

Curriculum Vitae

Dr. Vineet Srivastava

Assistant Professor (Applied Mathematics)

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Objective: To learn, develop, share, and spread my knowledge and to strengthen the organization using my full potential and talent.

Present Affiliation:

- Working as Assistant Professor at Rajkiya Engineering College, Azamgarh from 8th December 2017 to till date.

Work Experience:

- **Teaching: Total Experience 13 years.**
 - i. Teaching experience of B.Tech. Students at Rajkiya Engineering College, Azamgarh, from 8th December, 2017 to till date.
 - ii. Teaching experience of B.Tech. and M. Tech (ME) Students at Ajay Kumar Garg, Ghaziabad, from 1st Feb. 2014 to 7th December, 2017.
 - iii. Teaching experience of B. Tech. and M. Tech (First Sem.) Students at IEC – CET, Gr. Noida, from 22 Sept. 2012 to 31st Jan. 2014.
 - iv. Two years teaching experience of B. Teach. Students at BBDIT, Ghaziabad, from 13th Sept. 2010 to 21st Sept. 2012.
 - v. One-year teaching experience of B. Tech. Students at Devprayag Institute of Technical Studies, Allahabad, from Aug. 2009 to Sept. 2010.
- **Research:** Eleven years' experience in research (after Ph.D.) in Mathematical modelling. During research I learn some latest and advance numerical methods to get approximate analytical solution of some non-linear/linear, real-world problems. Also, study the application of Fractional Dynamical Systems in modeling of various areas like WSN, OSN, Computer Virus etc. using epidemiological approach and application of Machine Learning.

- **CURRENT RESEARCH INTERESTS:**

- i. Mathematical Modeling real world problems i.e. Bio Mathematics.
- ii. Using Advance/Latest Numerical Techniques to find out the solution of real-world problems.

- **ADMINISTRATIVE EXPERIENCES:**

- i. Nodal officer, Kalam Program for IP Literacy and Awareness (KAPILA) an AICTE program from 24th February 2022 to till date.
- ii. O/C, Water Management & Maintenance at REC Azamgarh from 13th July 2021 to till date.
- iii. Nodal officer, Women Development program at REC Azamgarh from 13th July 2021 to till date.
- iv. Nominated for BOS in Mathematics for Mentor Institute GEC, Karad as per guidelines of NPIU.
- v. Working as member of IQAC from 26th December to till date.
- vi. Working as **Head of Department** (Department of Applied Sciences & Humanities) at REC, Azamgarh from 22nd December 2020 to 21 December 2023.
- vii. Working as **Dean (Academics)** at REC, Azamgarh from 24th October 2019 to 16th January 2021.
- viii. Working as **Dean (R&D)** at REC, Azamgarh from 23rd June 2018 to Feb 2019.
- ix. Working as **Dean (P.G.)** at REC, Azamgarh from 09th May 2018 to June 2021.
- x. **Coordinator Digital Evaluation** at REC, Azamgarh from 11th May 2018 to June 2021.
- xi. **Library Office Incharge** at REC, Azamgarh from 22nd December 2017 to Feb 2019.
- xii. **Warden Boys Hostel** at REC, Azamgarh from 22nd December 2017 to Oct 2018.
- xiii. **Chief Warden Hostel** at REC, Azamgarh from Oct 2018 to Feb 2019.
- xiv. **Working** as member of Anti-Ragging Cell from 22nd June 2018 to till date.
- xv. Working as **Time Table coordinator** and **Class Coordinator** in the Department.
- xvi. Member of **Purchasing Committee** at REC, Azamgarh.
- xvii. Working as **Section In-charge** in **AKGEC, Ghaziabad** from July 2014 to December 2017.
- xviii. Additional to above all, Work as **Central Controller** in UPSEE Examination in **2017, 2018 & 2019** appointed from AKTU Lucknow.
- xix. Work as **Nodal Officer** of Ghazipur in UPSEE Examination in 2020 appointed from AKTU Lucknow.
- xx. I was a member of **Project Review and Supervisory Group**, Department of Higher Education, **MHRD, Govt. of India** from **May 29, 2012**, for the Project **“Next Generation e-content for Numerical Methods and its applications.”**

