

## CURRICULUM-VITAE



**Dr. M.S. Barak**

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Rewari , Haryana-123401(India)

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### **MISSION STATEMENT:**

My mission as a teacher is to inculcate the belief in my students that they can achieve anything and to encourage them in developing the spirit and art for becoming 21<sup>st</sup> century learners.

### **Research Grants:**

1. I was **Principal Investigator** of Major Research Project from UGC entitled "**UGC-BSR-Research Start-Up-Grant** by *University Grand Commission*", New Delhi-110002. (*Ref. No. F. 20-16(5)/2013(BSR)*) for two years 2014-2016.

2. A sum of Rs. 92,000/- (Ninty two thousands) granted by **DST-NEW DELHI** to attend the **Twenty-Fourth International Conference of the "Forum for Interdisciplinary Mathematics (FIM)"** held at University of Barcelona (Spain) organized by "*The Spanish Royal Academy of Economic and Financial Sciences (RACEF)* during November 18<sup>th</sup> -20<sup>th</sup>, 2015 .

### **Foreign Visits:**

*Singapore in (2008); Nepal in (2010); Italy, Vatican city, Austria, Liechtenstein and Switzerland in (2012); Germany, Netherlands, Belgium, France (2014); Barcelona Spain (2015); Thailand in (2017) and Dubai, Abu Dhabhi (2019).*

*The list of the following candidates completed their Ph.D. successfully under my Supervision.*

Sr.No	Name of Scholar	Title of Thesis	Name of Supervisor	Status
1.	Neeraj Reg. No. 14018104	Profit Analysis of Reliability Models with Preventive Maintenance and Repair under Different Weather Conditions	Dr. M.S. Barak	Date of Notification Dec. 11th , 2018
2.	Dheeraj Yadav Reg. No. 14018106	Stochastic Modeling of Redundant System with Standby and Server Failure	Dr. M.S. Barak	Date of Notification Feb. 12th , 2019
3.	Vinod Kaliraman Reg.No. 14018103	Behavior of Seismic Waves in Liquid Saturated Porous Medium at Some Interface	Dr. M.S. Barak	Date of Notification Sept. 5th , 2019
4.	Manjeet Reg. No. 1501216005	Wave Propagation in Porous Media Saturated by Fluid(s)	Dr. M.S. Barak	Date of Notification Jan. 17th, 2020
5.	Anup Singh Reg. No.1501216006	Study of Seismic Wave Propagation in Partially Saturated Medium(s)	Dr. M.S. Barak	Date of Submission Dec. 7th, 2020

### ***RESEARCH AREAS:***

#### **Theoretical Seismology & Reliability Modeling and Analysis**

Anup Singh, Vinod Kaliraman, Rajesh Kumar, Vipin Gupta, and **M.S. Barak** (2021): "Waves Propagation at an Interface of Two Liquid Saturated Porous Solid Half Spaces." *Turkish Journal of Computer and Mathematics Education (TURCOMAT)* 12.9 (2021): 273-289.

**Barak, M. S.**, Reena Garg, and Ajay Kumar (2021): "Reliability measures analysis of a milk plant using RPGT." *Life Cycle Reliability and Safety Engineering* (2021): 1-8.

Malik, S. C., R. K. Yadav, and **M. S. Barak** (2021): "Stochastic Analysis of a Unit Wise Redundant Computer System with Priority to Hardware Repair and Failure of Service Facility during Software Up-gradation." *International Journal of Statistics and Reliability Engineering* 7.3 (2021): 342-349.

Sandeep Kumar, Kumari, Neelam, Vipin Gupta, Rajesh Kumar and **M. S. Barak** (2020): "Waves at the Boundary Surface of Transversely Viscothermoelastic Slab between two Elastic Media." *Solid State Technology* 63.6 (2020): 17617-17642.

Kadyan, Sweetey, and **M. S. Barak** (2020): "Stochastic Analysis of a Non-Identical Repairable System of Three Units with Priority for Operation and Simultaneous Working of Cold Standby Units." *International Journal of Statistics and Reliability Engineering* 7.2 (2020): 269-274.

D.S. Hooda and **M.S. Barak** (2020): Estimation of missing values in fuzzy matrices (FM) and interval valued fuzzy matrices (IVFM); **Life Cycle Reliability and Safety Engineering**, DOI 10.1007/s41872-020-00116-1; 2520-1352@Springer.com

**M. S. Barak**, M. Kumar, M. Kumari & A. Singh (2020): Inhomogeneous wave propagation in partially saturated soils; **Wave Motion**, Vol. 93, pp: 102470.

