in Design, Chicago (USA), August 2006.
  - International Workshop on Soft Computing and Intelligent Systems (SOFT-COMP'98) at ISI, Calcutta (India) during 12-13 January 1998. (Three Days)
  - Integrated Management Programme for Effective Management of Technical Institutions, March 17-28, 2003, at NERIST. Two Weeks)
  - Translating Ideas into Products and Patents, Feb. 17-28, 2003, at NERIST. (Two Weeks)
  - Recent Trends in Reliability Engineering, Nov. 01-05, 1999, Indian Institute of Technology, Kharagpur, India. (One Week)
  - Advances in Control Techniques, (June 19- July 1, 1995) REC Kurukshetra, Haryana, India. (Two Weeks)
  - Teachers Training Induction Programme (Nov. 18-20, 1994), NERIST, Itanagar, India. (Three days)
  - Engineering Design Methodology, IIT, Ghauhati, Assam, India. (One Week)
- Contributed Lectures on the Topic "Probability Basics and Reliability" and "Distribution System Reliability" in CEP course on Power System Reliability held on 5-7 July 2004, at IIT Bhubaneswar extension centre.
- Contributed Lecture on the topic "System Reliability and Sub-graph Enumeration" in the ISTE course "Translating Ideas into Products and Patents", Feb. 17-28, 2003, at NERIST
- Involved as organizing committee member, contributed lectures and demonstration in short term course on " Application of Computer in Offices" organized by Computer Science & Eng. Department, NERIST during May 21- June 1, 1998
- Interviewer, Question paper setter & Evaluator for Programmer Assistant (Statistical), Public Health Engineering Department, (1998) Arunachal Pradesh Government.
- Member in computer committee of- STATE LAND USE BOARD (SLUB), Arunachal Pradesh Government.
- Management Committee member - workshop on " Renewable Energy Technology in Himalayan Region", 29 - 31,Oct'96
- Management Committee member "International Workshop on Telematics" 19-20 May'97.
- Question paper setter & Evaluator for Junior Engineers (1997), Power Department, Arunachal Pradesh Government.
- Published an article "Networks - That Learns" in Arunachal Times- a daily newspaper.

Others

1. Ph. D., 2003   *"Reliability Evaluation of Large and Complex Systems"*
2. M.E. Project and Dissertation Topic, 1990:   *" Optimal Order Reduction in Frequency Domain"*
2. B.E. Project, 1988   *" Two Phase Sequentially Controlled Chopper for DC Drive"*
3. Task Accomplished At NERIST, Itanagar
  - Started e-mail operations. Taken initiative for VSAT installation & commissioning.
  - Strengthened the Educational Technology Cell with state-of-the-art audio/video/computer facility, unique in the region.
  - Designed NERIST Newsletter, Information Brochure, Catalogue, Telephone Directory.
  - Involved in developing package related with entrance examination during 1993-1994

1. Edwin
2. DKY
3. Rajesh
4. Heeralal
5. Padma
6. Rajarajan
7. Gaurav
8. Boral
9. Vimal
10. Jaiprakash