

Dr Sharanjeet Dhawan

Current Position Assistant Professor
Department of Mathematics
Central University of Haryana
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D.O.B. 03 Nov., 1984, India

Educational Qualification Ph D, Post doc

Fellowships/Awards/Achievements

- Postdoctoral Fellowship: National Board for Higher Mathematics, Department of Atomic Energy(NBHM, DAE), Govt. of India, 2013.
- Foreign Travel grant from DST (Department of Science and Technology, India) to participate in 7th International Congress in Industrial and Applied Mathematics, Canada, 2011.
- Selected as funded participant of NSF-CBMS research conference in Mathematical Sciences- Nonlinear Water waves with Applications to Wave-Current Interactions and Tsunamis, (May 17-21, 2010), Department Of Mathematics, University of Texas, PAN America.
- Funded participant for ICM, Hyderabad, India, 2010.
- Foreign Travel grant from CSIR (Council of Scientific and Industrial Research, India) to participate in International Conference on Scientific Computing (CSC'09) at Las Vegas Nevada U.S.A, 2009.

Work Experience

- Assistant Professor, Department of Mathematics, Central University of Haryana, Mahendergarh, India (July 2014- Till date).
- Assistant Professor, Department of Mathematics, D.A.V. University Jalandhar, India (Aug 2013- June 2014).

- Post-doctoral fellow(NBHM, Govt of India), Department of Mathematics, National Institute of Technology Jalandhar, India (July 2012- July 2013).
- Assistant professor, Department of Mathematics, National Institute of Technology Jalandhar, India (July 2011- June 2012).

Professional Memberships

- Indian Society Of Theoretical and Applied Mechanics (ISTAM), 844.
- International Association of Computer Science and Information Technology(IACSIT), 80340905.
- International Association of Engineers(IAENG), 104778.
- Indian Society of Biomechanics.
- American Mathematical Society, 2011-12.
- Indian Society for Heat and Mass Transfer(ISHMT), 618.
- Ramanujan Mathematical Society(RMS), 701.
- Indian Society of Industrial and Applied Mathematics(ISIAM), D-20.
- Soft computing research society, 024.

Journal publications

1. **S. Dhawan**, Samir Kumar Bhowmik, “Spatiotemporal Orthogonal Polynomial Approximation for some PDEs”, Accepted, (2016).
2. **S. Dhawan**, Samir Kumar Bhowmik, Sheo Kumar, “Galerkin least square B-spline approach towards advection-diffusion equation”, *Applied Mathematics and Computation* (Elsevier) 261 (2015) 128-140.
3. **S. Dhawan**, S. Arora, S. Kumar, “Approximation of advection-diffusion phenomenon with wavelets”, *Neural, Parallel, and Scientific Computations* 22 (2014) 45-58.
4. **S. Dhawan**, D. Grover, S. Kumar, “Some traveling wave solutions of soliton family”, *International Journal of Industrial Mathematics* 5 (2013) 325-339.
5. **S. Dhawan**, R. Kumar, S. Kumar, “Multiquadratic quasi interpolation for Burger-Fisher equation”, *International Journal of Applied Mathematics and Mechanics* 9 (2013) 41-50.
6. **S. Dhawan**, S.Arora, S. Kumar, “Numerical approximation of heat equation using Haar wavelets”, *International Journal of Pure and Applied Mathematics* 86 (2013) 55-63.

7. **S. Dhawan**, S. Kapoor, Sheo Kumar, “Numerical method for advection diffusion equation using FEM and B-splines”, *Journal of Computational Science* (Elsevier) 3 (2012) 429-437.
8. **S. Dhawan**, S. Kapoor, S. Kumar, S. Rawat, “Contemporary review of distinguish simulation process for the solution of nonlinear Burgers’ equation”, *Journal of Computational Science* (Elsevier) 3 (2012) 405-419.
9. S. Kapoor, S. Rawat, **S. Dhawan**, “Numerical Investigation of Separated Solitary Waves Solution for KDV Equation through Finite Element Technique”, *International Journal of Computer Applications* 40 (2012) 27-33.
10. **S. Dhawan**, S. Kumar, S. Kapoor, “Approximation of Burgers’ equation using B-spline Finite Element Method”, *International Journal of Applied Mathematics and Mechanics* 7 (2011) 61-86.
11. **S. Dhawan**, S. Kapoor, “Numerical Simulation of Advection-Diffusion Equation”, *International Journal of Mathematical Modelling and Numerical Optimization* 2 (2011) 13-27.
12. S. Kapoor, **S. Dhawan**, “B-Spline Finite Element Technique for Advection-Diffusion Equation”, *International Journal of Applied Mathematics and Mechanics* 6 (2010) 75-94.
13. S. Kapoor, **S. Dhawan**, “A Computational Technique for the Solution of Burgers Equation”, *International Journal of Applied Mathematics and Mechanics* 6 (2010) 84-95
14. **S. Dhawan**, Sheo Kumar, “Approximation of Temperature Distribution in a Solid Body using Semi-Finite Element Technique”, *Indian Journal of Biomechanics: Special Issue* (2009) 246-250.