<https://doi.org/10.1016/j.wavemoti.2019.102470>; 0165-2125/© 2019 Elsevier, **I.F:1.723**

M. Kumari, M. Kumar and **M. S. Barak** (2020): Wave propagation characteristics at the welded interface of double-porosity solid and double-porosity dual-permeability materials; **Waves in Random and Complex Media**. **I.F: 3.223**

<https://doi.org/10.1080/17455030.2019.1698789>; 1745-5049 © 2019 Taylor & Francis Group.

D. S. Hooda and **M. S. Barak** (2019): Estimation of missing data in design of experiment and contingency table; **SN Applied Sciences**. **I.F. ....**

<https://doi.org/10.1007/s42452-019-0692-0>. 14545101© Springer Nature Switzerland AG 2019.

M. Kumar, **M.S. Barak** & M. Kumari (2019): Reflection and Refraction of Plane Waves at the Boundary of an Elastic Solid and Double-Porosity Dual-Permeability Materials. *Petroleum Science*, <https://doi.org/10.1007/s12182-018-0289-z>. 1672-5107@Springer.com **I.F: 1.846**

M.S. Barak & Vinod Kaliraman (2019): Reflection and transmission of elastic waves from an imperfect boundary between micropolar elastic solid half space and fluid saturated porous solid half space. *Mechanics of Advanced Materials and Structures*, <https://doi.org/10.1080/15376494.2018.1432795>. 1537-6494 © 2019 Taylor & Francis Group. **I.F. 2.873**

Manjeet Kumar, Manjeet Kumari & **Mahabir Singh Barak** (2018): Reflection of Plane Seismic Waves at the Surface of Double-Porosity Dual-Permeability Materials. *Petroleum Science*, Vol. **15(3)**, pp:521-537. **I.F: 1.846**

<https://doi.org/10.1007/s12182-018-0245-y>. 1672-5107@Springer.com

**M.S.Barak** and Vinod Kaliraman (2018): Propagation of Elastic Waves at Mircropolar Viscoelastic Solid/Fluid-Saturated Incompressible Porous Solid Interface. *International Journal of Computational Methods*, Vol. **15(1)**, pp.1850076-1 to 19. **I.F: 0.66**

<https://doi.org/10.1142/S0219876218500767>. @World Scientific Publishing Company.

M. Kumari, **M.S. Barak** and M. Kumar (2018): Reflection of Inhomogeneous Waves at the Surface of a Dissipative Poroelastic Media. **Journal of Porous Media**, Vol. 21(1), pp. 1025-1040; 1091-028X© 2018 by Begell House, Inc. [www.begellhouse.com](http://www.begellhouse.com) **I.F: 1.49**

Manjeet Kumari, **Mahabir Singh Barak** & Manjeet Kumar (2017): Seismic reflection and transmission coefficients of a single layer sandwiched between two dissimilar poroelastic solids. **Petroleum Science**, Vol. 14(4), pp. 676-693.

<https://doi.org/10.1007/s2182-017-0195-9>. [1672-5107@Springer.com](mailto:1672-5107@Springer.com)

**I.F: 1.846**

**M.S. Barak**, M. Kumari and M. Kumar (2018): Effect of local fluid flow on the propagation of plane waves at an interface of water/ double-porosity solid with underlying uniform elastic solid. **Ocean Engineering**, Vol. 147, pp. 195-205. **I.F: 2.730**

<https://doi.org/10.1016/j.oceaneng.2017.10.030>; 0029-8018/© 2017 Published by Elsevier Ltd.

**Mahabir Barak**, Manjeet Kumari and Manjeet Kumar (2017): Effect of Hydrological Properties on the Energy Shares of Reflected Waves at the Surface of a Partially Saturated Porous Solid. **AIMS Geosciences**, Vol. 3(1), pp. 67-90.

DOI: 10.3934/geosci.2017.1.67, <http://www.aimspress.com/journal/geosciences/>

**M.S. Barak** and Vinod Kaliraman (2018): Reflection and Refraction Phenomena of Elastic Waves Propagating Through Imperfect Interface of Solids, **International Journal of Statistika and Mathemtika**, Vol. 24(1), pp. 01-11. 2277- 2790 <http://www.statperson.com>

**M.S. Barak** and Vinod Kaliraman (2016): Effect to Loosely Bonded Interface on Wave Propagation Between two Half Space, **International Research Journal of Natural and Applied Sciences**, Vol. 3(3), pp.127-145. [www.aarf.asia](http://www.aarf.asia)

**M.S. Barak**, Vinod Kaliraman and Neelam Kumari (2015): Reflection and Refraction of Wave in two welded contact infinite unbounded half spaces, **International Journal of Research in Engineering and Applied Sciences**, Vol. 5(3), pp.84-100, ISSN:2249-3905; <http://www.euroasiapub.org>

**M.S. Barak**, Neeraj & Sudesh K. Barak (2018): Profit Analysis of a two-unit cold Standby System Model Operating under Different Weather Conditions. **Life Cycle Reliability and Safety Engineering**, <https://doi.org/10.1007/s41872-018-0048-6>; 2520-1352@Springer.com.

