

DR KOKILA JAYAKUMAR

Curriculum vitae



Personal : Born on 20.02.1985, female, Married, Indian Citizen
Present Address : Assistant Professor
Central University of Tamil Nadu
Thiruvarur, 610 005.
Tamil Nadu, India.
Email : kokimaths@gmail.com
Mobile : (91)9746214357

CURRENT POSITION

- Working as an Assistant Professor in the Department of Statistics and Applied Mathematics at CUTN, Thiruvarur from 25th Nov 2019 to date.

Previous Research \ Teaching Experiences

- NBHM Post doctoal fellow, Discipline of Mathematics, IIT Palakkad associated with Dr. Lakshmi K. Sankar from 1st Mar 2018 to 22nd Nov 2019.
- Women Post doctoral fellow, Department of Mathematics, IIT Madras associated with Prof. M. Thamban Nair from 10th Feb 2017 to 9th Feb 2018.
- Assistant Professor, Department of Mathematics, Dr. NGP IT, Coimbatore from June 2013 to Dec 2013.

AREAS OF SPECIALIZATION

- Regularization on fractional illposed Problems
- Fractional Control and Inverse Problems
- Fractional Partial Differential Equations
- Functional Analysis

ACADEMIC DETAILS

Ph.D., Mathematics

Supervisor : Dr. K. Balachandran
Professor (UGC-BSR) Bharathiar University
(2010 - 2013)

Field : Fractional Differential Equations
and Control Theory

M.Phil., Mathematics

Guide : Dr. K. Balachandran
Professor (UGC-BSR) Bharathiar University
(2008 - 2009)

Field : Differential Equations
and Control theory

M.Sc., Mathematics

Kongu Arts and Science College
Erode- 638 011. Affiliated to
Bharathiar University
(2006 - 2008)

Graduated with 87.7%

B.Sc., Mathematics

Kongu Arts and Science College
Erode- 638 011.
Graduated with 82.8%

Affiliated to
Bharathiar University
(2003 - 2006)

GRANTS AWARDED

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| 2018-2020 | Post Doctoral Fellowship
National Board of Higher Mathematics
and Department of Atomic Energy,
New Delhi, India. |
| 2017-2018 | Women Post Doctoral Fellowship
Indian Institute of Technology Madras,
Chennai, India |
| 2010-2012 | University Research Fellowship
Bharathiar University,
Coimbatore, India. |

LIST OF PUBLICATIONS

1. K.Balachandran and **J.Kokila**, Controllability of stochastic functional integrodifferential evolution systems, *Journal of Applied Mathematics and Informatics*, 29 (2011) 587–601.
2. K. Balachandran, Yong Zhou and **J. Kokila**, Relative controllability of fractional dynamical systems with time varying delays in control, *Communications in Nonlinear Science and Numerical Simulation*, 17 (2012) 3508–3520.
3. K.Balachandran and **J.Kokila**, On the Controllability of Fractional Dynamical Systems, *International Journal of Applied Mathematics and Computer Science*, 22 (2012) 523–

531.

4. K. Balachandran, **J. Kokila**, J.J. Trujillo, Relative Controllability of Fractional Dynamical Systems with Multiple Delays in Control, *Computers and Mathematics with Applications*, 64 (2012) 3037–3045.
5. K. Balachandran, Yong Zhou and **J. Kokila**, Relative controllability of fractional dynamical systems with distributed delays in control, *Computers and Mathematics with Applications*, 64 (2012) 3201–3209.
6. K. Balachandran and **J. Kokila**, Controllability of fractional dynamical systems with prescribed controls, *IET Journal of Control Theory and Applications*, 7 (2013) 1242–1248.
7. K. Balachandran and **J. Kokila**, Constrained controllability of fractional dynamical systems, *Numerical Functional Analysis and Optimization*, 34 (2013) 1187–1205.
8. K. Balachandran and **J. Kokila**, Controllability of implicit fractional dynamical systems, *IMA Journal of Applied Mathematics*, 79 (2014) 562–570.
9. **J. Kokila** and M. Thamban Nair, Fourier truncation method for the non homogeneous time fractional backward heat conduction problem, *Inverse Problems in Science and Engineering*, 2019, DOI: 10.1080/17415977.2019.1580707.
10. **J. Kokila**, Modified quasi boundary value method for multi-dimensional fractional non homogeneous fractional diffusion problem, *Mathematical Methods in the Applied Sciences* 2019, DOI: 10.1002/mma.6102.

PRESENTATION \ PARTICIPATION IN CONFERENCES

- ◆ *Controllability of abstract functional integrodifferential inclusions*
 - National Level Seminar on Partial Differential Equations
 - Bharathiar University, Coimbatore, November 6th, 2009.
- ◆ *Controllability of stochastic functional integrodifferential systems*

- National Conference on Advances in Differential Equations and Applications
- Periyar University, Salem, October 8th, 2010.
- ◆ National Conference on Recent Frontiers in Applied Dynamical Systems, Karunya University, Coimbatore, Jan 21-22, 2011.
- ◆ Lecture Series on Navier Stokes Equation (Solvability, Control and Stochastic Analysis) Department of Mathematics, Bharathiar University, Coimbatore, Feb 14-18, 2011.
- ◆ Lecture Series on Large Deviation Theory (Connection to Control Theory, Fluid Dynamics, Nonlinear PDE and Statistics), Department of Mathematics, Bharathiar University, Coimbatore, Feb 16-22, 2012.
- ◆ Seminar on Partial Differential Equations, Department of Mathematics, Bharathiar University, Coimbatore, Feb 28-29, 2012.
- ◆ National Seminar on Fractional Calculus: Theory & Applications, Department of Mathematics, University of Pune, Pune, Nov 5-7, 2012.
- ◆ International Conference on Nonlinear Dynamical Systems, Department of Mathematics, Bharathiar University, Coimbatore, Mar 24-26, 2016.
- ◆ National Seminar on Measure Theory, Department of Mathematics, CGC, Palakkad, Dec 4-5, 2018.
- ◆ International conference in Conjunction with 15th Biennial Conference of ISIAM, Bharathiar University, Coimbatore, Dec 5-7, 2019.

RESEARCH VISIT

1. Visited IIT Madras to make research collaboration and discussions on the Fourier truncation method for the backward fractional diffusion problems with Prof. M. Thamban Nair from March 6-25, 2018.
2. Visited IIT Madras to make research collaboration and discussions on the final draft of the manuscript with Prof. M. Thamban Nair from July 27-28, 2018.

INVITED TALK

1. Delivered an invited talk in Second National Conference on Control and Inverse Problems held at Central University of Tamil Nadu, Thiruvarur on March 1-2, 2019.

REFERENCES

1. Prof. K. Balachandran
Professor (UGC-BSR)
Department of Mathematics
Bharathiar University
Coimbatore - 641 046.
Email : kbkb1956@yahoo.com
2. Prof. M. Thamban Nair
Department of Mathematics
IIT Madras
Chennai - 600 036
Email : mtnair@iitm.ac.in
3. Dr. Lakshmi K. Sankar
Assistant Professor in Mathematics
Department of Mathematics
IIT Palakkad
Palakkad- 678 557
Email: lakshmi@iitpkd.ac.in