

Faculty Profile

Personal Details

Name : Sonawane Ramdas Baburao
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Educational Qualification

1. **Ph. D.** (Maths), *Swami Ramanand Teerth Marathwada University, Nanded*, Nov. 2016.
2. **SET** (Maths), *Savitribai Phule Pune University, Pune*, February 2003.
3. **M.Sc.** (Maths), *I.I.T. Bombay, Powai*, August 2001.
4. **B. Sc.** (Maths), *K. T. H. M. College, Nashik (Savitribai Phule Pune University, Pune)*, June 1999.

Professional Experience

1. **Associate Professor:** - *Modern Education Society's Ness Wadia College of Commerce, Pune*, from 29/12/2020 to till date.
2. **Assistant Professor:** - *Modern Education Society's Ness Wadia College of Commerce, Pune*, from 16/07/2014 to 28/12/2020.
3. **Assistant Professor:** - *Maratha Vidya Prasarak Samaj, Nashik*, from 25/08/2006 to 15/07/2014.

Other Organizational Experience

1. **CDC Member:** - *Modern Education Society's Ness Wadia College of Commerce, Pune* from 021/04/2023 to till date.
2. **BOS Member:** - *Board of Studies in Statistics and Computer Applications, Faculty of Commerce and Management, Savitribai Phule Pune University, Pune* from 10th January 2023 to till date.
3. **IQAC Coordinator:** - *Modern Education Society's Ness Wadia College of Commerce, Pune* from 01/06/2020 to till date.
4. **Nodal officer:** - *B. Voc. (Banking, Finance and Insurance with Actuarial Studies), Modern Education Society's Ness Wadia College of Commerce, Pune* from 17th Oct. 2018 to till date.
5. **Head:** - *Department of Statistics and Computer Applications, Modern Education Society's Ness Wadia College of Commerce, Pune* from 01/09/2017 to till date.
6. **Student Development Officer:** - *Modern Education Society's Ness Wadia College of Commerce, Pune* from 01/07/2017 to 31/08/2022.

7. **IQAC Member:** - *Modern Education Society's Ness Wadia College of Commerce, Pune* from 01/08/2016 to till date.

Awards and Honours

1. Received Best Paper award for paper presentation at National Conference on Mathematical and Computational Sciences organized by Indira College of Science and Commerce, Pune from 15th January 2016 to 16th January 2016.
2. Received Travel Grant from “Savitribai Phule Pune University, Pune” and “UGC, New Delhi” to participate and present research paper in International Congress of Mathematicians (ICM-2018) held during August 1-8, 2018 at Rio de Janeiro, Brazil.

Research

Research Interest: -

Applied Mathematics: - Control Theory, Partial Differential Equations, Optimal Control Problems.

Research Projects: -

A. Completed

1. “*Study of Controllability, Observability, Stabilization, and numerical approximation schemes for semilinear heat and wave equations*”, funded by BCUD, University of Pune, Ganeshkhind, Pune – 7. (Minor Research Project)

Publications

A. Books (coauthor):

1. *BIOMATHEMATICS AND BIOSTATISTICS – I*, Vision Publication, Pune, August 2019.
2. *BIOMATHEMATICS AND BIOSTATISTICS – II*, Vision Publication, Pune, January 2020.
3. *BUSINESS MATHEMATICS AND STATISTICS – II*, Suvichar Prakashan Mandal, Pune, March 2020.
4. *MATHEMATICS METHODS FOR BIOLOGISTS*, Vision Publication, Pune, July 2013, August 2008.
5. *ALGEBRA AND GEOMETRY*, Sunny Publication, Ahmednagar, October 2008.
6. *CALCULUS*, Vision Publication, Sunny Publication, Ahmednagar, October 2008.

B. Research Papers(author/coauthor):

a. Journals (Peer Reviewed and refereed)

1. R. B. Sonawane; D. N. Kandekar, *Bilinear Optimal Control for Stochastic Wave Equations*, International Journal of Latest Engineering Research and Applications (IJLERA) , Volume 08, 2023, Pages 17-22.
2. Ramdas B. Sonawane, *STOCHASTIC CONTROLLABILITY OF NONLINEAR SYSTEMS WITH TIME VARIABLE DELAY IN CONTROL*, Scholarly Research Journal for Interdisciplinary Studies, VOL. 11(77), 2023, Pages 427-438.