**M.S. Barak**, Neeraj and Sudesh Kumari (2018): Profit Analysis of a Two Unit Cold Standby System Operating Under Different Weather Conditions Subject to Inspection. *Application of Applied Mathematics: An International Journal (AMM)*, Vol. 13(1), pp. 67-83, June, 2018; 1932-9466; <http://pvamu.edu/aam>.

**M.S. Barak** and Neeraj (2016): Profit Analysis of a two Unit cold standby System with preventive Maintenance and Repair subjected to Weather Conditions, **International Journal of Statistics and Reliability Engineering**, Vol. 3(2), pp. 165-175.

Neeraj and **M.S. Barak** (2016): Economic Analysis of a System Reliability Model with Priority to Preventive Maintenance over Repair subject to Weather Conditions, **International Journal of Emerging Technology and Advanced Engineering**, Vol. 6(7), pp. 293-301. [www.ijetae.com](http://www.ijetae.com).

Neeraj and **M.S. Barak** (2016): A System Reliability Model with Priority to Repair over Preventive Maintenance under Different Weather Conditions, **Journal of Mathematics and Statistical Science**, Vol.(2016), pp. 644-654.

**M.S. Barak**, Dhiraj Yadav & Sudesh Kumari (2017): Stochastic analysis of a two-unit system with standby and server failure subject to inspection. **Life Cycle Reliability and Safety Engineering**, <https://doi.org/10.1007/s41872-017-0033-5>, 2520-1352@ Springer.

**M.S. Barak**, Dhiraj Yadav & Sudesh Kumari (2017): Stochastic Analysis of a cold standby system with conditional failure of server. **International Journal of Statistics and Reliability Engineering**, Vol. 4(1), pp.65-69, ISSN: 2456-2378.

**M.S. Barak**, Dhiraj Yadav & Sudesh Kumari (2017): Cost-Benefit Analysis of a Redundant System with Server having Refreshment Facility Subject to Inspection. **International Journal of Advanced Engineering Research and Science**, Vol. 4(6), pp. 24-31, 2017. ISSN:2456-1908. <https://dx.doi.org/10.22161/ijaers.4.6.4>.

Dhiraj Yadav and **M.S. Barak** (2016): Stochastic Analysis of a cold standby System with server Failure. **International Journal of Mathematics and Statistics Invention (IJMSI)**, Vol. 4(6), pp. 18-22. ISSN: 2321-4667; [www.ijmsi.org](http://www.ijmsi.org).

Sudesh K. Barak, **M.S. Barak** and S.C.Malik (2016): Cost-Benefit Analysis of a Cold Standby System with Preventive Maintenance and Repair Subject to Inspection. **Journal of Mathematics and Statistical Science**, Vol. 2016. Pp. 274-285. (Science Signpost Publishing).

Ashish K. Barak and **M.S. Barak** (2016): Impact of Abnormal Weather Conditions on Various Reliability Measures of a Repairable System with Inspection. **Thailand Statistician, Vol. 14(1)** January, 2016; pp:35-45. <http://statassoc.or.th> .

Rajneesh Kumar and **Mahabir Barak** (2007): Wave Propagation in A Liquid Saturated Porous Solid with Micro polar Elastic Skeleton at Boundary Surface. **Journal Applied Mathematics and Mechanics (P.R. China) Vol. 28(3), pp. 337-349.** **I.F: 1.699**

Ashish K. Barak, **M.S.Barak** and S.C.Malik (2014): Reliability Analysis of a Single-Unit System with Inspection Subject to Different Weather Conditions. **Journal Of Statistics and Management Systems 'Taylor & Francis Group' (2014), Volume (17), No. 2,** pp. 195-206. <http://dx.doi.org/10.1080/09720510.2014.914292>; Taylor & Francis.

S.C. Malik, Sudesh K. Barak and M.S.Barak (2014): Stochastic Analysis of Cold Standby System with Priority to Preventive Maintenance over Repair. **Journal of Advances in Industrial Engineering and Management 'American Scientific Publishers, Printed in USA, Vol. 3(2),** pp. 33-38.

