



DR. SWAGAT RAMESHCHANDRA BAROT

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EDUCATIONAL QUALIFICATION

Ph.D. (Applied Mathematics) , Department of Applied Mathematics, Faculty of Technology and Engineering, M. S. University of Baroda	2018
Gujarat State Eligibility Test (GSET)	2018
M.B.A. (Human Resource Management) , Indira Gandhi National Open University	2012
M.Phil. (Mathematics) , Department of Mathematics, Sardar Patel University, Vallabh Vidyanagar	2007
M.Sc. (Mathematics) , Department of Mathematics, Sardar Patel University, Vallabh Vidyanagar	2004
B.Sc. (Mathematics) , M.B. Patel Science College, Anand (affiliated to Sardar Patel University, Vallabh Vidyanagar)	2002

WORK EXPERIENCE

Government Polytechnic, Valsad Lecturer in Mathematics	2020 – Present
R.C. Technical Institute, Ahmedabad Lecturer in Mathematics	2018 – 2020
Department of Mathematics, Marwadi University, Rajkot Sr. Assistant Professor and Head of the Department	2016 – 2018
Shroff S. R. Rotary Institute of Chemical Technology, Vataria Assistant Professor	2013 – 2016

TECHNICAL SKILLS AND KNOWLEDGE

Computer Packages for Mathematics and Statistics: MATLAB, SPSS and R

SUBJECTS TAUGHT

Basic Mathematics (**Diploma, Sem 1**), Advance Mathematics (**Diploma, Sem 2**), Calculus (**BE, Sem 1**), Vector Calculus and Linear Algebra (VCLA) (**BE, Sem 2**), Advanced Engineering Mathematics (**BE, Sem 3**), Calculus and Algebra (**B.Sc, Sem 1**), Mathematics (**BE (offered by IChE – Indian Institute of Chemical Engineers), Module-1**), Real Analysis-I (**M.Sc., Sem 1**), Real Analysis – II (**M.Sc., Sem 2**), Biomathematics (**M.Sc. Integrated Biotechnology, Sem 2**), Biostatistics (**M.Sc. Sem II**), Biostatistics and Bioinformatics (**M.Sc., Sem 2**)

TRAINING AND WORKSHOP

- *‘Pedagogy and effective use of ICT in Engineering and Vocational Education’* in online mode by NITTTR, Bhopal during 9/08/2021 to 13/08/2021
- *‘Innovative Teaching Techniques’* in online mode organized by NITTTR, Bhopal during 5/07/2021 to 9/07/2021
- *‘Business statistics’* in online mode through NPTEL during 18/01/2021 to 9/04/2021
- *‘UDAYAM (Unlimited Digital Advanced Yearlong Academic Method of learning) E-Content Development Course’* in online mode organized by Knowledge Consortium of Gujarat Education Department, Government of Gujarat during 28/07/2020 to 18/08/2020
- *‘Comprehensive Online Intellectual Property Rights’* in online mode organized by Gujarat Student Startup and Innovation Hub (i - Hub) and Department of Higher Education during 07/06/2020 to 14/09/2020
- Summer bootcamp on *‘Building Innovation Culture & Understanding Entrepreneurship Skill’* in online mode by District Education Office, Valsad & Government Engineering College, Valsad during 02/06/2020 to 08/06/2020
- Online FDP on *‘Artificial Intelligence’* by Department of Computer Science and Engineering, Shridevi College of Engineering and National Youth Council of India during 22/05/2020 to 26/05/2020
- *‘TALE 2 : Course Design and Instruction of Engineering Course’* in online mode through NPTEL during 29/07/2019 to 20/09/2019
- *‘Designing learner-centric e-learning in STEM disciplines’* in in online mode through NPTEL during 29/07/2019 to 23/08/2019