3. Ramdas B. Sonawane, *STOCHASTIC CONTROLLABILITY OF NONLINEAR INTEGRODIFFERENTIAL SYSTEMS WITH TIME VARIABLE DELAY IN CONTROL*, Review of Research Vol. 12(11), 2023, Pages 1-8.
 4. Ramdas B. Sonawane, Dnyandeo Namdeo Kandekar, *Bilinear optimal control for stochastic heat equations*, International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET), Vol. 12 (7), 2023, Pages 9974-9977.
 5. Dnyandeo Namdeo Kandekar, Ramdas B. Sonawane, *A DISCUSSION ON METHODS OBTAINING LOWER AND UPPER BOUNDS OF STATISTICAL QUANTITIES BASED ON PROBABILITY MASS FUNCTION OF DISCRETE PROBABILITY DISTRIBUTIONS*, Review of ReseaRch, Vol. 12(10), 2023, Page 1-20.
 6. Kumar, Anil, Latpate, S. G., Sonawane, Ramdas B., *Controllability of a Space-Time Fractional Order Parabolic Equation*, Discussiones Mathematicae Differential Inclusions, Control and Optimization, 42 (2), 131-142.
 7. Sonawane, R.B., Kumar, A., Nimse, S.B., *Exact controllability of wave equation with multiplicative control*, Applied Mathematics E-Notes, 14, 45-51.
 8. Sonawane, R. B., *A note on exact controllability of stochastic heat equation with bilinear control*, International J. of Math. Sci. & Engg. Appls. Vol. 7, No. II, March, 2013, pp. 385-389 (ISSN 0973-9424).
- b. Proceedings of International conferences**
1. Sonawane, R. B., Kumar, A., *Optimal control of the velocity term in a Kirchhoff plate equation with multiplicative control*, Proceedings of International Conference on Computational Modelling and Simulation held at University of Colombo, Sri Lanka (ICCMS) 2017, 248-251 (ISBN: 978-955-703011-1).
 2. Sonawane, R.B., Kumar, A., Nimse, S.B., *Optimal control for a vibrating string with variable axial load and damping gain*, ACODS – 2014, Proceeding of Third International Conference on Advances in Control and Optimization of Dynamical Systems held at Indian Institute of Technology, Kanpur during 13th – 15th March 2014, pp. 75-81 (IFAC Papers Online ISBN 978-3-902823-60-1).
 3. Sonawane, R.B., Kumar, A., Nimse, S.B., *Numerical Optimal Control for Bilinear Hyperbolic PDEs*, NUiCONE 2013, Proceeding of Nirma University International Conference on Engineering held at Nirma University, Ahmadabad during 28th – 30th November 2013, pp. 1-5 (IEEE Xplore ISBN 978-1-4799-0726-7).
- c. Proceedings of National conferences**
1. Sonawane, R.B., Khairnar, A.S., *Exact Controllability of Parabolic Integro-Differential Equations with Bilinear Control*, proceeding of 4th National Conference on Computer Science and

Applications and Computational Mathematics, held at Indira College of Commerce and Science, Pune during 16th – 17th January 2016 (ISBN 978-93-81765-55-5).

2. Sonawane, R.B., Kandekar, D.N., Wavare, M.S., Nikumbh, V.E., *Optimal control problem for a parabolic system with multiplicative control*, Recent Trends in Mathematics and Their Applications in Computer Science, Proceeding of National Conference on ‘Recent Trends in Mathematics and its Applications in Computer Science’ held at ‘Rajarshi Shahu Mahavidyalaya, Latur’ during 17th & 18th January 2014, pp. 151-157 (ISBN 978-81-926910-4-6).
3. Sonawane, R.B., Kandekar, D.N., Nikumbh, V.E., *Stochastic controllability of linear systems with delay in control*, Advances in Computational Mathematics, proceeding of ‘National Seminar on Advances in Computational Mathematics’ held at Rajarshi Shahu Mahavidyalaya, Latur during 23rd & 24th February 2011, pp. 61-82 (ISBN 978-81-920783-4-2).