A.K.Barak and **M.S.Barak** (2013): Stochastic Modeling of a Cloud With Independent H/W and S/W Failure Subject to Maximum Operation and Repair Times. **International Journal of Mathematical Archive-4(5), 2013. Pp.10-15.** ([www.ijma.info](http://www.ijma.info)).

Ashish K. Barak and **M.S.Barak** (2013): Analysis of a repairable system operating under different weather conditions. **International Journal of Computer Applications, Vol. 84(9),** pp.12-16. 0975–8887: [www.ijcaonline.org](http://www.ijcaonline.org).

Barak A.K and **Barak M.S.** (2013): Reliability Modeling of a cloud with arrival time of the server subject to Maximum operation and repair times. **Indian Journal of Science, Vol.3(6),** pp.06-10. [www.discovery.org.in](http://www.discovery.org.in).

Ashish Kumar, S.C.Malik and **M.S. Barak** (2012): Reliability Modeling of a Computer System with Independent H/W and S/W Failures Subject to Maximum Operation and Repair Times. **International Journal of Mathematical Archive-Vol. 3(7), pp.2622-2630.** ([www.ijma.info](http://www.ijma.info))

**M. S. Barak** and Anil Kumar (2011): "Effect of Couple-Stress on the Reflection and Transmission Of Plane Waves At The Boundary Surface." **International Journal of Modern Engineering Research (IJMER), Vol. 1, Issue 1, pp.25-38, 2011.**

Malik, S. C., P. Nandal, and **M. S. Barak** (2009): "Reliability analysis of a system under preventive maintenance." *Journal of Mathematics and System Sciences*, Vol. 5(1), (2009), pp. 92-115.

Malik, S. C., and **M. S. Barak** (2009): "Reliability and economic analysis of a system operating under different weather conditions." *Proceedings of the National Academy of Sciences India Section A-Physical Sciences*, Vol. 79 (2009), pp. 205-213.

Malik, S. C., and **M. S. Barak** (2007): "Probabilistic Analysis of a Single-Server System Operating Under Different Weather Conditions." *Journal of Mathematical Analysis and Approximation Theory*, Vol. 2(2), pt.II, 165-172, 2007.

**M. S. Barak** (2007): "Wave Propagation in Elastic Solid with Micro polar Elastic Skeleton at Boundary Surface." *Journal of Mathematical Biosciences, GAMS (India)*, Vol. 3(1), January-June, pp. 31-45, 2007.

### ***International Conferences Attended and Paper Presented:***

1. International Conference on Emerging Innovations in Statistics & Operations Research (EISOR-2018) in conjunction with 38<sup>th</sup> Annual Convention of Indian Society for Probability and Statistics (ISPS) and 4<sup>th</sup> Convention of Indian Association for Reliability and Statistics (IARS) organized by Department of Statistics, M.D. University, Rohtak (Sponsored by MDUR, DST, DRDO & IARS) during Dec. 27-30, 2018.

Paper Presented: Reflection and Transmission of plane waves at an interface of fluid saturated porous solid and micropolar elastic solid half space.

2. 1<sup>st</sup> International Conference of Association of Inventory Academicians and Practitioners on "Emerging Trends in Inventory, Supply Chain & Reliability Modeling" in association with Department of Operational Research, University of Delhi & Department of Mathematics, Gujarat University held at Department of OR, University of Delhi, during Dec. 21-23, 2018.

Paper Presented: Reliability Modeling of a Standby System with failure Facility.

3. Twenty-Seventh International Conference of Forum for Interdisciplinary Mathematics (FIM) in Conjunction with Third convention of IARS on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2018-FIM XXVII) organized by Department of Statistics, University of Jammu, Jammu during Nov. 02-04, 2018.

Paper presented: Wave Propagation at an interface of fluid saturated porous solid and micropolar Elastic solid half-space.

4. International Conference on Frontiers in Industrial & Applied Mathematics organized by Department of Mathematics, National Institute of Technology, Hamirpur, H.P., India in collaboration with Indian Society of Industrial & Applied Mathematics during April 26-27, 2018

Paper Presented: Effect of Weather Conditions on a two unit cold stand by computing system S/W evolution and S/W repair.

5. International Conference on Changing Paradigms and Emerging Challenges in Statistics Sciences in conjunction with Bi-Decennial Convention of Society of Statistics, Computer and Application organized by Department of Statistics, Pondicherry University (A Central University), Puducherry-605014, during January 29-31, 2018.

**Paper Presented:** Profit Analysis of two unit cold standby system operating under different weather conditions with priority to preventive maintenance over Inspection.

