

## **Dr. Muhammad Hanif**

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# **CURRICULUM VITAE**

## **ABOUT ME:**

I am a Ph.D. Doctor in Pure Mathematics. I am interested in studying curves and Surfaces in Euclidean space as well as in Minkowski spaces with some applications to Mathematical and Engineering problems.

## **Career Objects:**

Actively looking for a suitable position in a reputed and ambitious organization where I can contribute my excellent technical, managerial and interpersonal skills towards the growth of the organization and where I can add to the values of organization by showing team work, innovation and collaboration through effective research.

## **Professional Work Experience:**

**Organization:** University of Narowal, Pakistan.

**Designation:** Assistant Professor

**Tenure:** 25 September, 2020 To Present.

## **Skills and Expertise:**

Pure Mathematics, Functional Analysis, Mathematical Methods of Physics, Geometry, Differential Geometry, Applied Mathematics, Numerical Analysis, Discrete structure, Calculus.

## **Personal Summary:**

- ❖ Date of Birth : 10-07-1984
- ❖ Citizenship : Pakistan

## **Academic Qualification:**

[2014 - 2019] Dalian University of Technology, Dalian, China.

Ph.D. in Pure Mathematics.

**Specialized in:** Differential Geometry

**Research Interests:** Differential Geometry, Geometry and Topology, General Relativity, Minkowski Space, Riemannian Geometry.

**Project Project:** Executed research Project valued at PKR 1,000,000

**Advisor:** Zhong Hua Hou, Prof. at Dalian University of Technology, Dalian, China.

[2011 - 2013] Institute of Southern Punjab, Multan, Pakistan.

MSc. Mathematics

[2011 - 2012] Allama Iqbal Open University, Pakistan.

B.Ed. Mathematics and Physics

[2004 - 2006] Bahauddin Zakarya University, Multan, Pakistan.

B.Sc. Mathematics

**Subjects:**

1. Mathematics (A)
2. Mathematics (B)
3. Physics

[2001 - 2003] Government Science College, Multan, Pakistan.

F.Sc. (Pre-Engineering).

[1999 - 2001] Government High School Gahi Mummer Kehror pacca, Multan, Pakistan.

Matriculation (Science). Science Group

## **Fellowship & Awards:**

- ❖ 2014 Chinese Government Scholarship.
- ❖ 2013 Excellent student award of Institute of Southern Punjab, Multan , Pakistan.

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## **Publications:**

- 1: **Muhammad Hanif**, Zhong Hua Hou, Nisar K. S. *On Special Kinds of Involute and Evolute Curves in 4-Dimensional Minkowski Space*. **Symmetry**, 10, 2018.
- 2: **Muhammad Hanif**, Zhong Hua Hou, Emilija Nešović. *On involutes of order  $kkk$  of a null Cartan curve in Minkowski spaces*. **Filomat**, 33(8), 2295–2305, 2019.
- 3: **Muhammad Hanif**, Zhong Hua Hou. *Generalized involute and evolute curve-couple in Euclidean space*. **International Journal of Open Problems in Computer Mathematics**, 15, 2018.
- 4: **Muhammad Hanif**, Zhong Hua Hou. *A new approach to find a generalized evolute and involute curve in 4-dimensional Minkowski space-time*. **Palestine Journal of Mathematics**, 10, 2018.
- 5: **Muhammad Hanif**, Mehmet Önder. *Generalized quaternionic involute-evolute curves in the Euclidean 4-space*. **Mathematical Methods in the Applied Sciences**, 2020, 1–12. DOI:10.1002/mma.6231.
- 6: Zhong Hua Hou, Wei Shi, **Muhammad Hanif**. *Submanifolds in  $SE(3)$  and their applications in envelope theory*. **Mechanism and Machine Theory**, 142, 2019.
- 7: Kang-Li Wang, Hao Wang, **Muhammad Hanif**. *A new perspective for two different types of fractal Zakharov–Kuznetsov models*. **Fractals**.
- 8: M. Ilyas, Khalid H. Shah, **Muhammad Hanif**. *Cylindrical and spherical two-soliton propagation for high frequency waves with  $(r,q)$  distributed electrons*.
- 9: **Muhammad Hanif**, Fatemah Mofarreh, A. Ali. *A study on the behavior of osculating and rectifying curves on smooth immersed surfaces in  $E^3$*
- 10: **Muhammad Hanif**, Fatemah Mofarreh, A. Ali. *Null Cartan curve's generalized involute–evolute curve couple in  $E^4$* .
- 11: A. Elsharkawy, A. Ali, **Muhammad Hanif**, C. Cesarano. *An advanced approach to Bertrand curves in 4-dimensional Minkowski space*.
- 12: **Muhammad Hanif**, Fatemah Mofarreh, A. Ali. *Combinatorial correspondences between colored partitions by Dedekind's level-8 partition identities*. **AIMS**

## **Supervision:**

Supervised 10 MPhil students.

## **Technical Proficiency:**

**Software:** Microsoft Office (Word, Excel, Outlook, PowerPoint, Project), LaTeX.

**Language:** Mathematica, Matlab.

## **LANGUAGES:**

- ❖ English (Speaking, Writing, Listening, Reading).
- ❖ Urdu. (Native Language).
- ❖ Chinese (Basic).

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## **University Projects (Completed):**

### **Description:**

I have successfully completed a project worth 10,00000 Titled “Geometry of pair of involute and evolute curves in space form” at department of mathematics University of Narowal.

Funding agency NAHE /SRGP/HEC/2020/79

### **References:**

1. Zhong Hua Hou (Professor at School of Mathematical Science Dalian University of Technology, Dalian, China)  
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2. Dr. H. M. Noor-ul-Huda Khan Asghar (Chairperson Department of Physics Faculty of Arts and Basic Sciences BUITEMS, Pakistan)  
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[noorulhudakhan@gmail.com](mailto:noorulhudakhan@gmail.com)
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5. Dr. Yasir Niaz (Head of Department Assistant Professor Department of Agricultural Engineering Khwaja Fareed University of Engineering and Information Technology)  
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