

## **CURRICULM - VITAE**

### **PERSONAL DETAILS:**

Name: Dr. Uday Singh  
Date of Birth: 2<sup>nd</sup> February, 1980  
Father's Name: Shri Mom Raj Singh  
Nationality: Indian  
Designation: Assistant Professor  
Department of Mathematics  
Indian Institute of Technology Roorkee  
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### **EDUCATIONAL QUALIFICATIONS:**

- High School from U.P. Board in 1994 with 1<sup>st</sup> division.
- Intermediate from U.P. Board in 1996 with 1<sup>st</sup> division.
- B. Sc. from Chaudhary Charan Singh University, Meerut, Uttar Pradesh in 1999 with 1<sup>st</sup> division.
- M. Sc. (Mathematics) from Chaudhary Charan Singh University, Meerut, Uttar Pradesh in 2001 with 1<sup>st</sup> division.
- Ph. D. on the topic '**Fourier Approximation in  $L_p(p \geq 1)$ - Spaces Using Summability Techniques**' from Chaudhary Charan Singh University, Meerut, Uttar Pradesh in 2007.
- CSIR-UGC, National Eligibility Test-December 2001 with the award of UGC - JRF.
- CSIR-UGC, National Eligibility Test-June 2002 with the award of CSIR - JRF.

### **EMPLOYMENTS AND EXPERIENCE:**

- Worked as a Junior Research Fellow at IIT Roorkee from 3<sup>rd</sup> January, 2003 to 9<sup>th</sup> November, 2003.
- Worked as a Lecturer in the Department of Education in Science & Mathematics, NCERT, New Delhi from 10<sup>th</sup> November, 2003 to 20<sup>th</sup> January, 2006.
- Worked as a Lecturer in the Department of Mathematics, Faculty of Science BHU, Varanasi, from 21<sup>st</sup> January, 2006 to October, 2010 (scale Rs. 8000-13500). [on lien from November 2007 to December 2009 to join ISM Dhanbad as an Assistant Professor in the pay scale Rs. 12000-18300]
- Working as an Assistant in the Department of Mathematics, IIT Roorkee, Roorkee from November, 2010 (In PB-3 + AGP Rs. 8000/-)

### **COURSES TAUGHT AT UG/PG LEVEL:**

UG Level: Vector Calculus, Differential Calculus, Differential Equations (ODE& PDE)

PG Level: Real Analysis, Complex Analysis, Functional Analysis.

### **UG/PG PROJECT GUIDENCE:**

M. Sc.: 08

MCA: 05

### **Ph.D. GUIDENCE:**

Completed: 01

Ongoing: 03

### **COURSE/SEMINARS/CONFERENCES ATTENDED:**

1. Four Week Orientation Course Conducted by NCERT, New Delhi during 07 February- 04 March, 2005.
2. One Week Short Term Course on 'Soft Computing' Conducted by IIT Roorkee during July 1-5, 2008.
3. Attended International Conference On 'Optimization and Its Applications' held at the BHU, Varanasi held during February 16-18, 2010.
4. Presented a paper entitled "Degree of Approximation of Function  $f \in H_p^{(w)}$  Class in Generalised Hölder Metric by Matrix Means" in the 'International Conference on Mathematical Modelling and Scientific Computation' March 16-18, 2012 organized by Gandhigram Rural Institute, Gandhigram, Tamil Nadu.
5. Presented a paper entitled "Trigonometric Approximation of Signals (Functions) Belonging to Weighted  $(L^p, \xi(t))$ -Class by Hausdorff Means, in the 'International Conference on Applied Mathematics and Approximation Theory' May 17-20, 2012, organized by the TOBB University, Ankara, Turkey,
6. Presented a paper entitled "Trigonometric Approximation of Functions Belonging to Lipschitz Classes  $Lip\alpha$  and  $W(L^p, \xi(t))$ -Class by Matrix  $(C^1.T)$  Operator" in the International Congress in Honour of Professor H. M. Srivastava', August 23-26, 2012, organized by the Uludag University, Bursa, Turkey.
7. Presented a paper entitled "Degree of Approximation of Functions Conjugate to Functions Belonging to Lipschitz Class  $Lip\alpha$  by  $(C^1.T)$  Operator" in the International Conference on Mathematical Sciences (ICMS-2012), December 28-31, 2012 organized by the Shivaji Science College, Nagpur (India).

8. Presented a paper entitled "Fourier Approximation of Functions Conjugate to the Functions Belonging to Weighted Lipschitz Class" in the World Congress on Engineering (WCE-2013), July 3-5, 2013 held at Imperial College London.