6. International Conference on Frontiers in Industrial & Applied Mathematics organized by Department of Mathematics, National Institute of Technology, Hamirpur, H.P., India in collaboration with Indian Society of Industrial & Applied Mathematics during April 26-27, 2018

**Paper Presented:** Effect of weather conditions on a two unit cold standby computing system s/w evolution and s/w repair.

7. Twenty-Seventh International Conference of Forum for Interdisciplinary Mathematics (FIM) in conjunction with Third Convention of IARS on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2018-FIM XXVII) organized by Department of Statistics, University of Jammu, Jammu (India) during November 02-04, 2018.

**Paper Presented:** Wave propagation at an interface of fluid saturated porous solid and micropolar elastic solid half space.

8. 21<sup>st</sup> International Conference of **International Academy of Physical Sciences “CONIAPS XXI” on Symbiotic Development of Mathematical, Physical, Chemical & Computational Sciences & Symposium on Recent Advances and Future Directions on Mathematics in Bio-Sciences** organized by Department of Mathematics, Guru Jambheshwar University of Science & Technology Hisar-125001 (HR) India, during 28<sup>th</sup> -30<sup>th</sup> October, 2017.



**Paper Presented:** Stochastic Analysis of a two unit system with standby and server failure subject to inspection.

9. **Silver Jubilee International Conference on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2016- FIM XXV)** of **Forum for Interdisciplinary Mathematics** organized by the *Department of Mathematics & Statistics, Manipal University Jaipur* during Dec. 22-24, 2016.

**Paper Presented:** Cost Analysis of a system Reliability Model with Preventive Maintenance and Repair working under different Weather Conditions.

10. **VIII International Symposium on Statistics and Optimization in Conjunction (ISSAC-2016) with XXXVI- Annual Convention of Indian Society for Probability & Statistics (ISPS)** and Seminar on **Statistical Inference, Sampling and Optimization Techniques & Related Areas ( Under SAP-DRS-II)** held at *the Department of Statistics and Operations Research, Aligarh Muslim University, Aligarh, India* during Dec. 17-19, 2016.

**Paper Presented:** Importance of Inspection of the unit on a two units cold standby system with PM.

11. **Twenty-Fourth International Conference of the “Forum for Interdisciplinary Mathematics (FIM)”** held at **University of Barcelona (Spain)** organized by *“The Spanish Royal Academy of Economic and Financial Sciences (RACEF) during November 18<sup>th</sup> -20<sup>th</sup>, 2015.*

**Paper Presented:** Cost-Benefit Analysis a cold standby System with Priority and Inspection

12. **International conference on Recent Advances in Mathematics, Statistics and Computer Science (ICRAMSCS-2015)** held at the school of Mathematics, Statistics and Computer Science, **Central University of South Bihar, Patna, India**, during May 29<sup>th</sup>-31<sup>th</sup>, 2015

**Paper Presented:** Stochastic Analysis of a cold standby system with Inspection, Priority to Preventive Maintenance over repair.

13. 17<sup>th</sup> International Conference of International Academy of Physical Sciences (CONIAPS XVII) on **Emerging Trends in Physical Sciences & Technology** Organized by the University of Rajasthan, Jaipur in association with St. Wilfred PG College, Jaipur and Parishkar College of Global Excellence, Jaipur on January 16-18, 2015.

**Paper Presented:** Reflection and Refraction of wave in two welded contact infinite unbounded half spaces

14. 23<sup>rd</sup> International Conference of Forum for Interdisciplinary Mathematics (FIM) *on Interdisciplinary Mathematical, Statistical and Computational Techniques* held during 18-20 December, 2014 at the Department of Mathematical and Computational Sciences, National Institute of Technology Karnataka, Surathkal.  
**Paper Presented:** Stochastic Analysis of system working under different weather condition with appearance and disappearance of the server.
15. **International Conference on “Operations Research for Data Analysis and Decision Analysis” in conjunction with the 46<sup>th</sup> Annual Convention of Operational Research Society of India (ORSI)** held in Department of Statistics, University of Kashmir, Srinagar during Oct. 19-23, 2013.  
**Paper Presented:** Reliability Analysis of a two- unit cold stand by system with arrival time of the server subject to MOT.
16. **International Conference on Frontiers of Statistics and Its Applications [ICONFROST-2012] & 32<sup>th</sup> Annual Convention of Indian Society for Probability and Statistics (ISPS)** held in Department of Statistics, Pondicherry, University, Puducherry during Dec. 21-23, 2012.  
**Paper Presented:** Reliability modeling of a Computer system with Priority to S/W replacement subject to MOT & MRT
17. **International Conference on Optimization Modeling and Applications** held in the *Vallabhbhai Patel Chest Institute (VPCT)* Convention Centre, **University of Delhi, Delhi**, during Nov. 29- Dec 01, 2012.  
**Paper Presented:** Analysis of a Computer system with Maximum Operation Time (MOT), preventive and Maximum Repair Time (MRT).
18. **International Conference on Development and Applications of Statistics in Emerging Areas of Science & Technology along with XXX Annual Convention of Indian Society For Probability and Statistics** held at Department of Statistics University of Jammu, Jammu-180006, J&K, India during Dec. 8-10, 2010.
19. **18<sup>th</sup> International Conference of FIM on Interdisciplinary Mathematical & Statistical Techniques** held at **JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY WAKNAGHAT (H.P.) INDIA** during August 2-4, 2009.  
**Paper Presented:** Analysis of a system with maximum operation time and priority for preventive maintenance.