- A one day hands-on training on *using Khan Academy for strengthening the foundational mathematics learning of students* at IITRAM on 4/07/2019
- *‘Teaching And Learning in Engineering (TALE)’* in online mode through NPTEL during 25/02/2019 to 22/03/2019
- *‘Induction Program, Phase-I’* at NITTTR Bhopal during 28/01/2019 to 8/02/2019
- 5 days STTP on *‘Virtual labs development (BootCamp)’* organized by IIT at Marwadi University, Rajkot during 5/02/2018 to 09/02/2018
- *‘IUCEE- EPICS Design thinking course’* offered online offered by Indo US Collaboration for Engineering Education (IUCEE) during 01/08/2017 to 6/01/2018
- *‘Faculty Development Program, Level 3’* offered by Learning & Development Dept., Marwadi University, Rajkot during 30/06/2017 to 1/07/2017
- *‘IIEECP - Phase II certification program’* in blended mode at Marwadi University, Rajkot by Indo US Collaboration for Engineering Education (IUCEE) during 20/02/2017 to 14/05/2017.
- *‘Faculty Development Program, Level 2’* by Learning & Development Dept., Marwadi University, Rajkot during 21/12/2016 to 22/12/2016
- *‘IIEECP - Phase I certification program’* offered by Indo US Collaboration for Engineering Education (IUCEE) at Marwadi university during 21/11/2016 to 23/11/2016
- *‘Faculty Development Program, Level 1’* by Learning & Development Dept., Marwadi University, Rajkot during 13/10/2016 to 14/10/2016
- Workshop entitled *‘Vision, mission & Quality’* organized by Marwadi university, Rajkot on 24/08/2016
- A workshop on *‘Latex for technical report writing’* organized by Dept. of Electrical Engineering, Marwadi University, Rajkot on 29/07/2016
- Two days *‘Python workshop’* organized by Gujarat Technological University (GTU) during 9/01/2016 to 10/01/2016
- *‘Springer Author workshop’* organized by Gujarat Technological University (GTU) on 30/10/2015
- Workshop on *‘Soft computing techniques in optimization using MATLAB’* organized by Dept. of Mathematics & Computer science, Pandit Deendayal Petroleum University (PDPU), Gandhinagar during 27/03/2015 to 28/03/2015
- Workshop entitled *‘Research to Rupees’* organized by Gujarat State Biotechnology Mission (GSBTM) during 22/03/2013 to 23/03/2013
- *‘UGC Sponsored Refresher course on Mathematical Sciences’* organized by Academic Staff College, Sardar Patel University during 19/11/2012 to 09/12/2012
- Workshop on *‘conduct of University examinations’* organized by ERU and IQAC cell of Sardar Patel University on 21/09/2012

- Workshop on '**Problem Solving in Mathematics**' organized by Dept. Of Mathematics, Sardar Patel University (SPU) during 24/01/2009 to 29/01/2009
- Training program on '**Strategy & art of reinventing excellence in Education**' organized by Career Development Centre, V.V. Nagar during 12/02/2007 to 16/02/2007

PORTFOLIOS (Current Portfolios)

- Verification officer in ACPDC committee of the institute
- Departmental coordinator in CWAN committee of the institute
- Member in Security service and Anti-ragging committee
- Member in the committee for Boy's hostel of the institute
- Member in the departmental committee for data compilation and e-mail checking
- Member in the Write off committee of the department
- Co-coordinator in the NBA committee of the department
- Member in the T&P and MAY committee of the department

RESEARCH PROJECTS GUIDED

NIL

PUBLICATIONS

Journal Papers

- Swagat Barot, '**Relationship between Emotional Intelligence and Individual job performance: Statistical perspective**', SEMCOM Management and Technology Review, Vol. 3, Issue 2, pp. 108 – 113, March 2016, ISSN: 2321 5968
- Prabir Chandra Padhy, Swagat Barot, '**Emotional Intelligence: An inhibitor for cultural disruptions in India Inc**', ANVESHAK-International Journal of Management, Vol. 7 (1), pp. 94 – 104, arch 2016, ISSN: 2278- 8913
- Prabir Chandra Padhy, Swagat Barot, Ashiss Kumar Mihsra, '**Ethical aspects of CSR & its impact on society**', Sankalpa: Journal of Management & Research, Vol.6, Conference issue, pp. 109 – 113, February 2016, ISSN – 2231 –1904
- Swagat Barot, Prof. S. Rama Mohan, '**Binarization of textual images using network flow terminology**', International Journal of Modern trends in Engineering, Vol. 2, Issue 8, pp. 237 – 242, August 2015, ISSN – 2393-8161
- Swagat Barot, '**Application of Combinatorial optimization in image processing via graph theoretic tool**', International Journal of management studies, statistics and App. Economics, Vol. 2, pp. 139 –150, June 2012, ISSN – 2250-0367

