

# *Dr Ekta Narwal*

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## **Social Navigation URLs**

ResearchGate [https://www.researchgate.net/profile/Ekta\\_Narwal](https://www.researchgate.net/profile/Ekta_Narwal)  
Google Scholar <https://scholar.google.com/citations?user=2jEBDtcAAAAJ&hl=en>

## **Educational Qualifications:**

2020	Ph.D. (Comp. Sc.)	M.D. University, Rohtak
2011	MCA (Lateral Entry)	M.D. University, Rohtak
2010	Qualified NET	
2010	M.Sc. (Computer Science)	M.D. University, Rohtak
2008	B.Sc.	M.D. University, Rohtak
2005	12 <sup>th</sup>	C.B.S.E.
2003	10 <sup>th</sup>	H.B.S.E.

## **Technical Expertise/ Software Skills:**

Operating System	Windows-98, 2000, Windows-XP, NT, 7, 8, 10 &UNIX
Language/ Software Database	C, C++, MATLAB, PL/SQL, MS- office SQL Server 2000/2005, MS-Excel

## **Educational/Professional Experience: 11 years**

1. **Assistant Professor**, Computer Science, Department of Mathematics, Maharshi Dayanand University, Rohtak from 2nd March 2012 to till date.
2. **Guest Lecturer**, Department of Mathematics, Maharshi Dayanand University, Rohtak from January 2011 to 1st March 2012.

## **Awards:**

- Got **AWARD FOR BEST FACULTY** by Teacher's Day Achiever's Award 2021 for the year 2021.
- Got **AWARD OF EXCELLENCE** for Counselor, Youth Red Cross by M.D. University for excellent services for the year **2018-2019**.
- Got **THANKS LETTER** from Governor of Himachal Pradesh for successful

organization of “**Zero Budget Prakrit Krishi**” event on **17 February 2018**.

- Awarded **UNIVERSITY COLOUR** for the session **2006-07** in the field of Cultural Activities by Pt. Neki Sharma Government College, Rohtak.
- Won **FIRST PRIZE** in Zonal Youth festival of M. D. University, Rohtak in the sessions **2005-06** in One Act Play (Hindi).
- Won **FIRST PRIZE** in Zonal Youth festival of M. D. University, Rohtak in the sessions **2006-07** in One Act Play (Hindi).
- Won **THIRD PRIZE** in Inter-Zonal Youth festival of M. D. University, Rohtak in the session **2006-07** in One Act Play Hindi.

### **Extra Assignments & Duties:**

- **Deputy Director, University Outreach Cell, M.D. University** (January 2021 to till date).
- **Counsellor Youth Red Cross, University Teaching Departments, M. D. University, Rohtak** (2017 to till date).
- **Co-ordinator, Career Counselling & Placement Cell, Department of Mathematics, M.D. University, Rohtak** (September 2017 to till date).
- **Programme Officer NSS, Girls (Unit-II), UTD, M.D. University, Rohtak** (2014-2017).
- **Assistant Secretary, Faculty Club, M.D. University, Rohtak** (2013-2015).

### **Event/Activities Management at University Level:**

- **Member Organizing Committee** of Inter- Zonal Youth Festival (March, 2022).
- **Member Organizing Committee** of One Week Online GIAN Course on Stochastic Processes: Theory and its applications in Medical Sciences from 14<sup>th</sup> March to 18<sup>th</sup> March, 2022.
- **Member Organizing Committee** of Rang Bahar Festival, M.D. University (March 2022).
- **Treasurer, One Week Faculty Development Programme on Recent Developments in Mathematical Sciences and Engineering** from December 22-26, 2021.
- **Coordinator, One week Workshop on “Employability Enhancement Training”** from December 3 to December 9, 2021.
- **Member Organizing Committee, One Week Faculty Development Programme on Advanced Mathematics Techniques in Engineering and Technology** from October 14-18, 2021.
- **Joint Organizing Secretary of National Webinar on IPR-Patent and Designs Filing Process** organized by **Centre for IPR Studies, M. D. University, Rohtak in Association with Rajiv Gandhi National Institute of Intellectual Property Management.** (09 October 2021)
- **Coordinator of Lecture Series** for improvement of Earn While Learning Scheme in **Department of Mathematics, M. D. University, Rohtak.** (8 October 2021)
- **Organizing Secretary of Faculty Induction Programme** organized by Faculty Development Centre of Maharshi Dayanand University under the scheme of **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), MHRD, GoI, Delhi.** (2- 31 March 2021)

