Curriculum Vitae

MANOJKISHOR PRADHAN

Research Scholar, Department of Physics and Astronomy,
National Institute of Technology Rourkela,
Rourkela-769008, Odisha, India.
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Motivation and Interest:

During my 6 years of experience so far in experimental research as Ph.D. scholar, I have worked in the areas of Magnetism and Magnetic Materials and subsequently Luminescent Materials research. During this time, I have developed the passion for experiemental condensed matter physics & materials science and I'm intrigued by its research prospects. This has also strengthened my spirit scientific research and teaching. My interest is also to explore the computational methods in physics to aid the experimental research. Looking forward to build my career by utilizing all opportunities to implement my skills and knowledge in respective fields and work hard to satisfy the objectives of the organinization in which I may get the chance to flourish. I am looking forward to be the part of new generation teaching learning in academics as well as research. I may cope easily with the changing scinario of new skills and technology and make efforts to lead in my domain of work and any professional assignments by the organisation.

Present Position:

Ph.D. Thesis Submitted to Department of Physics and Astronomy,
National Institute of Technology Rourkela
Rourkela-769008, Sundargarh, Odisha, India.
PIC-cum-Supervisor: Prof. Suryanarayan Dash

Education:

- 07/2016 – 03/2022**, Ph.D.** *in Physics (Thesis Submitted),* National Institute of Technology Rourkela, Odisha, India.

  Orientations: Nanomaterials, Magnetism, Dielectric Spectroscopy, Photoluminescence and Photoelectron Spectroscopy.

  OGPA: 8.88/10

- 2013, **M.Sc.** *in Applied Physics and Ballistics (**Electronics Specialization**).*
  Fakir Mohan University, Balasore, Odisha, India.
  CGPA:7.0/10

- 2011, **B.Sc.** *with Physics (Honours), Mathematics and Computer Applications.*
  College of Basic Science and Humanities, Orissa University of Agriculture & Technology (OUAT), Odisha, India.
  Division/Class: 2nd

- 2008, **Higher Secondary (10+2 Science)** *with Physics, Chemistry, Mathematics, Biology and English*
  B. P. College of Science & Education, Nayapalli, Bhubaneswar.
  Council of Higher Secondary Education, Orissa.
  Division/Class: 1st

- 2006, **Secondary Education (10th)** with *Physical Sciences, Life Sciences, Social Science, Mathematics and English.*
  Rajnagar High School, Rajnagar, Kendrapara.
  Board of Secondary Education, Orissa.
  Division/Class: 1st

Research and Teaching Experience:

- 03/2016 – 03/2022, **Project Assistant-cum-Ph.D.** Student, National Institute of Technology Rourkela, Odisha, India.

  I have worked as a Project Assistant in a sponsored research project entitled as *"Neutron Diffraction Investigation of Magnetic Structure and Phase transition in doped $LaFeO_3$ nanoparticles"*.

- 03/2014 – 03/2016, **Lecturer in Physics**, Teaching physics to higher secondary classes (10+2 Science) at Odisha Science College, Choudwar, Choudwar-754028, Cuttack, Odisha, India

List of Publications/research papers published:

International Refereed Journals

1. **M.K. Pradhan** and S. Dash,
   J. Rare Earths (2022), https://doi.org/10.1016/j.jre.2022.01.014 .

2. **M. K. Pradhan**, T. Lakshmana Rao, U.K. Goutam and S. Dash,
   Spectrochim. Acta - A: Mol. Biomol. Spectrosc. **240** (2020) 118593.

3. **M. K. Pradhan**, T. Lakshmana Rao and S. Dash,
   J. Electron. Mater. **49** (2020) 2463.

4. T Lakshmana Rao, **M. K. Pradhan**, M Chandrasekhar, P V Ramakrishna and S Dash,
   J. Phys. Condens. Matter **31** (2019) 345803.

5. T. Lakshmana Rao, **M. K. Pradhan**, U. K. Goutam, V. Siruguri, V. R. Reddy and S. Dash,
   J. Appl. Phys. **126,** (2019) 064104.

6. T Lakshmana Rao, **M. K. Pradhan**, Sujay Chakravarty and S Dash,
   Mater. Res. Express **7** (2020) 016108.

7. T. Lakshmana Rao, **M. K. Pradhan**, Saurabh Singh and S. Dash,
   J. Mater. Sci.: Mater. Electron. **31** (2020) 4542.