**20. International Conference on New Trends in Statistics & Optimization (ICONTSO)** held at **Department of Statistics, University of Kashmir, Srinagar, J & K, India** during October 20-23, 2008.

*Paper Presented:* Profit Evaluation of The System With Inspection for Feasibility of Repair Subject to Weather Conditions.

**21. 7<sup>th</sup> World Congress In Probability And Statistics** held at the Department of Applied Probability and Statistics, **National University Singapore, Singapore** during **July 14-19, 2008**

*Paper Presented:* Profit Analysis Of An Electric Supply System Working Under Different Weather Conditions Subject To Inspection.

***National Conferences Attended/Sessions Chaired / Paper Presented:***

**1. Chaired Two Sessions** in International Conference on Emerging Innovations in Statistics & Operations Research (EISOR-2018) in conjunction with 38<sup>th</sup> Annual Convention of Indian Society for Probability and Statistics (ISPS) and 4<sup>th</sup> Convention of Indian Association for Reliability and Statistics (IARS) organized by Department of Statistics, M.D. University, Rohtak (Sponsored by MDUR, DST, DRDO & IARS) during Dec. 27-30, 2018.

**2. National Conference on Statistics and Optimization Technique (NCSOT)** in the Conjunction with 2<sup>nd</sup> Convention of **Indian Association for Reliability and Statistics (CIARS-2017)** Organized by Department of Statistics, **M. D. University, Rohtak (under UGC-GDA Scheme)** during Feb.11-13, 2017.

**Paper Presented:** Profit Analysis of a cold standby system with server failure.

**3. National Conference on Mathematics and its Applications in Science & Technology (MAST16)** held at *Department of Mathematics, Guru Jambheshwar University of Science and Technology, Hisar* during November 09-10, 2016.

**Paper Presented:** Economic Analysis of a Cold Standby System Working Under Different Facility.

**4. Chaired a session and Presenting a paper at** UGC Sponsored National Conference on **Global Challenge-Role of Science & Technology in imparting their Solutions (GCRSTS-2016)** organized by **The Technological Institute of Textile & Sciences, Bhiwani** in Association with **Indian Society of Analytical Sciences (Delhi Chapter)** during April 23-24, 2016.

**Paper Presented:** Stochastic Analysis of a two unit cold standby system with different type of failure.

5. **Chaired Session/as a Member of Organizing Committee and presented paper at National Conference on Recent Trends and Developments in Statistics (NCRTDS) IN Conjunction with I<sup>st</sup> Convention of Indian Association for Reliability and Statistics (CIARS-2015)** organized by Department of Statistics, M. D. University, Rohtak-124001.[UGC-SAP (DRC-I) Sponsored] during Feb 21-23, 2015.

**Paper Presented:** Profit Analysis of a Single- Units System Working Under Different Weather Conditions.

6. **Chaired Session** at National Conference on Advanced Computing Research (NCACR-2015) organized by Department of Computer Science and Applications, Indira Gandhi University Meerpur, Rewari (Haryana)-122502 on 20<sup>th</sup> February, 2015

7. 32<sup>th</sup> Annual Conference of Indian Society for Medical Statistics on **Recent Advances in Statistical Methods and Their Applications in Health Sciences** Organized by Department of Statistics, University of Jammu, Jammu, J&K, India during November 1-3, 2014.

**Paper Presented:** Profit Analysis of a system Reliability Model with Priority to Preventive Maintenance over Repair.

8. **XXXI Annual convention of Indian Society for probability and Statistics (ISPS) and International Conference on Statistics, Cochin University of Science and Technology during, Dec, 19-22, 2011.**

**Paper Presented:** Analysis of an operating system with degradation, arrival time of the server and inspection at two stages of failure subject to weather condition.