- **Organizing Secretary of Interdisciplinary National Seminar on National Education Policy-2020** organized by Faculty Development Centre of Maharshi Dayanand University under the scheme of **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT)**, MHRD, GoI, Delhi. (20-21 February 2021)
- **Member Organizing Committee** of Rang Bahar Festival, M.D. University (2020-2021).
- **Member Organizing Committee** of International Workshop on Patent Filing organized by IPR Cell of M.D. University, Rohtak (24-25, January 2020)
- **Organizing Secretary of Capacity Building Programme** organized by Faculty Development Centre, Maharshi Dayanand University, Rohtak under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) by MHRD, Government of India, Delhi. (10th to 23rd August, 2019)
- **Organizing Secretary of Seven Days Workshop on E-Learning Technologies, E-Content Development and MOOCs** organized by Faculty Development Centre, Maharshi Dayanand University, Rohtak under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) by MHRD, Government of India, Delhi. (20h Feb. to 26th Feb. 2019)
- **Member Organizing Committee** of 21<sup>st</sup> National Youth Festival held at M.D. University, Rohtak (2016-2017).
- **Member Organizing Committee** of 37<sup>th</sup> Inter Zonal Youth Festival (17-19 Nov. 2017).
- **Member Organizing Committee** of Rang Bahar Festival, M.D. University (2019-2020)
- **Member Organizing Committee** of “RAAHGIRI” campaign in M. D. University, Rohtak for Social Cause. (2015-2016)
- **Member Organizing Committee** of Convocation, M.D. University (2018-2019).
- **Member Organizing Committee** of Alumni Meet of Convocation, M.D. University (15.04.2018).
- **Member Organizing Committee** of Inter-Zonal Youth Festival, M.D. University, Rohtak (2017-2018, 2014-2015).
- **Member Organizing Committee** of Folk Festival, M.D. University, Rohtak (2014-2015).
- **Member Organizing Committee** of Phagun Mela, M.D. University, Rohtak (2015-2016)
- **Member Organizing team** of Induction Program as P.O., N.S.S. held in Tagore Auditorium, M.D. University, Rohtak (August 10, 2015).
- Participated as **Teacher In-charge** in Science Conclave-2014, M.D. University, Rohtak (February 22-23, 2014)
- **Member of organizing committee** of Mega Job Fair at Maharshi Dayanand University, Rohtak. (11/07/2019)
- **Member of organizing committee** of various Cultural Programmes at Teachers’ Club like New Year Celebration, Lohari Party, Sports meet, Diwali Party etc.
- **Member of Inspection Committees** for the inspection of college affiliated to M.D. University, Rohtak.

## Social Activities

- Organized more than **26 Blood Donation Camps** in M.D. University Campus as YRC Counsellor.

- Organized **3 Eye Donation Pledge Camps** in M.D. University Campus as YRC Counsellor.
- Organized **5 Health Check Up camps** 4 in M.D. University Campus and 1 in Village Kheri Sadh Near to M.D. University Campus.
- Organized more than **20 awareness rallies** in M.D. University Campus and nearby villages as NSS Programme Officer and YRC Counsellors for Health & Hygiene Awareness, Say no to Crackers, Save Environment, Say no to Plastic, Save Girl Child etc.
- Organized **8 First aid training camps** for the Students of M. D. University.