#### **MEMBERSHIP OF PROFESSIONAL BODIES:**

1. Life member of Indian Mathematical Society (IMS)
2. Life member of International Society for Analysis, its Applications and Computation (ISAAC)
3. Regular member of American Mathematical Society (AMS) till 31 December 2016.
4. Life member of International Association of Engineers (IAENG)

#### **LIST OF PUBLICATIONS:**

##### **Research Papers in Journals:**

1. Shalini Priti, Saurabh Shyam Mittal, **Uday Singh**, Vinay Kumar, Approximation of Functions by Matrix Means of Walsh-Fourier series, Advances in Mathematics Research, USA, 5(2003), 31- 45.
2. M. L. Mittal, **Uday Singh**, Vishnu N. Mishra, Shalini Priti, Saurabh Shyam Mittal, Approximation of functions (signals) belonging to  $Lip(\xi(t), p)$  - class by means of conjugate Fourier series uses linear operators, Indian J. Math. Vol. 47, Nos. 2 - 3, (2005), 217-229.
3. M. L. Mittal, **Uday Singh**, V. N. Mishra, Approximation of functions (signals) belonging to  $W(L_p, \xi(t))$  - class by means of conjugate Fourier series using Nörlund operators, Varāhmihir J. Math. Sci. India, Vol. 6, No.1, (2006), 383-392.
4. Vishnu N. Mishra, M. L. Mittal, **Uday Singh**, On best approximation in locally convex space, Varāhmihir J. Math. Sci. India, Vol. 6, No.1, (2006), 43-48.
5. M. L. Mittal, **Uday Singh**, V. N. Mishra, On the strong Nörlund summability of conjugate Fourier series, Appl. Math. Comp. 187(2007), 326-331.
6. M. L. Mittal, B. E. Rhoades, V. N. Mishra, **Uday Singh**, Using Infinite Matrices to Approximate Functions of Class  $Lip(\alpha, p)$  using Trigonometric Polynomials, J. Math. Anal. Appl. 326(2007), 667-676.
7. M. L. Mittal and **Uday Singh**,  $T.C_1$  Summability of a Sequence of Fourier Coefficients, Appl. Math. Computation, 204(2) (2008), 702-706.
8. M. L. Mittal, B. E. Rhoades, Smita Sonker, **U. Singh**, Approximation of signals of class  $Lip(\alpha, p)$  by linear operators, Appl. Math. Computation, 217(9) (2011), 4483-4489.
9. **Uday Singh**, M. L. Mittal, Smita Sonker, Trigonometric Approximation of Signals (Functions) Belonging to  $W(L^r, \xi(t))$ -Class by Matrix  $(C^1, N_p)$  Operator, Int. J. Math. & Math. Sci., 2012 (2012), 1-11.
10. Smita Sonker, **Uday Singh**, Degree of approximation of the conjugate of signals (functions)

belonging to  $Lip(\alpha, r)$ -class by  $(C,1)(E, q)$  means of conjugate trigonometric Fourier series, *Journal of Inequalities and Applications*, 128(2012), 1-7.

11. **Uaday Singh**, Smita Sonker, Trigonometric Approximation of Signals (Functions) Belonging to Weighted  $(L^p, \xi(t))$ -Class by Hausdorff Means, *J. Applied Functional Analysis*, 8(1) (2013), 37-44.
12. **Uaday Singh**, Shailesh Kumar Srivastava, Degree of Approximation of Functions in Lipschitz Class with Muckenhoupt Weights by Matrix Means, *IAENG Int. J. Appl. Maths.*, 43(4)(2013), 190-194
13. **Uaday Singh**, Shailesh Kumar Srivastava, Approximation of conjugate of functions belonging to weighted Lipschitz class  $W(L^p, \xi(t))$  by Hausdorff means of conjugate Fourier series, *J. Computational and Applied Maths*, 259 (2014), 633-640.
14. Shailesh Kumar Srivastava, **Uaday Singh**, Trigonometric approximation of periodic functions belonging to  $Lip(\omega(t), p)$ -class, *Journal of Computational and Applied Mathematics* (2014), <http://dx.doi.org/10.1016/j.cam.2014.01.020>

#### **Research Papers in Conference Proceedings:**

15. **Uaday Singh**, Smita Sonker, Degree of Approximation of Function  $f \in CH_p^{(w)}$  Class in Generalised Hölder Metric by Matrix Means, *Communications in Computer and Information Sciences* (Springer-Verlag), 283 (2012), 1-10.
16. Smita Sonker, **Uaday Singh**, Approximation of Signals (Functions) Belonging to  $Lip(\alpha, p, w)$  - Using Trigonometric Polynomials, *Procedia Engineering*, 38(2012), 1575-1585.
17. **Uaday Singh**, Shailesh Kumar Srivastava, Fourier Approximation of Functions Conjugate to the Functions Belonging to Weighted Lipschitz Class, *Lecture Notes in Engineering and Computer Science* (Proceedings of WCE-2013), 1(2013), 236-240.

#### **Books/Chapters/Monographs:**

1. **Uaday Singh**, Shailesh Kr. Srivastava, On the Degree of Approximation of Conjugate Functions in Weighted Lipschitz Class, Book chapter accepted for publication in *IAENG Transactions on Engineering Sciences* by CRC Press/Balkema, Taylor & Francis Group.
2. **Uaday Singh**, Fourier Approximation in  $L_p$  – Spaces (A monograph), VDM Verlag Dr. Müller Aktiengesellschaft & Co. KG, Germany, ISBN-NR 978-3-639-20410-0 (2009).
3. Reviewed the book “Theory and Problems of Complex Variables, SI (metric edition) by Spiegel” for its 2009 Edition.
4. A Chapter entitled STRAIGHT LINES in Mathematics Textbook for Class XI, published by NCERT, New Delhi (2006).
5. A Chapter entitled COORDINATE GEOMETRY in Mathematics Textbook for Class IX, published by NCERT, New Delhi (2006).