- **PUBLICATIONS (Refereed Journals)**

International Journals

- **Vineet Srivastava**; Dharmendra Tripathi; P. K. Srivastava; S. Kuharat; O. Anwar Bég, “Mathematical modelling of Oxygen diffusion from capillary to tissues during hypoxia through multiple points using fractional balance equations with memory”, *Critical Reviews™ in Biomedical Engineering* Vol. 52 (6): 1–13 (2024).
- **Vineet Srivastava**, Pramod Kumar Srivastava, Jyoti Mishra, Rudra Pratap Ojha, Purnendu Shekhar Pandey, Radhe Shyam Dwivedi, Antonino Galletta, “Generalized Defensive Modeling of Malware Propagation in WSNs Using Atangana–Baleanu–Caputo (ABC) Fractional Derivative”, *IEEE Access*, Vol. 11, May 2023, pp 49042-49058 Digital Object Identifier 10.1109/ACCESS.2023.3276351.
- Rudra Pratap Ojha, Pramod Kumar Srivastava, Shashank Awasthi, **Vineet Srivastava**, Purnendu Shekhar Pandey, Radhe Shyam Dwivedi, Rajesh Singh, and Antonino Galletta, “Controlling of Fake Information Dissemination in Online Social Networks: An Epidemiological Approach”, *IEEE Access*, Vol. 11, April 2023, pp 32229-32240, Digital Object Identifier 10.1109/ACCESS.2023.3262737.
- J Prakash, Dharmendra Tripathi, OA Beg, **Vineet Srivastava**, “EMHD Casson Hybrid Nanofluid Flow over an Exponentially Accelerated Rotating Porous Surface”, *Journal of Porous Media*. Vol. 25 Issue 11, 2022, pp 1-24.
- **Vineet Srivastava**, “Approximate Analytical Solution of Linear and Nonlinear Fractional Delay Differential Equations using Variational Iteration Method”, *Open Science Journal* Vol.5 (4) (2020), pp. 1 -11.
- **Vineet Srivastava**, “NUMERICAL STUDY OF HEAT TRANSFERS IN TISSUES DURING HYPERTHERMIA USING MODIFIED BERNSTEIN POLYNOMIALS”. *J. Math. Sci. & Comp. Math.*, Vol.2, No.1, November 2020, pp 129 – 144.
- **V. Srivastava** and Dharmendra Tripathi and O. Anwar Beg, “Numerical study of oxygen diffusion from capillary to tissues during hypoxia with external force effects”. *Journal*

of Mechanics in Medicine and Biology. Vol. 17, No. 2 (2016) 1750027 (20 pages) Published 23 January 2017.

- **V. Srivastava**, “Dual-Phase-Lag Heat Equation of Fractional Order of heat transfer within a micro scale region”. **WJMS**,2013, Vol. 9 (3), pp. 216-222.
- **V. Srivastava** and K.N. Rai, “Multi-term fractional diffusion equation for Oxygen delivery through capillary to tissues”. **Mathematical and Computer Modelling**, 51 (2010) 616-624.
- K.N. Rai and **V. Srivastava**, “Mathematical modeling of first to third degree burn injury by sinusoidal heating source”. **Int. J. of Applied Mechanics and Engineering**, 2009, vol. 14, No.2, pp. 489-500.
- **V. Srivastava** and K.N. Rai, “Approximate analytical solution of 3D fractional microscale heat equation using modified homotopy perturbation method”. **Applied Mathematical Sciences** Vol. 3, 2009, no. 32, 1557 - 1565.

➤ **Book Chapter (Scopus Indexed)**

Vineet Srivastava, Pramod Kumar Srivastava, Ashok Kumar Yadav, “Fractional Order Epidemiological Model of Fake Information Mitigation in OSNs with PINN, TFC, and ELM”. In *Machine Learning Techniques and Industry Application*, IGI Global (2024), Chap. 9, pp 169-200. DOI: 10.4018/979-8-3693-5271-7.ch009

➤ **National Journals**

- **V. Srivastava**, K.N. Rai and S. Das, “Analytical approach to micro scale bio-film heat transport using homotopy perturbation method”. *Int. J. of Applied Mathematics and Computation*, 2009, vol. 1(3), pp 148-158.