### **Event/Activities Management at Department Level**

- **Coordinator of Online Expert Lecture on Mathematics and Computing** organized by Department of Mathematics, M.D. University, Rohtak in collaboration with Career Counselling and Placement Cell, M.D. University, Rohtak (14.05.2021).
- **Coordinator of Online Expert Lecture on Resume Building and Interview Skills** organized by Department of Mathematics, M.D. University, Rohtak in collaboration with Career Counselling and Placement Cell, M.D. University, Rohtak (19.02.2021).
- **Organizing Secretary of International Conference on History and Development of Mathematics** organized by Department of Mathematics, M.D. University, Rohtak in collaboration with Haryana State Council for Science, Innovation & Technology, Haryana. (22.12.2020).
- **Coordinator of International Webinar on Mathematical, Models, Artificial Intelligence and Pandemic Responses** organized by Department of Mathematics, M.D. University, Rohtak (07.11.2020).
- **Coordinator of National Webinar on Statistics and its Applications** organized by Department of Mathematics, M.D. University, Rohtak (20.10.2020).
- **Coordinator of National Webinar on Mathematics in Science & Technology** organized by Department of Mathematics, M.D. University, Rohtak (15.10.2020).
- **Organized Three days Workshop on Communication Skills** in Department of Mathematics, M.D. University, Rohtak in collaboration with Career Counselling and Placement Cell, M.D. University, Rohtak (13.06.2020).
- **Coordinator of e-Learn & Joy Mathematics State Level Competitions** organized by Students' Club of Department of Mathematics, M.D. University, Rohtak (01.06.2020).
- **Organized Webinar on Career Opportunities in Mathematical Sciences** in Department of Mathematics, M.D. University, Rohtak in collaboration with Career Counselling and Placement Cell, M.D. University, Rohtak (01.06.2020).
- **Hosted e-Milan Samaroh** of Department of Mathematics, M.D. University, Rohtak on online platform. (02.05.2020)
- **Co-ordinated Poster and Model Exhibition** in Department of Mathematics, M.D. University, Rohtak on National Science Day. (28.02.2020)
- **Joint Secretary of One Day National Seminar on 'Mathematical Sciences and**

**Applications' to celebrate 'National Mathematics Day'** organized by Department of Mathematics, Maharshi Dayanand University, Rohtak (22.12.2019).

- **Member Organizing Committee** of Mathematics Premiere League (Season-I) (12-13 Oct. 2019).
- **Member Organizing Committee** of Mathematics Enrichment Programme Department of Mathematics, Maharshi Dayanand University, Rohtak (27.09.2019)
- **Member Organizing Committee of One Day Seminar on Relevance of the Vedic Mathematics in IT Era and Alumni Interaction Programme** organized by Department of Mathematics, Maharshi Dayanand University, Rohtak (30.03.2019).
- **Organized Expert Lecture on Mathematical Mobile Application Development** in Department of Mathematics, Maharshi Dayanand University, Rohtak (22.02.2019).
- **Organized One-Day Seminar on “Career and Placement Guidance in Mathematics” as Departmental Co-ordinator** of CCPC, at Department of Mathematics, M.D. University, Rohtak (November 15, 2017).
- **Member Organizing Committee** of National Seminar on Recent Developments in Mathematical Sciences (NSRDMS-2017) at Department of Mathematics, M.D. University, Rohtak (March 7 & 8, 2017).
- **Member Organizing Committee of one day workshop** on "Communication and Soft Skills" held at Department of Mathematics, M. D. University, Rohtak (October 16, 2015).
- **Member Organizing Committee** of Blood Donation Camp & Eye Donation Pledge Camp, Department of Mathematics, M.D. University, Rohtak (September 16, 2015).
- **Member of the committee** for redressal of grievances of students from May 8, 2013, at Department level.
- **Organized** an educational one-day trip to “World of Wonder and GPL Mall (Noida) on September 14, 2013, as teacher in-charge.
- **Teacher in-charge** of the team of the department of Mathematic in Quiz Contest under Banner of “Ch. Mayachand Memorial Mathematics Quiz” on September 21, 2013.
- **Member of organizing committee** of Intradepartmental Talent Search Programme for students of the department on September 14, 2012.
- **Member of organizing committee** of International Conference on History and Development of Mathematical Sciences & Symposium on Nonlinear Analysis at Department of Mathematics from November 21-24, 2012.
- **Member** of various Committees at Department level like Student activities (including educational tours), Admissions, Refreshment, Laboratory in-charge, Class Co-ordinator, Eco- Club.

## Research Publications:

Research Project	: 1
Published in Journals	: 8
Published in Conference Proceedings	: 2

Details of the above are given in **Annexure –I**

### **Area of Research:**

- Network Security
- Artificial Neural Network
- Vehicular Ad Hoc Networks
- Coding Theory
- Cryptography

### **Workshops / Conferences/ Other Courses/Extension Lectures:**

1. Workshops **18**
2. Conferences/ Seminars: **14** (12 Paper Presentations & 2 Attended)
3. Delivered Expert/ Extension Lectures **18**

Details of the above are given in **Annexure-II**

### **Annexure –I**

### **Research Project:**

- **Minor Research Project** on the title “**Development of Smart System for Recognition of Vehicles using Neural Networks**” under Dr Radha Krishnan Foundation Fund of Maharshi Dayanand University, Rohtak of Rs. 50000 of duration one Year.