9. **Annual Conference of Vijnana Parishad of India & National Symposium on Recent Developments in Applicable Mathematics & Information Technology** held at **Jaypee Institute of Engineering & Technology, Guna, India** during December 4-6, 2009.

**Paper Presented:** Effect of Loosely Boundary on Reflection and Transmission of Plane Waves Between two Couple Stress Elastics Half Spaces.

10. 11<sup>th</sup> Annual Conference of Gwalior Academy of Mathematical Sciences and National Symposium on Applicable Mathematics to Engineering and Technology held at Jaypee Institute of Engineering and Technology, A.B.Road, Raghogarh-473226, **District Guna M.P.(India)** during *April 22-23,2006*

**Paper Presented:** *Wave Propagation In Elastic Solid With Micro polar Elastic Skeleton At Boundary Surface.*

### ***National Seminar/Workshop Attained/Paper Presented:***

1. Attended SWARNA JAYANTI two day national workshop on Data Analysis Using SPSS organized by Department of Statistics and Operational Research, Kurukshetra University, Kurukshetra during March 20-21,2017.
2. Two days workshop on **Choice Based Credit System**, organized by **Indira Gandhi University, Meerpur, Rewari**, Sponsored by: *State Project Directorate Rusa*, Haryana, Panchkula, during March 11-12, 2016.
3. National Seminar “**Indian Constitution: the Precursor of Modern India**” Organized by Department of Law Indira Gandhi University Meerpur, Rewari (HR.-122502) during March 20-21, 2015.
4. National Seminar on **INDIAN NATIONALISM AND ITS ROOTS** organized by Department of History, Indira Gandhi University, Meerpur, Rewari, during November 13-14, 2014.

***Paper Presented:*** Role of Mathematics in our Society and Nationalism.

5. A seven days **National Workshop on “Research Methodology and Computer Applications (NWRMCA-2014)”** organized by Department of Commerce, **Indira Gandhi University**, Meerpur, Rewari during April 22-28, 2014.
6. **National Workshop On Current Perspectives in Advance Material Science.** Held at *Pt. Neki Ram Sharma Government College, Rohtak (Haryana), India* during February, **8-9, 2012**
7. **5<sup>th</sup> National Statistics Day Cum Summer Training Program On Optimization & Business Analysis** organized by Department of Statistics, S.V. University, TIRUPATI, A.P. Indian Society for Probability and Statistics(ISPS) sponsored by Department of Science and Technology (DST),New Delhi. During 29<sup>th</sup> June to 3<sup>rd</sup> July, 2011.
8. **Five Days National Workshop on Modeling, Optimization and Their Applications** organized by **Department of Statistics, M. D. University, Rohtak & DST, Govt. of India** during August 17-21, 2010
9. **Three days National Workshop on Applicable Statistics** held at **Department of Statistics M. D. University, Rohtak, India** during March 28-30, 2010.
10. National Seminar on Emerging Trends In Statistical Methods And Optimization Techniques organized by the **Department of Statistics, University of Jammu, Jammu** during **Feb. 22-23, 2008**.

**Paper Presented:** Probabilistic Analysis of a Single-Server System Operating Under Different Weather Conditions

**ORGANISOR/COORDINATOR of WORKSHOPS/SEMINAR:**

1. **Liaison Officer of organizing Committee** in **21<sup>st</sup> National Youth Festival** held at M. D. University, Rohtak during January 12-16, 2017.
2. **Coordinator**, seven days **National Workshop on MATLAB and LaTeX (NWML-2016)** organized by Department of Mathematics, Indira Gandhi University Meerpur, Rewari during 24-30 August, 2016.
3. **SPIO (Right to Information Act, 2005) of the University**
4. participated in one day State Level workshop on the theme “**Right to Information Act: A tool of Empowerment for citizens**” held at the First Lady Teacher Mata Savitri Bai Phoole, Govt. College for Women, Rewari on dated 18<sup>th</sup> February, 2017 (Saturday)
5. Attended one day National Conference/Seminar on **Navsrijan: Resrearch for Resurgence** organized by Indira Gandhi University Meerpur, Rewari under the Golden Jubilee Celebration of Haryana in Collaboration with Bhartiya Shikshan Mandal, Haryana on May 18, 2017.
6. Completed Advanced Post Graduate Diploma in Computer Applications from **IEC (India Education Center)**, New Delhi (India).