International/ National Conference:

- Jyoti Mishra, P. K. Shrivastava, Vineet Srivastava, “Securing Wireless Sensor Networks Against Multi-Malware Threats: A Comprehensive Modelling and Analysis Approach” in the 2nd International Conference on Recent Advances in Applied Mathematics (RAAM 2024) organized by Department of Mathematical Sciences, IIT(B.H.U.), Varanasi, U.P. India suring July 03 – 05, **2024**.

- **Vineet Srivastava**, “**Machine Learning Model of Fraud Detection**” in the 2nd National Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES-23) organized by Department of Applied Science & Humanities, Rajkiya Engineering College, Ambedkar Nagar, UP, India, during February 27-28, 2023.
- **Vineet Srivastava**, “**Complex Adaptive Systems: A Mathematical Approach**” in the 1ST International Conference (online) on Novel Sustainable Practices in Waste Mitigation and its Innovative Utilization (NSWIU), held at Rajkiya Engineering College, Azamgarh during February 03- 04, 2023.
- **Vineet Srivastava**, Prabhat Kumar and M.M Dixit, “**Numerical Study of Dual-Phase-Lag Microscale Heat Transport Equation of Fractional Order Using Mesh Free Method**”, International Conference On “Contemporary Challenges in Management, Education, Technology & Applied Sciences (I3CMETAS 22), April, 09 – 10, 2022 at Mangalmai Institute of Management & Technology, Greater Noida, U.P.
- **Vineet Srivastava**, Prabhat Kumar, Dharmendra Tripathi & M.M Dixit, “Mathematical Modelling of Skin Burn Injury Due to Periodic Heating Source” **Accepted** in First International Conference on Mathematics & Computation (ICMC 2021) organized by the Department of Applied Sciences & humanities, Rajkiya Engineering College, Kannauj, U.P. during October 22 – 23, 2021.
- **Vineet Srivastava** and Dharmendra Tripathi, “**Numerical study of oxygen diffusion from capillaries to tissues using fractional diffusion equation containing force term (P-163)**, International Conference on Recent Trends in Mathematics (**ICRTM 2015**), July 10 – 12, 2015, Department of Mathematics, University of Allahabad, Allahabad, U.P.

Patent:

1. Title of the invention: **A NEW APPROACH FOR ESTIMATION OF EIGEN VALUE AND EIGEN VECTOR**. Application No.202011022086 A, INDIA, Date of filing of Application :27/05/2020, Publication Date: 26/06/2020, No. of Pages: 17, No. of Claims: 3.
2. Title of the invention: **AUTONOMOUS EXPLOSIVES DETECTING DEVICE. (21)** Application No.202111034607 A, INDIA, Date of filing of Application :01/08/2021, Publication Date: 27/08/2021, No. of Pages: 26 No. of Claims: 8

3. Title of the invention: **A system for Checking attendance with multiple levels of authentication. G07C 9/38.** The utility model No. 20 2022 105 143, GERMANY, Date of filing of Application :12/09/2022, Registration date: 06/10/2022, Publication Date: 17/11/2022, No. of Pages: 11.

ACTIVITIES:

(Session Chaired/ Completed Certification Course/ FDPs /Participating/Organizing Conference/Workshop/Short Term Training Program)

Invited talk

- i. Attended and gave an **invited talk** titled “**Fractional Calculus and its Application to real world problems**” in the Second International Workshop on “Advanced Topics in Mathematics-2021”, organized by the Centre for Applied Mathematics, International Institute of Information Technology, Naya Raipur, during October 08-12, 2021.
- ii. Attended and gave an **invited talk** titled “**Solving Fractional Diffusion Equation for Oxygen Delivery Through Capillary to Tissues using New Iterative Method**” in the Conference on Fractional Calculus: Analysis & Applications held at Department of Mathematics, Savitribai Phule Pune University during August 20-21, 2021.

Completed Certification Course

- i. Participated and successfully completed the 5-day online FDP on the theme “**Inculcating Universal Human Values in Technical Education**” organized by All India Council for Technical Education (AICTE) from 21st March, 2022 to 25th March, 2022.
- ii. Successfully completed a **2-Week Interdisciplinary Refresher Course** (Online) on Science and Technology held from 28th September – 11th October, 2021 and obtained **Grade A+**.
- iii. Successfully completed a **4-Week Induction/Orientation Programme** for “Faculty in Universities/Colleges/Institutes of Higher Education” from March 15 - April 14, 2021 and obtained **Grade A**.
- iv. Successfully completed NPTEL online Certification course on Mathematical Modelling Analysis & Application, which is AICTE approved FDP in December 2020.