### **Research Publications:**

- Ekta Narwal, Sumeet Gill, “Security Issues in Bluetooth Technology- A Review” in **International Conference on Innovative Trends in Computing Technology & Mathematics (ITCTM-2015)** conference proceedings organized by Delhi Institute of Technology & Management, Sonapat (Haryana) on March 14, 2015. (ISBN 978-81-929035-0-7).
- Ekta Narwal, Sumeet Gill, “Perceptrons Helping to Secure VANETs” in **International Journal of Advanced Research in Computer Science**, Vol. 8, Issue 3, March-April 2017, Page No. 181-184. [ISSN: 0976-5697] (**UGC List number 2503**).
- Ekta Narwal, Sumeet Gill, “Secure and Faster Key Management of Elliptical Curve Cryptography in VANETs” in **International Journal of Computer Science Engineering and Information Technology Research (IJCEITR)**, Vol. 7, Issue 4, August 2017. [ISSN: 2249-7943(Online), 2249-6831(Print)].
- Ekta Narwal, Sumeet Gill, “Securing Vehicle Numbers using Artificial Neural Networks”, in **International Journal of Computer Sciences and Engineering**, Vol.

5, Issue 10, October 2017, Page No. 196-199, [E-ISSN: 2347-2693] (**UGC List number 63193**).

- Ekta Narwal, Sumeet Gill, “Intelligent Transportation Systems Motivate Vehicles to Communicate” in **National Conference on “Emerging Trends in Smart Computing (ETSC-19)”** organised by Department of Computer Science & Applications, M.D. University, Rohtak (Haryana) on March 27,2019.
- Ekta Narwal, Sumeet Gill, “Modeling Elliptical Curve Cryptography keys using Back Propagation Algorithm” in **International Journal of Innovative Technology and Exploring Engineering (IJITEE)**, Vol. 8, Issue 9S3, July 2019, Page No. 1525-1529, [ISSN: 2278-3075] (**SCOPUS Indexed and UGC CARE Listed**).
- Ekta Narwal, Sumeet Gill, “Simulation of Biometric Data in VANETs using Layer Recurrent Model”, in **International Journal of Recent Technology and Engineering (IJRTE)**, Vol. 8 Issue-4, November 2019, Page No. 4715-4718, [ISSN: 2277-3878] (**SCOPUS Indexed and UGC CARE Listed**).
- Ekta Narwal, Sumeet Gill,” Simulating Manual Signature using Elman Back Propagation Model to Create Pseudo Digital Signature”, in **International Journal of Innovative Technology and Exploring Engineering (IJITEE)**, ISSN: 2278–3075 (Online), Volume-9 Issue-2, December 2019, Page No. 3548-3551, [ISSN: 2278-3075] (**SCOPUS Indexed and UGC CARE Listed**).
- Ekta Narwal, Sumeet Gill,” A Smart System for Recognition of Vehicles Using Convolution Neural Networks” in **Journal of Tianjin University Science and Technology**, ISSN: 0493-2137, Volume- 54 Issue-8, August 2021, Page No. 355-366. [ISSN: 0493-2137] (**SCOPUS Indexed**)
- Ritu, Niram, Ekta Narwal, Sumeet Gill, “A Novel Cipher Technique Using Substitution and Transposition Methods” Lect. Notes in **Networks, Syst., Vol. 434, Vijay Singh Rathore et al. (Eds): Rising Threats in Expert Applications and Solutions, 978-981-19-1121-7, 520987\_1\_En, (Chapter 14) (Springer)**

### Conferences and Seminars:

1. **Attended** International Colloquium on History of Mathematical Sciences & Symposium on Non- Linear Analysis” held, during 16-19 May, 2011 organised by Department of Mathematics, Kumaun University, S. S. J. Campus, Almora and Indian Society for History of Mathematics.
2. **Presented a paper** on “MANETS, Security and Artificial Intelligence” in International Conference on History and Development of Mathematical Sciences and Symposium on Nonlinear Analysis organized by Department of Mathematics, M. D. University, Rohtak from Nov. 21, 2012, to Nov. 24 2012.
3. **Presented a paper** on “Security Issues in Bluetooth Technology- A Review” in International Conference on Innovative trends in Computing Technology & Mathematics