**Invited Talks:**

1. Delivered a lecture on topic **Group Theory** in the **First Lady Teacher Mata Savitri Bai Phoole Govt. Girls College Rewari** on dated Nov. 04/2015.
2. Delivered a lecture on topic **Quadratic form, Rank, Signature, Index and anonical form** in the **First Lady Teacher Mata Savitri Bai Phoole Govt. Girls College Rewari** on dated Feb. 10/2017
3. Delivered a lecture on topic **Operation Research** in the **JANTA COLLEGE, Dadari** on dated Feb. 20/2017

**MEMBER OF ACADEMIC/PROFESSIONAL BODIES:**

- Life Member of **Forum for Interdisciplinary Mathematics (FIM) (USA)**
- Life Member of **Gwalior Academy of Mathematical Sciences, (GAMS) GWALIOR.**
- Life Member of **Indian Society for Probability and Statistics (ISPS)**
- Life Member of **Indian Association for Reliability and Statistics (IARS)**
- Life Member (**L30794**) of **The Indian Science Congress Association (IISCA)**

### **RESEARCH GUIDENESS/ SUPERVISOR for M.Phil :**

1. supervised (Usha Rani ) for M. Phil Dissertation under titled “ **Reflection and refraction of various waves in different medium**” submitted to the **Maharishi Markandeshwar University Mulana, AMBALA, 133203** (Haryana)
2. supervised (Vikash Gahlawat, Reg. No. 07-JHR-1130, **Nov-2014**) for M.Phil Dissertation under titled “**Wave Propagation in Liquid Saturated Porous Solid with Micropolar Elastic Skelton**” submitted to the **INDIRA GANDHI UNIVERISTY, MEERPUR REWARI-122503.** (Haryana)
3. supervised (Naresh Chahal, Reg. No. 3011011, **Nov-2014**) for M.Phil Dissertation under titled “**Stochastic-Analysis of a Single-Unit System Operating Under Different Weather Conditions**” submitted to the **INDIRA GANDHI UNIVERISTY, MEERPUR REWARI-122503.** (Haryana)
4. Supervised (Amit Kumar, Regn. No. 14012007, **May-2016**) for M.Phil Dissertation under titled “**Reliability Analysis of a Cloud Under Different Weather Conditions**” submitted to the **INDIRA GANDHI UNIVERISTY, MEERPUR REWARI-122503.** (Haryana)
5. Supervised successfully (Sumit , **Regn. No. 215100**) for M.Phil Dissertation under the titled “**Profit Analysis of Two Units Cold Standby System Models Subject Priority and Refreshment Facility**” submitted to award the degree in December 2016 to **INDIRA Gandhi University, Meerpur Rewari.**
6. Supervised successfully(Preeti, Reg. No. 07-JHR-1130) for M. Phil Dissertation under titled “**Reflection and Refraction of Waves in Two Welded Contact Infinite Unbounded Half Spaces**” submitted to award the degree in July 2016 to **INDIRA GANDHI UNIVERISTY, MEERPUR REWARI-122503.** (Haryana)
7. Supervised successfully (Priti, Reg. No. 1600105021001) for M.Phil Dissertation under titled “**Propagation of waves in two welded contact infinite half spaces** ” submitted to award the degree in December,2017,to **INDIRA GANDHI UNIVERISTY, MEERPUR REWARI-122503.** (Haryana)

### **PROFESSIONAL QUALIFICATIONS:**

- Advanced Post Graduate Diploma in Computer Applications from **IEC (India Education Center)**, New Delhi (India)
- B.Ed degree from **M.D.University, Rohtak** (India).

***TEACHING EXPERIENCE: 10+ years:***

- One year teaching experience as a lecturer in Mathematics at Govt. College, **Dujana** (Jhajjar) Haryana, during session 2007-2008
- Three year and 10 months experience as assistant professor in Mathematics at Pt. N.R.S. Govt. College Rohtak, Haryana, during 13<sup>th</sup> July 2008 to 18<sup>th</sup> May 2012
- Six months experience as lecturer in mathematics at GSSS, Kahanur Rohtak, during 22<sup>th</sup> May to 18<sup>th</sup> Oct. 2012
- Presently working as Assistant Professor in Department of Mathematics Indira Gandhi University Meerpur Rewari, Haryana since Oct, 18<sup>th</sup>. 2012 to till date

***EDUCATIONAL QUALIFICATIONS: NET, M.Phil & Ph.D.***

***ANY OTHER INFORMATION:***

Awarded *NSS Merit Certificate* by M.D.Univeristy, Rohtak (India).

Place: -IGU, Meerpur, Rewari

Date:-May, 2021

*Mababir Barak*

(Dr. M.S. Barak)