

*Dr. Suman Kumar*  
*Assistant Professor*  
*Department of Mathematics*  
*Indira Gandhi National Tribal University*  
*(A Central University Established by an Act of Parliament)*  
*Amarkantak, Madhya Pradesh- 484887*  
*Mobile: +91-9440637415, +91-9576345734*  
*Email: ksumanrm@gmail.com, suman@igntu.ac.in*



#### **Research Interests:**

Mathematical Control Theory, Functional and Fractional Delay Differential Equations, Optimal Control Problems in Life Sciences, Applied Functional Analysis

#### **Academic Details:**

2010-2016: Ph.D. Mathematics, Indian Institute of Technology Patna, India

**Title of Thesis:** Controllability Analysis for Infinite Dimensional Semilinear Systems

2008-2010: M.Sc. Applied Mathematics, University of Hyderabad, India

#### **Awards & Honors:**

- ❖ NBHM-M.Sc. Scholarship for the year 2009-2010
- ❖ CSIR-UGC(NET) in Mathematical Sciences, Dec-2009
- ❖ CSIR-UGC(JRF) in Mathematical Sciences, June-2010
- ❖ GATE-2010 in Mathematics
- ❖ Honours Mathematics Olympiad - 2008 (Group of 5) organized by Chhotanagpur Mathematical Society

#### **Journal Publications:**

1. [S. Kumar](#) and N.K. Tomar, Mild Solution and Constrained Local Controllability of Semilinear Boundary Control Systems, *Journal of Dynamical and Control Systems* 23 (2017) 735-751.
2. N.K. Tomar and [S. Kumar](#), On Controllability of Nonlocal Retarded Semilinear Distributed Control Systems, *Differential Equations and Dynamical Systems* 21(3) (2013) 215-223.
3. N.K. Tomar and [S. Kumar](#), Approximate Controllability of Nonlocal Semilinear Time-varying Delay Control Systems, *Nonlinear Dynamics and Systems Theory* 12(3) (2012) 303-310.

#### **Conferences:**

1. [Suman Kumar](#) and N.K. Tomar, Mild Solution of Size-structured Population Model with Nonlocal Delay Condition, 2nd Research Scholars Day, 17th March 2012, IIT Patna, India.
2. [Suman Kumar](#), Constrained Controllability of Infinite-dimensional Second Order Linear Systems, In: Elsevier Proceeding of International Conference on Mathematical Sciences (ICMS-2014), July 17-19, Sathyabama University, Chennai, India.
3. [Suman Kumar](#) and N.K. Tomar, Controllability of Age-structured Population Model via Semigroup Theory, 23rd International Conference of Forum for Interdisciplinary Mathematics(FIM), ICIMSCT-2014, Dec 18-20, NIT Karnataka, Surathkal, India.
4. [Suman Kumar](#) and N.K. Tomar, Optimal Control of Age-structured Population Model with Birth Delay, International Conference on Frontiers in Mathematics 2015, March 26-28, Gauhati University, Guwahati, India.
5. [Suman Kumar](#) and N.K. Tomar, Age-structured Population Model and Its Controllability, International Conference on Emerging Trends in Multidisciplinary Research 2016, Aug 2-3, Bangkok, Thailand.

#### **Workshops Attended:**

1. "SERC School on Nonlinear Dynamics" Nov 18 - Dec 08, 2015 at Manipur University, India.
2. "Advanced Level Workshop on Variational Analysis and Optimization" March 02-07, 2015 at IIT Gandhinagar, India.
3. "Advanced Workshop on Hyperbolic PDEs: Theory, Numerics & Applications and Conference on Partial Differential Equations (HPTNA-2014 & CPDE-2014)" Dec 01-11, 2014 at The LNM Institute of Information Technology, Jaipur, India.
4. "Winter School on Stochastic Analysis and Control of Fluid Flow" Dec 03-20, 2012 at School of Mathematics, IISER Thiruvananthapuram, India.
5. "Advanced Level Training Program (NPDE-TCA)" June 10-30, 2012 at IIT Bombay, Mumbai, India.
6. "Workshop on Variational Analysis and Optimization with Applications to PDEs" April 1-4, 2011 at IIT Gandhinagar, India.
7. "Recent Trends in Nonlinear Elliptical Partial Differential Equations" Jan 6-8, 2011 at TIFR-CAM Bangalore, India.
8. "Summer Program in Mathematics" June 1-19, 2009 at HRI Allahabad, India.

#### **Past Organizations:**

1. Assistant Professor, Banasthali University, Rajasthan from 01.02.2017 to 04.05.2017
2. Assistant Professor, RIE Ajmer (NCERT), Rajasthan from 30.08.2016 to 31.01.2017