Conference Papers

- Swagat Barot, '**An application of algebraic graph theory in prediction of folding of secondary RNA structure**', International conference of international academy of physical sciences on advances in algebra and analysis, 18 – 20 December, 2020

- Falguni Sheth, Swagat Barot, '*Mathematical modeling of a botanical problem*', International conference of international academy of physical sciences on advances in algebra and analysis, 18 – 20 December, 2020
- Swagat Barot, Subhanshu Goyal, '*Design thinking project: Customized Electronic toilet*', International conference on transformations in Engineering Education, 4-6 January, 2018
- Swagat Barot, '*Mathematical modeling of image processing problem of binarization through graph theoretic modeling*', One day national seminar on 'Advances in mathematical sciences', 16 February, 2015
- Swagat Barot, '*Mathematical modeling of vision problem for textual images*', XXVII Gujarat Science Congress, 24 Feb, 2013
- Swagat Barot, '*Introduction of new move spaces for energy minimization*', National conference on applied mathematics, 4-5 May 2012
- Swagat Barot, '*Application of combinatorial optimization in image processing*', National seminar on Advances in mathematics, 9-11 Jan 2012
- Swagat Barot, '*Graph cut and its application in Image processing*', National conference on Innovations and Applications of Mathematical Modeling techniques in engineering system, 10 Dec, 2009
- Swagat Barot, '*A graph theoretic approach towards problem of image processing*', XXIII Gujarat Science Congress, 15 Feb, 2009 (awarded as a Best paper)

Book

- Swagat Barot, '*Spectrum related to graphs*', Lap Lambert Academic Publishing, Germany, 2013, ISBN978-3-659-33000-1

Book chapter

- Swagat Barot, Subhanshu Goyal, Anil Kumar, chapter entitled '*Internet of Things: Inception and its expanding horizon*' in the book **handbook of IoT and Big data**, CRC Press, Taylor & Francis group, ISBN-13: 978-1-1385-8420-4 (Hardback) ISBN 978-0-4290-5329-0 (ebook)

ACADEMIC PROJECTS GUIDED

- M.Sc. (Microbiology) Dissertation on '*Hydrocortisone succinate bioconversion by free b cells of pseudomonas Putida MTCC 1259 and optimization using Response Surface Methodology*' submitted to Sardar Patel University, April 2012

PATENTS FILED

NIL

PROFESSIONAL INSTITUTION MEMBERSHIP

Gujarat Ganit Mandal

EXPERT LECTURES

- Expert lecture delivered for Ph.D. coursework of students of the university, Topic: *'Basics of Hypothesis testing'* , Govind Guru University, Godhra, 22-23 March 2021
- Expert lecture delivered for Ph.D. coursework of students of the university, Topic: *'Sampling methods and statistical inference'* , Marwadi University, 22-23 March 2018
- Expert lecture series (of 11 lectures) delivered for the Post Graduate students, Topic: *'Principles of biostatistics'* , Anand Mercantile College of Science, Management & Computer Technology, Anand, 10 January to 12 February

AWARDS

- Received Certificate of Distinction for 'IIEECP - Phase II certification program' in August 2017
- Received Best research paper award in National Conference on 'India Inc: Threats & opportunities through emerging disruptions' organized at Pune University on 20 February, 2016
- Received the first prize in research presentation in oral category of XXIII Gujarat Science congress on 15 February, 2009
- Secured the first prize in Light vocal (Indian) competition of Inter Collegiate Youth festival of Sardar Patel University, Vallabh Vidyanagar in 2005