Session Chaired

- i. Chaired a technical session on February 28, 2023, in the 2nd National Conference on **Computational and Characterization Techniques in Engineering & Sciences (CCTES-23)** organized by Department of Applied Science & Humanities, Rajkiya Engineering College, Ambedkar Nagar, UP, India, during February 27-28, 2023.
- ii. Session Chaired in Three Days IEEE International Conference on **Artificial Intelligence and Smart Communication (AISC-2023)** dated 27th – 29th January, 2023 organized by G. L. Bajaj Institute of Technology & Management, Greater Noida, (U.P.), India.
- iii. Chaired a technical session in the 4th National Conference on “**Recent Advancement in Physical Sciences**” jointly organized by Department of Chemistry, Department of Physics & Department of Mathematics, National Institute of Technology, Uttarakhand during December 19-20, 2022 at NIT Uttarakhand.
- iv. Chaired a technical session in the **2nd International Conference on Applied Mathematics and Computational Sciences - 2022 (ICAMCS 2022)** organized by Department of Mathematics, DIT University, Dehradun, Uttarakhand during Oct 12-14, 2022.
- v. Successfully **chaired a Technical Session** on 27th International Conference of International Academy of Physical Sciences on “**Mathematical Modelling in Biological Sciences**” during October 26-28, 2021. Organized by NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR, ASSAM-788010, INDIA.
- vi. **Session Chair** in the **First International Conference on Mathematics & Computation (ICMC -2021)** organized by the Department of Applied Sciences & humanities, Rajkiya Engineering College, Kannauj, U.P. during October 22 – 23, 2021.
- vii. **Session Chair** in the Second International Workshop on “**Advanced Topics in Mathematics-2021**”, organized by the Centre for Applied Mathematics, International Institute of Information Technology, Naya Raipur, during October 08-12, 2021.
- viii. **Session chaired** in the **International Conference on Artificial Intelligence and Sustainable Engineering (AISE 2020)** which was held from 18th, 19th and 20th January 2021, at NIT Goa, through online Mode. TRACK NAME- Machine Learning, TRACK NO.- T8, 19th JANUARY 2021, 2:00- 4:30 PM.

Participated/ Attended

- i.** Participated in “Faculty Development Program” On “Innovations in Mechanical Engineering and Technology” at Rajkiya Engineering College, Azamgarh held on 2nd to 6th January, 2023 through online mode.
- ii.** Participated in the regional meet Institutions’ Innovation Council MoE’s Innovation Cell held on 29th Aug 2022 at Dr. A.P.J. Abdul Kalam Technical University, Lucknow.
- iii.** Participated in the International Workshop on “Fractional Derivatives: Theory & Computations with Applications (FDTCA 2021)” held at Department of Mathematical Sciences, Indian Institute of Technology (BHU) Varanasi during November 12-14, 2021 in online mode.
- iv.** Participated and successfully completed a five – day workshop on “Mathematics for Machine Learning”, which is sponsored by AICTE and organized by Department of Basic & Applied Science, NIT Arunachal Pradesh from 25th – 30th January 2021 in online mode.
- v.** Successfully completed AICTE Training And Learning (ATAL) Academy Online FDP on "Quantum Computing" from 2021-1-18 to 2021-1-22 at Sathyabama institute of science and technology.
- vi.** Successfully completed AICTE Training And Learning (ATAL) Academy Online FDP on "Internet of Things (IoT)" from 2021-1-11 to 2021-1-15 at Central University of Kerala.
- vii.** Successfully completed AICTE Training And Learning (ATAL) Academy Online FDP on "Energy Engineering" from 2021-1-4 to 2021-1-8 at G.L.Bajaj Institute of Technology and Management.
- viii.** Participated in an International E- Conference on “Recent Advances in Biomathematics” held on 18 -19 December 2020 in ZOOM platform.
- ix.** Participated and Successfully completed MHRD sponsored TEQIP assisted course on “Essential Mathematics for Machine Learning with Hands on Training” from 23rd to 27th November, 2020 organized by the Department of Mathematics, IIT Roorkee.