- (ITCTM-2015) organised by Delhi Institute of Technology & Management, Sonapat (Haryana) on March 14, 2015, and paper published in conference proceedings.
4. **Presented a paper** on “A Comparative Study of Wireless Protocols: Bluetooth, ZigBee, WirelessHART and Wibree” in National Conference on Innovations in IT, Management & Education – Digital India Initiative (IIMEDI-2015) organised by Maharaja Surajmal Institute, Janakpuri, New Delhi-110058 on March 21, 2015.
  5. **Presented a paper** on “Securing Vehicle Numbers in Automatic Gate Entry System using Back Propagation Model” in International Conference on Recent Trends in Engineering and Material Sciences (March 17-19, 2016) at Jaipur National University, Jaipur (Rajasthan).
  6. **Presented a paper** on “Security Enhancement of Digital Signatures” in National Conference on Emerging Trends in Cloud Computing and Big Data Analytics (ETCCBDA-17) held on March 06, 2017, at Department of Computer Science and Applications, Maharshi Dayanand University, Rohtak.
  7. **Attended National Seminar** on Recent Developments in Mathematical Sciences (NSRDMS-2017) held on March 7 & 8, 2017 at MDU organized by Department of Mathematics, MDU, Rohtak.
  8. **Presented a paper** on “Cryptography Applied to Secure Vehicular Ad Hoc Networks” in International Conference on Mathematics & Applications (ICMA-2017) held on April 26-28, 2017, at Ramjas College, University of Delhi.
  9. **Presented a paper** on “Security Key Management in VANETs using Artificial Neural Networks” in 21<sup>st</sup> International Conference of International Academy of Physical Sciences on Symbiotic Development of Mathematical, Physical, Chemical & Computational Sciences & Symposium on Recent Advances and Future Directions on Mathematics in Bio- Sciences held on 28-30 October 2017 organized by Department of Mathematics, Guru Jambheshwar University of Science & Technology Hisar.
  10. **Presented a paper** on “Enhancing Security of ECC keys in VANETs using Artificial Neural Networks” in National Conference on Future Innovations in Computing Technologies and Machine Learning (FICTML-17) held on November 21, 2017, at Department of Computer Science and Applications, Maharshi Dayanand University, Rohtak.
  11. **Presented a paper** on “Digital Learning Technologies and their flaws” in the Interdisciplinary National Seminar on “**Excellence and Expansion: Quantity and Quality in Indian Higher Education**” held on October 28, 2018 at Tika Ram College of Education. Sonapat.
  12. **Presented a paper** on “Improving Security Mechanism of ECC keys using technique of Soft Computing” in the International Conference on “**Modern Research in Physical, Chemical Science, Mathematics, Statistics and Emerging Energy Technology**” held on September 9, 2018 organised by Krishi Sanskriti at Jawaharlal Nehru University, New Delhi.



13. **Presented a paper** on “Modelling Elliptical curve Cryptography keys using Artificial Neural Networks” in the 2<sup>nd</sup> International Conference on “**Mathematical Modelling, Applied Analysis and Computation-2019 (ICMMAAC-19)**” held on 08-10 August 2019 organised by Department of Mathematics, Faculty of Science, JECRC University, Jaipur (Raj.), India.
14. **Presented a paper** on “Intelligent Transportation Systems Motivate Vehicles to Communicate” in National Conference on “Emerging Trends in Smart Computing (ETSC-19)” organized by Department of Computer Science & Applications, M.D. University, Rohtak (Haryana) on March 27,2019.