Conference Proceedings

1. **S. Dhawan**, S. Kumar, “An application of wavelet matrices for solving differential equations”, *2nd International Conference on Biomedical Engineering and Assistive Technologies, NIT Jalandhar (Pb.) , India*, (Dec 6-7, 2012).
2. **S. Dhawan**, S. Rawat, S. Kumar, S. Kapoor, “Solution of Advection diffusion equation using Finite Element Method”, *IEEE conference: 4th International conference on Modeling , Simulation and Applied Optimization (ICMSAO-2011), Kula-Lumpur, Malaysia*, (April 19-21, 2011).

3. V. Dabral, S. Kapoor, **S. Dhawan**, “Mathematical study of separated solitary Wave solution for KDV equation: B-spline FEM Approach”, *IEEE conference: 4th International conference on Modeling , Simulation and Applied Optimization (ICMSAO-2011)*, Kuala-Lumpur, Malaysia, (April 19-21, 2011).
4. S.Kapoor, **S. Dhawan**, R. Gupta, S. Agarwal, “Numerical solution of burgers’ equation using B-spline technique”, *International conference and Workshop- Applied Mathematics (CMIC-2011)*, Chiang mai University, Chiang Mai, Thailand, (January 06-07, 2011).
5. V. Dabral, S. Kapoor, **S. Dhawan**, S. Rawat, “Finite element based solution of modified equal width equation(MEW) with homogeneous boundary condition using B-spline basis function”, *International conference and Workshop- Applied Mathematics (CMIC-2011)*, Chiang mai University, Chiang Mai, Thailand , (January 06-07, 2011).
6. **S. Dhawan**, S. Kumar, “Finite element method for Burgers equation using cubic B-spline approximation”, *13th IASME/WSEAS International Conference on Mathematical Methods and Computational Techniques in Electrical Engineering (MMACTEE ’11) Angers, France*, (November 17-19, 2011).
7. **S. Dhawan**, S. Kumar, “Solution of advection-diffusion equation based on cubic B-spline finite element method”, *National Conference on Mathematical Modeling and Computer Simulation, (MMCS - 2011)*, BHU, India.
8. S.Kapoor, **S. Dhawan**, S. Kumar, S. Rawat, “Temperature variation in heated tube filled with molten polymer using FEM”, *2nd International conference on Industrial and Production Engineering, NIT Jalandhar (Pb.)*, India (Dec 03-05, 2010).
9. **S. Dhawan**, S. Kumar, “Petrov-Galerkin least square linear B-spline Finite Element Method for Burgers equation”, *International Conference on Biomedical Engineering and Assistive Technologies, NIT Jalandhar (Pb.)* , India (Dec 17-19, 2010).
10. **S. Dhawan**, S. Kumar, Subhash Chander, “A Comparative Study of Numerical Techniques for 2D Transient Heat Conduction using Finite

Element Method”, *International Conference on Scientific Computing (CSC’09) Las Vegas Nevada, U.S.A.*, (July 13-16, 2009).

**Conferences/
Workshops/
Schools**

- Advanced Training in Mathematics Schools, ISL Numerical Analysis (2014), **Panjab University, Chandigarh, India** (June 09-28, 2014).
- Orthogonal Spline Collocation Methods for Partial Differential Equations, **Sauth Asian University, New Delhi-110021, India** (March 21-24, 2014).
- Summer School on Numerics and Control of PDEs, IFCAM, **IISC Bangalore, India** (July 22 - August 02, 2013).
- Advanced Workshop on Theoretical and Computational Aspects of Nonlinear Waves, **IIT Bombay, India** (May 27- May 31, 2013).
- Instructional Workshop on Applied Mathematics, **South Asian University, New Delhi-110021, India** (May 6-10, 2013).
- Workshop on Parallel Computing using HPCC, Department of Physics, **Panjab University, Chandigarh, India** (March 21-22 2013)
- Advanced Instructional School-(Numerical Analysis), **Panjab University, Chandigarh, India** (June18-July 7,2012).
- International Congress of Mathematics (ICM 2010), **Hydrabad, India** (August 19-27, 2010).
- International Conference on Recent Trends in Mathematics and its Applications (ICRTMA-09), **Jamia Milia Islamia Uni., New Delhi, India** (March 30-31, 2009).
- International Conference in honour of Late Prof.S.L.Yadava **TIFR, Bangalore, India** (Jan. 7-9, 2009).
- International Conference on Scientific Computing 09, **Las Vegas, Nevada, U.S.A.** (July 13-16, 2009).
- National Conference on Biomechanics, I I T Roorkee, India (March 7-8, 2009).
- Advanced Instructional School in Partial Differential Equations (AIS-PDE), **TIFR Bangalore, India** (Dec.15- Jan. 6, 2009).
- Instructional School on PDEs and National Symposium on HPDEs (CPDE-08), **IIT Bombay, India** (June 22- July 17, 2008).