- x. Participated in 2020 NPIU/ TEQIP-III sponsored Faculty Training on Future Skill Technologies on “Artificial Intelligence and Machine Learning” from 20th – 27th November, 2020, organized by IIT Indore.
- xi. Attended two days’ workshop on Summit Connect, 08-09 Nov 2019 at BMS college of Engineering Bengaluru, by SPIU UP & SPIU Karnataka.
- xii. AICTE sponsored QIP Short Term Course on “Advanced Numerical Schemes for Scientists and Engineers” Organized by Department of Mathematical Sciences IIT (BHU), Varanasi, from August 12 – 16, 2019.
- xiii. Participated in Short Term Course on “**Computational Methods for Integral & Differential Equation** (CMIDE 2018)”, Organized by Department of Mathematical Sciences, **IIT B.H.U.**, Varanasi from December 10th – 16th , 2018.
- xiv. Participated in Special Summer Workshop on “**Active Learning, Autonomy, Academic Governance and R&D**”, Organized by IIT Roorkee, from June 18 – 22, 2018.
- xv. Participated in Faculty Development Program On “**Total Quality Management**” Organized by Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh, from June 04-08, 2018.
- xvi. Participated in International Symposium on Computational Fluid Dynamics, Department of Mechanical Engineering, Manipal University Jaipur, Rajasthan, from December 18, 2015.
- xvii. Paper Presented in International Conference on Recent Trends in Mathematics (**ICRTM 2015**), Department of Mathematics, University of Allahabad, Allahabad, U.P. from July 10 – 12, 2015.
- xviii. National Workshop Cum Training Programme on Advanced Numerical Techniques And Applications, **DST – CIMS, BHU, Varanasi**, from June 29 to July 11, 2009.
- xix. Indo-German Workshop-cum-Lecture Series on “Computational Models and Methods Driven by Industrial Problems”, **IIT Madras**, from January 5 to January 16, 2009.
- xx. Short Term Course on C – language programme, **Computer Centre, B.H.U.**, Varanasi, from 1st September to 6th September, 2008.
- xxi. Short Term Training Programme on Scientific Computing and Modeling, **NIT, Warangal**, from 5th May to 10th May, 2008.

(II). Organized

- i. **Organized** (as Committee Member) One Week International Workshop on Entrepreneurship Development during 20th – 25th February, 2023.
- ii. **Organized** one-day webinar on ODOP: Silk industry in Varanasi on 25th August, 2021.
- iii. **Organized** one-day webinar on “महिलासंवेदीकरण एवं सशक्तिकरण”, on the occasion of Mission Shakti Launch by Govt. of U.P. on 21st August 2021.
- iv. **Organized** Three days’ series of online expert lecture for our B.Tech. students:
 - a. **“Role of mathematics in Engineering Sciences”** by Dr. Dharmendra Tripathi, Associate Professor, NIT Uttarakhand, Srinagar, on 4th August 2021.
 - b. **“Essence of Chemistry and its applications”** by Dr. Ashish Kumar Singh, Associate Professor, Guru Ghasidas Vishwavidyalaya (Central University, Bilaspur (C.G.), on 5th August, 2021.
 - c. **“How to get success in exam, achieve your goal & stress management”** by Mr. Rajanikant Mishra, Joint Commissioner in Vigilance Directorate, Govt. of India, India on 6th August, 2021.
- v. **Organized** a 5-day online workshop **“Machine Learning and its applications using Python”** in collaboration with SPIU U.P. and REC Azamgarh, from 14th -18th September 2020.
- vi. **Organized** a National Seminar on **“Recent Advancement in Science, Technology and Management (RASTM-2019)”** in Department of Applied Science and Humanities, Rajkiya Engineering College, Azamgarh, from 26-27 April, 2019.
- vii. **Organized** A NBA Workshop on **“Outcome Based Education”** Sponsored by TEQIP-III being Programme – Coordinator, at Rajkiya Engineering College, Azamgarh, from March 16th - 17th 2018.

Reviewer in the reputed journals:

IEEE Access, International Journal of Biomathematics, World Scientific.

SOCIETY: Associated with

1. **American Mathematical Society (AMS)** as member.

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