### Workshops:

1. **Attended workshop** on "Applicability of Statistical tools using SPSS" held on May 13, 2013, at Department of Mathematics, MDU, Rohtak.
2. **Attended** "Workshop on Neural Network and its implementations with MATLAB" on 17th & 18th January 2014 at BVIMR, New Delhi.
3. **Attended National Workshop** on “SPSS & R Software” held on February 20, 2015 at Department of Statistics, M.D.University, Rohtak.
4. **Attended Workshop** on “Sexual Harassment and Violence against Women: Prevention, Prohibition & Redressal” held on February 26-27, 2015 at M.D.University, Rohtak.
5. **Attended two days’ workshop** on "Quality Assurance and Accreditation" held on March 19-20, 2015 at M.D.University, Rohtak.
6. **Attended one day workshop** on "Communication and Soft Skills" held on October 16, 2015 at Department of Mathematics, M.D.University, Rohtak.
7. **Attended one day Workshop** on “All India Survey on Higher Education” held on November 20, 2015 at M.D.University, Rohtak.
8. **Participated in workshop on** "Gender Sensitization and Women Safety at Workplace” held on February- 9 & 10, 2016 at MDU, Rohtak organized by Committee to check sexual harassment and violence against women at workplace (SCSHVW).
9. **Participated in workshop on** "E-Governance in India: Issues and Challenges" held on October 05, 2016, at Department of Public Administration, MDU, Rohtak.
10. **Participated in One day Author Workshop** held on November 18, 2016 at MDU, Rohtak organised by, Vivekananda Library, MDU, Rohtak in association with Elsevier.
11. **Participated in workshop on** "All India Survey on Higher Education" held on March 17, 2017, at MDU, Rohtak organised by AISHE Cell, MDU, Rohtak.
12. **Participated in workshop on** “Cyber Security and Digitalization” held on November 09, 2017, organised by Youth Red Cross of Maharshi Dayanand University, Rohtak at Tagore Auditorium.
13. **Attended** workshop on "Women Safety and Gender Sensitive Issues at Workplace on 7th February 2019

### One Week (7 Days Workshops or Training):

1. **Attended one-week National Workshop** on "Problem Solving Using MATLAB" from March 24, 2014, to March 29, 2014, at DCSA, MDU, Rohtak.
2. **Attended 7 days training programme** on "Training of Trainers on Effective Facilitation Skills" at Rajiv Gandhi National Institute of Youth Development (RGNIYD), Regional Center, and Chandigarh, India on 27 June- 3 July 2016.
3. **Attended 7 days National Integration Camp** of NSS as Programme Officer in Baddi Himachal Pradesh organized by Chitkara University from December 11-17, 2016.
4. **Participated in 7 days Health Awareness Camp** of YRC as Counsellor held at Jaipur (Rajasthan) from January 15-21, 2018.
5. **Attended 5 days Online STTP on MATLAB based Teaching- Learning in Mathematics, Science & Engineering** organized by Department of Electronics Engineering, RAIT, D. Y. Patil University, in Collaboration with DesignTech. (18- 22 May 2020).

### Extension Lectures:

- **Delivered one extension lecture** in the Department of Mathematics, M.D. University Rohtak on MATLAB in 5 days Intra-department Workshop on MATLAB and SPSS on January 19, 2015.
- **Delivered three extension lectures** in the Department of Geography, M.D. University Rohtak on "Computer Programming" C++ Language- Introduction, Objects, Decisions, Algorithm & Flowcharts on March 9, 2016.
- **Delivered lectures** as Resource Person in Department of Mathematics, Indira Gandhi University Meerpur, Rewari on MATLAB in National Workshop on MATLAB and LaTeX, on August 24-30, 2016.
- **Delivered three extension lectures** in the Department of Geography, M.D. University Rohtak on Computer Programming under paper Spatial Statistics, Computer Programming and Report Writing, on February 3, 2017.
- **Delivered expert lecture in One Day Workshop on MATLAB and Latex** in Department of Mathematics, M.D. University Rohtak. (25.01.2020)
- **Delivered 2 expert lectures** on Programming approach in C in **4<sup>th</sup> Online Refresher Course in Mathematics and Statistics** organized by Academic Staff College, BPSMVV, Khanpur. (26.10.2020)
- **Delivered 2 expert lectures** on Essentials of MATLAB in Problem Solving in **4<sup>th</sup> Online Refresher Course in Mathematics and Statistics** organized by Academic Staff College, BPSMVV, Khanpur. (29.10.2020)
- **Delivered 2 expert lectures** on MATLAB Programming in **Refresher Course in Online Course Development and Use of ICT in Teaching & Research (ID)** organized by Academic Staff College, BPSMVV, Khanpur. (18.11.2020)
- **Delivered 2 extension lectures** on Computational Methods in the Department of Mathematics, BPSMVV, Khanpur. (07.07.2021)

- **Delivered expert lecture on G- Suite for Education in Faculty Induction Program organized by FDC, MDU, Rohtak. (30.03.2021)**

**Declaration:**

I here declare that above-mentioned information is correct up to my knowledge & bear the responsibility for the correctness of the above-mentioned particulars.

Date – 07/04/2022

Place – Rohtak

**(EKTA NARWAL)**