School of Basic Sciences (SBS), Mathematics discipline, IIT Bhubaneswar, Argul-Jatani Rd., Odisha · India 752050

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AKASH ASHIRBAD PANDA, PH.D.

ACADEMIC AFFILIATIONS & WORK EXPERIENCE

POSITION	**Assistant Professor**
PERIOD	**3rd November 2022 — Present**
INSTITUTION	**IIT Bhubaneswar** — Arugul, India
SCHOOL	**School of Basic Sciences (SBS)**
	Promoted to Assistant Professor Grade I from Grade II on 23rd of January 2023.

POSITION	**DST–INSPIRE Faculty Fellow**
PERIOD	**12th September 2022 — 31st October 2022**
INSTITUTION	**NISER Bhubaneswar** — Jatani, India
SCHOOL	**School of Mathematical Sciences (SMS)**
	Awarded INSPIRE Faculty Fellowship (IFF) on the 5th of July 2022 and joinded as an INSPIRE faculty at NISER. Now, only availing the research grant from DST-INSPIRE at the IIT Bhubaneswar.

POSITION	**Postdoctoral fellow**
PERIOD	**1st April 2020 — 31st July 2022**
INSTITUTION	**Eberhard Karls Universität Tübingen** — Tübingen, Germany
DEPARTMENT	Fachbereich Mathematik
ADVISOR	**Prof. Dr. Andreas Prohl**
	Involved in research activities in the area of numerics of stochastic PDEs and teaching full course in the mathematical foundations of machine learning, and guided a masters thesis.

POSITION	**Postdoctoral fellow**
PERIOD	**19th August 2019 — 31st March 2020**
INSTITUTION	**Montanuniversität Leoben** — Leoben, Austria
DEPARTMENT	Lehrstuhl für Angewandte Mathematik
ADVISOR	**Prof. Erika Hausenblas**
	Involved in research activities in the area of stochastic analysis of mathematical-biological models.

EDUCATION & SCHOLASTIC RECORDS

DEGREE	**Ph.D.**
PERIOD	**August 2015 — August 2019**
INSTITUTION	**IISER Thiruvananthapuram** — Kerala, India
SUPERVISOR	**Prof. Utpal Manna**
DEFENSE	**12th of December 2019**

Enrolled in the **Integrated PhD** (MS + PhD) program in August 2013. The title of the Ph.D. thesis: *Stochastic Analysis of Nematic Liquid Crystals and Related Physical Models*.

DEGREE	**M.Sc. in Mathematics (Integrated Ph.D. program)**	
PERIOD	**August 2013 — July 2015**	
INSTITUTION	**IISER Thiruvananthapuram**	Kerala, India
C.G.P.A.	**8.2 on a 10 point scale**	

DEGREE	**B.Sc. (Hons.) in Mathematics and Computing**	
PERIOD	**2009 — 2012**	
INSTITUTION	**Institute of Mathematics and Applications**	Bhubaneswar, India
C.G.P.A.	**8.2 on a 10 point scale**	
RANK	**First (with distinction)**	

EXAM	**Higher Secondary (10+2)**	
PERIOD	**2007 — 2009**	
BOARD	**Council of Higher Secondary Education**	Odisha, India
PERCENTAGE	**78.2 (Top 1% of the state board)**	

EXAM	**Secondary (10th)**	
YEAR	**2007**	
BOARD	**Board of Secondary Education**	Odisha, India
PERCENTAGE	**86 (Top 1% of the state board)**	

RESEARCH PUBLICATIONS

My research interest includes the topics

- Well-posedness theory of Stochastic Partial Differential equations (SPDEs);

- (Stochastic) Nematic liquid crystals and related physical models like Navier-Stokes equations and Landau-Lifshitz-Gilbert equations;

- (Stochastic) Mathematical-Biological models;

- Martingale solutions and large deviation principle for SPDEs;

- Study of Marcus type jump noise and blow-up criterion;

- Weak and strong approximation (Numerics) of SPDEs.,

The following are my **research publications**:

(1) X. Feng, A. Prohl, Akash A. Panda, '*Higher order discretization of the stochastic semi-linear wave equation with multiplicative noise*'. (To appear in **IMA J. Numerical Analysis**)

(2) E. Hausenblas, Akash A. Panda, '*Correction to: The stochastic Gierer-Meinhardt system*. **Applied Mathematics and Optimization**, 86(2) (2022), Paper No. 20, 1 p. (2022).

(3) E. Hausenblas, Akash A. Panda, '*The Stochastic Gierer-Meinhardt system*,' **Applied Mathematics and Optimization**, 85:11 (2022).

DOI: 10.1007/s00245-022-09835-6.

(4) U. Manna, Akash A. Panda, '*Well-posedness and large deviations for 2D stochastic constrained Navier-Stokes equations driven by Lévy noise in the Marcus canonical form,*'
J. Differential Equations, Vol. **302**, 64–138 (2021).
DOI: 10.1016/j.jde.2021.08.035.

(5) U. Manna, Akash A. Panda, '*Local existence and blow-up criterion for the two and three dimensional ideal magnetic Benard problem,*' **Electron. J. Differential Equations**, Vol. **2020**, No. 91, pp. 1-26 (2020).