8. T. Lakshmana Rao, **M. K. Pradhan**, V. Siruguri and S. Dash**,**
   J. Supercond. Nov. Magn. **33,** (2020) 1593.

Papers Published in National Symposium and Conference Proceedings

1. "Bi^{3+} sensitized Mg, Mn co-doped La_2LiSbO_6 phosphors for smart agriculture and horticulture LEDs applications: A spectroscopic perspective"
   M. K. Pradhan and S. Dash, *AIP Conference Proceedings* **2265**, 030487 (2020).

2. "Photoluminescence signature in Eu^{3+} ion doped $NaCdPO_4$ phosphors for white LEDs application"
   M. K. Pradhan, T. Lakshmana Rao and S. Dash, *AIP Conference Proceedings* **2115**, 30463 (2019).
3. "Structural, microstructure and impedance spectroscopy analysis of Zn^{2+} doped $LaFeO_3$ nanoparticles"
   T. Lakshmana Rao, **M. K. Pradhan**, and S. Dash, *AIP Conference Proceedings* **2115**, 030089 (2019).

4. "Giant dielectric response in (Sr, Sb) codoped $CaCu_3Ti_4O_{12}$ ceramics: A novel approach"
   M. K. Pradhan, T. Lakshmana Rao, Lipsarani Karna, and S. Dash, *AIP Conference Proceedings* **1942**, 110009 (2018).

5. "Structural, magnetic and impedance spectroscopic analysis of $LaFeO_3$ nano-particles"
   T. Lakshmana Rao, **M. K. Pradhan**, and S. Dash, *AIP Conference Proceedings* **1942**, 050011 (2018).

6. “Effect of dilute magnetic ions on the optical, dielectric and ferroelectric properties of PZT at morphotopic phase boundary”
   T. Lakshmana Rao, **M. K. Pradhan**, P. V. Ramakrishna, and S. Dasha, *AIP Conference Proceedings* **1953**, 090040 (2018).

7. “Resistivity correlated field driven dielectric behavior of a charge ordered system: $Pr_{0.75}Na_{0.25}MnO_3$”
   S. Dash, **M. K. Pradhan**, and T. Lakshmana Rao, *AIP Conference Proceedings* **1953**, 040007 (2018).

8. “Evolution of ferromagnetism in charge ordered manganite: An effect of external pressure”
   S. Dash, **M. K. Pradhan**, and T. Lakshmana Rao, *AIP Conference Proceedings* **1953**, 120008 (2018).

Conference/Symposium and Workshop:

i. ***National Conference on Luminescence and its Applications (NCLA-2020)*** jointly organized by Department of Physics, National Institute of Technology Warangal & Luminescence Society of India,10-12 February 2020.

ii. ***64th DAE Solid State Physics Symposium,*** organized by Bhabhi Atomic Research Centre, Mumbai at Indian Institute of Technology Jodhpur, Rajasthan, India,18-22 December 2019.

iii. ***63rd DAE Solid State Physics Symposium***, organized by Bhabhi Atomic Research Centre, Mumbai at Guru Jambheshwar University of Science & Technology, Hisar-Haryana, India,18-22 December 2018.

iv. ***62nd DAE Solid State Physics Symposium***, organized by Bhabhi Atomic Research Centre, Mumbai at Bhabhi Atomic Research Centre, Mumbai, India,26-30 December 2017.

v. ***National Symposium on Advances in Functional and Exotic Materials***, jointly organized by MRSI Trichy Chapter & Centre for High Pressure Research, Bharathidasan University, Tiruchirappalli, India,14-16 February 2018.

vi. Thematic workshop on ***“Advanced Probes for Materials Strucure”*** jointly organised by UGC-DAE CSR Mumbai centre & Department of Physics, North Orissa University, Baripada, on November 2-3, 2017.

Contributed Talk/Presentations:

"Spectroscopic Perspective of Plant Growth LED Phosphors for Smart Agriculture Applications", **National Conference on Luminescence and its Applications (NCLA-2020)** jointly organized by **Department of Physics, National Institute of Technology Warangal & Luminescence Society of India**,10-12 February 2020.

