Dr. Parveiz Nazir Lone
DOB: 19/12/1991

CONTACT INFORMATION

Department of Mathematics
University of Kashmir-190006

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RESEARCH INTERESTS

- Cryptography
- Information Security
- Multimedia Security
- Image Encryption and Decryption
- Digital image processing
- Quantum Cryptography and Elliptic Curve Cryptography

EDUCATION

2017 - 2022 *Ph.D. in Mathematics* - Central University of Jammu.
- **Thesis Title:** Applications of Algebra in Cryptosystems for Two Dimensional Data.
- **Thesis Advisor:** Dr. Deep Singh (Currently HOD Central University of Punjab)

2014 - 2016 *Masters of Science in Mathematics* - University of Kashmir.
- **Division:** First

2010 - 2013 *Bachelors of Science (Math/Physics/IT/English)*- University of Kashmir
- **Division:** First

2008 - 2009 *12th (Math/Phys./IT/Chem./English)*
- **Division:** First

2007- *10th (Math/Science/English)*
- **Division:** First

OTHER ACHIEVEMENTS

December, 2022: Qualified J&K State Eligibility Test (JKSET) for Assistant Professor in Mathematics.

July, 2023: Qualified CSIR- UGC NET, AIR - 46 for Assistant Professor in Mathematics.

TEACHING EXPERIENCE

- **Feb. 2023 - April 2023 (Contractual):** Worked as a Lecturer at PG Department of Mathematics, Govt Degree College Baramulla, Kashmir.

- **April 2023 - Dec. 2023 (Contractual) :** Worked as a Lecturer in the department of Applied Sciences at Institute of Technology and Engineering - University of Kashmir.

- **Current Position - March 2024 (Contractual) :** Working as aa Lecturer in the department of mathematics - University of Kashmir.

COURSES CAN TAUGHT

- Abstract and Linear Agebra

- Complex and Real Analysis

- Differential Equations

- Discrete Mathematics

- Number Theory

- Numerical Analysis

- Topology

- Calculus

- Operation Research Integral Equations and Variation of Calculus

SKILLS

- **Language:** English, Hindi, and Urdu

- **Programming:** Matlab, C, C++, and Python.

- **Text Editor:** Latex, Microsoft office suit.

- **Strength:** Hard worker, Good Learner, Adaptable, Problem solver.

- **Recreation:** Reading, Surfing, Cricket.

RESEARCH PUBLICATIONS

1. **P. N. Lone** , U. H. Mir and Abdul Gaffar **(2023)**. Hyperchaotic image encryption using DNA coding and discrete cosine transform. *Journal of Franklin Institute* 360:13318-13338 (Elsivier - SCI, SCOPUS with impact factor = 4.1).

2. U. H. Mir, **P. N. Lone**, D. Singh and D. C. Mishra **(2023)**. A public and private key image encryption by modified approach of Vigener cipher and the chaotic maps. *Imaging Science Journal*, (Taylor & Francis - SCI, SCOPUS with impact factor = 0.871).

3. **P. N. Lone**, D. Singh, et. al. **(2022)** Cryptanalysis and Improved Image Encryption Scheme Using Elliptic Curve and Affine Hill Cipher. *Mathematics*, 10, 3878. (Mdpi– SCI, SCOPUS with impact factor = 2.4).

4. **P. N. Lone**, D. Singh and U. H. Mir **(2022)**. Image encryption using DNA coding and three-dimensional chaotic systems . *Multimedia Tools and Applications*, vol. 81, pp- 5669-5693.(Springer - SCI, SCOPUS with impact factor = 3.6).

5. U. H. Mir, D. Singh and **P. N. Lone (2022)**. Color image encryption using RSA cryptosystem with a chaotic map in Hartley domain. *Information Security Journal: A Global Perspective*. Vol. 31, pp. 49-63 (Taylor & Francis - SCI, SCOPUS with impact factor = 1.8).

6. **P. N. Lone**, D. Singh and U. H. Mir **(2021)**. A novel image encryption using random matrix affine cipher and the chaotic maps. *Journal of Modern Optics*. Vol. 68(10), pp.507–521 (Taylor & Francis - SCI, SCOPUS with impact factor = 1.3).

7. U. H. Mir, D. Singh, D. C. Mishra and **P. N. Lone (2020)**. Multilayer security of RGB image in discrete Hartley domain. *Applcations and Applied Mathematics: An International Journal* (2020). Vol. 15(2), pp. 1213–1229 (Prairie View A & M University, Texas, USA - ESCI).

8. **P. N. Lone** , D. Singh **(2020)**. Application of algebra and chaos theory in security of color images. *Optik* 218:165155 (Elsivier - SCI, SCOPUS with impact factor = 3.1).

CONFERENCES & TALKS

1. Presented a talk on "An introduction to Cryptography" International Conference on Mechanical Engineering and Allied Sciences (ICMEAS–2018) at SMVD University, Katra, Jammu & Kashmir, India.

2. Participated in an international Conference on Class Groups of Number Fields & Related Topics-2019. Harish–Chandra Research Institute (HRI), Allahabad, India.

3. Presented a talk on a paper entitled "Application of algebra and chaos theory in security of color images" 2nd International Conference on Algebra, Analysis and Applications at Dr. B. R. Ambedkar University, New Delhi, India.

4. Presented a talk on a paper entitled "A novel image encryption using random matrix affine cipher and the chaotic maps". International Conference on Emerging Areas in Science and Technology (EAST–2021) at RG University Guwahati, India.

5. Participated in a Three Day National Level Workshop on "Algebra and Analysis" organised by Central University of Kashmir, India.

ONLINE CERTIFICATE COURSES

1. Cryptography and Network Security (by Indian Institute of Technology Kharagpur).

2. Introduction to Abstract Group Theory (by Indian Istitute of Technology Madras).

3. Introduction to Abstract and Linear Algebra (by Indian Institute of Technology Kharagpur).

REFREES

Dr. Deep Singh
Associate Prof. (HOD)
Department of Mathematics and Statistics,
Central University of Punjab.
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Place: Baramulla, Jammu and Kashmir, India.   **Dr. Parveiz Nazir Lone**