(6) Z. Brzeźniak, U. Manna, Akash A. Panda, '*Large Deviations for Stochastic Nematic Liquid Crystals driven by Multiplicative Gaussian Noise,*' **Potential Analysis**, Vol. **53**, no. 3, 799–838 (2020).
DOI: 10.1007/s11118-019-09788-6.

(7) U. Manna, D. Mukherjee, Akash A. Panda, '*Wong-Zakai approximation for the Stochastic Landau-Lifshitz-Gilbert equations with anisotropy energy,*' **Journal of Mathematical Analysis and Applications**, Vol. **480**, no. 1, 123384 (2019).
DOI: 10.1016/j.jmaa.2019.123384.

(8) U. Manna, Akash A. Panda, '*Higher Order Regularity and Blow-up Criterion For Semi-Dissipative and Ideal Boussinesq Equations,*' **Journal of Mathematical Physics**, Vol. **60**, 041503 (2019).
DOI: 10.1063/1.5048839.

(9) Z. Brzeźniak, U. Manna, Akash A. Panda, '*Martingale solutions of Nematic Liquid Crystals driven by Pure Jump Noise in the Marcus Canonical Form,*' **J. Differential Equations**, Vol. **266**, no. 10, 6204–6283 (2019).
DOI: 10.1016/j.jde.2018.11.001.

The following are **submitted** for a journal publication:

1. Z. Brzeźniak, U. Manna, Akash A. Panda, '*Large Deviations for Stochastic Nematic Liquid Crystals driven by Lévy Noise in the Marcus canonical form.*'

The following works are **ongoing**:

1. Z. Brzeźniak, U. Manna, Akash A. Panda, P. Razafimandimby, '*Struwe solutions for stochastic Landau-Lifshitz-Gilbert equations in two dimensions.*'

2. M. Biswas, D. Mukherjee, Akash A. Panda, '*Full discretization of stochastic semi-linear Euler-Bernoulli beam equation.*'

3. A. Aggarwal, D. Mukherjee, Akash A. Panda, '*Stochastic Scalar Conservation Laws.*'

FUNDING FOR RESEARCH PROJECTS

PROJECT	**Stochastic analysis of FitzHugh-Nagumo Neuron model**
FUNDING AGENCY	**DST-INSPIRE**
AMOUNT	**35,00,000 INR**
DURATION	**5 years (2022-2027)**
STATUS	**Ongoing**
	Awarded the INSPIRE Faculty Fellowship 2021 on the 5th of July 2022.

PROJECT	**Stochastic Homogenization in Micromagnetism**
FUNDING AGENCY	**IIT Bhubaneswar (Seed Grant)**
AMOUNT	**10,00,000 INR**
DURATION	**2 years (2023-2024)**
STATUS	**Ongoing**
	Seed Grant Funding from IIT Bhubaneswar obtained in 2023.

ACADEMIC ACHIEVEMENTS, AWARDS AND DISTINCTIONS

- Center Co-ordinator of IIT Bhubaneswar for the **Madhava Mathematics Competition**.

- Selected for the **DST-INSPIRE Faculty Fellowship (IFF) award 2021**.

- Supported by the **Austrian Science Foundation (FWF)** project number P28010 and P28819 during my postdoc (August, 2019 – March, 2020).

- **ICIAM-2019 travel grant from NBHM** (amongst very few junior researchers from India) to attend in Valencia, Spain.

- Availed the "**Collaborative Research Exchanges Scheme**" of the University of York, UK, and did a research visit in 2018 (May–July).

- Participant in **the Royal Society (UK) International Exchanges award IE140328** and research visit to the University of York, UK, in 2016 (May–July).

- Department of Science and Technology - Post Graduate **(DST-PG) Merit scholarship (Ranked first)** in the year 2012-2013 while pursuing M.Sc. in Mathematics in Utkal University, Bhubaneswar.

- Cleared **National Board of Higher Mathematics** (NBHM) M.Sc. written exam twice, 2012 and 2013.

- Ranked **first** in B.Sc. (Hons.) in Mathematics and Computing with **distinction**.

- Cleared **INSPIRE's top 1% cut-off** for state board of Odisha in both 10th (2007) and 10+2 (2009) examination.

- **Foundation For Excellence** (FFE) scholarship holder from 2007-2009.

ACADEMIC VISITS FOR RESEARCH COLLABORATION

- Availed the "**Collaborative Research Exchanges Scheme**" of the University of York, UK and visited Prof. Z. Brzeźniak during the period May - July 2018.

- Participant in the **Royal Society International Exchanges award IE140328** led by *Prof. Zdzisław Brzeźniak* at the University of York, UK and and *Prof. Utpal Manna* at IISER Thiruvananthapuram. Under this project entitled "Stochastic Landau-Lifshitz-Gilbert equation with Levy noise and Ferromagnetism", I visited University of York, UK during the period 24th May - 25th July 2016.

ACADEMIC SERVICES

- Journal reviewer for *Applied Mathematics and Optimization*;
- Journal reviewer for *Electronic Research Archive* (American Institute of Mathematical Sciences);
- Journal reviewer for *AIMS Mathematics*;
- Journal reviwer for *Communications in Optimization Theory*;
- Journal reviwer for *Stochastic Analysis and Applications*;
- Journal reviwer for *SIURO*;