Training Courses:

1. Vocational Training of 06 weeks on M.Sc. project work entitled as *"Design and analysis of first-order active filters and oscillators using Op-amp"* in the **Directorate of Range Radar** at **Integrated Test Range, DRDO, Chandipur.**

Skills:

- ***Computer skills***
  - Microsoft Office, LaTeX
  - Linux
  - Visualization for Electronic and Structural Analysis(VESTA)
  - Basics of High Performance Computing (An online short term course "HPC Shiksha" from National Supercomputing Mission, CDAC, India.)

- ***Programming skills***
  - C(Proficient)
  - FORTRAN(Medium)
  - MATLAB(Medium)
  - Python(Beginner)

Strengths:

- Leadership
- Discipline
- Adaptable
- Professional
- Friendly

Achievements:

1. All India Rank #108, Joint CSIR-UGC **National Eligibility Test (Lectureship)** in **PHYSICAL SCIENCES**, 21 December 2014.

2. **NCC 'C' Certificate** with **A** grade, **1(Orissa) Air Squadron National Cadet Corps**, **Bhubaneswar (Flying)**, under the **Ministry of Defence, India**.

Hobbies:

- Listening Music, Reading & Watching News
- Badminton Playing

Miscellaneous Webinars/FDPs:

1. One Week TEQIP-III Short Term Course on ***"Innovation, Novelty and Intellectual Property Rights"*** organized by Innovation Club, **Dr B R Ambedkar National Institute of Technology Jalandhar** from August 28, 2020 to September 01, 2020.

2. One Week Online Workshop on ***"Intellectual Property Rights and Entrepreneurship Development"*** (IPRED-2020) under TEQIP-III organized by the Department of Management Studies (DoMS) in association with Institute Innovation Cell (IIC) at **National Institute of Technology, Silchar** from September 01-05, 2020.

3. Webinar on ***"IP Challenges in Engineering, Science and Technology-Advanced Concepts"***, organised by **IFERP**, from 07th to 11th August 2020.

4. One-week online Faculty Development Program on ***"Recent Trends in Computer Simulations for Applications in Biotechnology: Teaching Learning Strategies"*** organised by Department of Biotechnology in association with Teaching Learning center, **National Institute of Technology Warangal**, during 17th – 21st of August,2020.
5. One Week Faculty Development Programme on ***"Introduction to Machine Learning in Research (Concepts and Practical Use)"*** October 10 - October 18, 2020, organised by **Teaching Learning Centre, Ramanujan College, University of Delhi and Department of Computer Science, Ram Lal Anand College, University of Delhi.**

6. Online Short-Term Course on ***"Machine Learning: Theory and Applications (MLTA-2020)"*** Jointly organized by Department of Physics, Instrumentation and Control Engineering & Industrial and Production Engineering, **Dr. B R Ambedkar National Institute of Technology Jalandhar**, Funded by TEQIP-III, from September 09 - 13, 2020.

7. Supercomputing Mission's online course "***HPC Shiksha: Basics of High Performance Computing"*** organized by **C-DAC and the NSM Nodal Centres for Training in HPC and AI at IITs Goa, Kharagpur, Madras and Palakkad** from November 2020 to February 2021.

8. Faculty Development Program on ***"Next Generation Computing: Machine and Deep Learning Applications"*** conducted by the Department of Computer Science and Engineering, **National Institute of Technology Warangal** from 04-01-2021 to 08-01-2021.

9. AICTE Training and Learning (ATAL) Academy Online FDP on ***"Data Science"*** from 2021-2-1 to 2021-2-5 at **National Institute of Technology Agartala.**

10. TEQIP - III sponsored four-day webinar on ***"Functional Materials for Emerging Technology, FMET-2021"*** organized by the **Dept. of Basic Science and Humanities, Silicon Institute of Technology, Bhubaneswar** from 2nd – 5th March, 2021.

Personal Information

- **Date of Birth:** 05/07/1990
- **Nationality:** Indian
- **Gender:** Male
- **Marital Status:** Married
- **Spoken Languages:** English, Hindi and Odia (Mother Tongue)
- **Present address:** C/O: Anuj Kumar Subudhi
  Plot No.: GA -382, Sailashree Vihar,
  Bhubaneswar-751021, Odisha, India.
  Mobile: +91 9437816604

Declaration

I hereby declare that all the details furnished above are true to the best of my knowledge and belief.

Date: *April 19,2022* **Signature**

Place: Bhubaneswar *(Manoj Kishor Pradhan)*