Faculty Development Programs

1. Participated in Faculty Development program on ‘Recent Trends in Teaching-Learning Process’ organized by organized by Dadapatil Rajale Arts, Science and Commerce College, Adinathnagar and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education during April 21-27, 2022.
2. Participated in Refresher Course Innovation and Best Practices in Education Skills (ARPIT Course for CAS) organized by UGC-HRDC, Sant Gadge Baba Amravati University, Amravati from November 2018 - March 2019.
3. Participated in Faculty Development program on ‘Innovative teaching skills for Mathematics Teachers’ organized by Department of Mathematics, Savitribai Phule Pune University, Pune from 12th November 2018 to 18th November 2018.
4. Participated in Refresher Course in Information Tech. (interdisciplinary) organized by UGC-HRDC, University of Lucknow, Lucknow from 2nd March 2015 to 25th March 2015.
5. Participated in Instructional Schools for Teachers on Differential Equations and Computations organized by Jaypee University of Information Technology, Wanknaghat, Distt. Solan (HP) from 4th June 2012 to 16th June 2012.
6. Participated in 14th Orientation Program organized by UGC-HRDC, Kumaun University Nainital, Uttarakhand, India from 4th April 2011 to 30th April 2011.

Paper presentations in Regional/State/National/International Conferences

1. Presented paper titled “*Bilinear optimal control of the time fractional convection-diffusion equation*” in ‘*International conference of Mathematical Sciences*’ organized by organized by the Department of Mathematics and Humanities (DoMH), SVNIT Surat during October 7-9, 2021.

2. Presented paper titled “*Controllability of space-time fractional order parabolic equations*” in ‘*International Congress of Mathematicians*’ organized by ‘*IMPA, Rio De Janeiro*’ during 1st-9th August 2018.
3. Presented paper titled “*Bilinear optimal control of stochastic heat equation*” in ‘*International conference of Mathematical Sciences*’ organized by ‘*Sant Gadge Maharaj College, Karad (Satara)*’ during 15th-16th September 2015.
4. Presented paper titled “*Optimal control problems for distributed bilinear parabolic PDEs: Modeling approach and simulations*” in ‘*International conference of Applied Mathematics and Numerical Simulations*’ organized by ‘*Department of Applied Mathematics, University of Lucknow, Lucknow*’ during 1st – 3rd July 2013.
5. Presented paper titled “*Bilinear optimal control for heat equation*” in ‘*77th Annual conference of Indian Mathematical Society*’ organized by ‘*School of Mathematical Sciences, S. R. T. M. University, Nanded*’ during 27th – 30th December 2011.
6. Presented paper titled “*Controllability of partial differential equations: Additive control verses multiplicative control*” in ‘*National Workshop on Recent Trends in Mathematics*’ organized by ‘*Loknete Vyankatrao Hiray Mahavidyalaya, Nashik*’ during 27th - 29th January 2011.

Seminars/Workshops/Conferences Attended/Participated

1. Participated in “*National Conference on Mathematical Analysis and Applications - 2022*” organized by Department of Mathematics, Shivaji University, Kolhapur during March 21-22, 2022.
2. Participated in ‘*International Workshop on Mathematical Finance*’ organized by ‘*IISER Pune*’, Pune during July 12-16, 2018.
3. Participated in ‘*International Workshop on Mathematical Foundation of Advanced Finite Element Methods*’ organized by ‘*BITS-Pilani, Goa Campus*’, Goa during 26th December 2013 to 3rd January 2014.
4. Attended ‘*International Conference on Fuzzy Mathematics and its Application*’ organized by ‘*New Arts, Commerce & Science College*’, Ahmednagar during 27th - 29th January 2007.
5. Participated in ‘*Indo-UK study group meeting on industrial problems*’ organized by ‘*M.S. University Baroda*’, Vadodara during 20th - 24th March 2006.
6. Attended ‘*International Conference on Recent Trends in Nonlinear Analysis and Applications*’ organized by ‘*I.I.T. Bombay*’, Powai during 11th - 13th December 2004.
7. Participated in ‘*Workshop on the Qualitative Theory of Ordinary Differential Equations*’ organized by ‘*University of Pune*’, Pune during 23rd - 27th November 2004.