



DR. J. EMIMA JERONSIA

Assistant Professor

PROFESSIONAL SUMMARY

Dr. J. Emima Jeronsia is a dedicated and passionate Assistant Professor of Physics at Holy Cross College, Tiruchirappalli, with over seven years of teaching and research experience. Specializing in metal and metal oxide nanostructures for industrial and biomedical applications, her research emphasizes green synthesis and eco-friendly approaches. Dr. Jeronsia has received several accolades, including best paper presentation awards and a gold medal in M.Phil. Physics. As a certified Chief Innovation Officer and mentor, she actively promotes innovation and entrepreneurship, guiding students in both academic and professional growth.

WORK EXPERIENCE

Assistant Professor

2017 – Present

Holy Cross College

Physics educator with expertise in teaching subjects like Spectroscopy, Classical Mechanics, Microprocessor Intel 8085, Thin Film Physics, and Condensed Matter Physics. She emphasizes conceptual understanding and practical applications, encouraging critical thinking and problem-solving skills. Integrates innovative teaching techniques and hands-on experiments to make complex topics accessible and engaging, while also mentoring students in their research projects.

EDUCATION

Ph.D. in Physics

Loyola College, Chennai | 2013 - 2017

Research Title: Green Synthesis and Characterization of Silver, Zinc Oxide, and Copper Oxide Nanostructures for Potential Biomedical Applications: An Eco-Friendly Approach

Guide: Dr. S. Jerome Das

M.Phil. in Physics (Gold Medalist)

Loyola College, Chennai | 2011 - 2012

Percentage: 92%

Research Title: Synthesis and Antibacterial Activity of Copper Oxide Nanoparticles

M.Sc. in Physics

Loyola College, Chennai | 2009 - 2011

Percentage: 78%

B.Sc. in Physics

Holy Cross College, Trichy | 2006 - 2009

Percentage: 83%

ACHIEVEMENTS

- Best Paper Presentation Awards at international conferences.
- Gold Medalist in M.Phil. Physics.
- Graduated with Distinction in all courses.
- Served as a Student Council Member.
- INITIATED the Physics departmental intercollegiate entitled 'HYPHY' during my tenure as the Physics Association President for the academic year 2018 – 2019
- Received COPYRIGHT for Winkle (One click Sustainable change connecting local sellers and buyers) on 30th September 2022 from Intellectual Property India, Government of India.
- Certified chief Innovation Officer
- Served as an Evaluator for MoE's Innovation contest for schools all over India.

ROLES AND RESPONSIBILITIES

- Research Guide: Guiding the academic and research progress of 4 Ph.D. scholars and 2 M.Sc. students.
- DC Member: Serving as a Doctoral Committee (DC) member.
- Convenor- Holy Cross Innovation and Incubation Council (HCIICT)
Imparting necessary skills for Entrepreneurship and Student Startups within the campus
- IIC Innovation Ambassador: Trained in IPR
- Mentor Mentee Coordinator:
Mentoring Other Higher Education Institution and Schools in Innovation, Idea Generation and Entrepreneurship
- Certified Chief Innovation Officer: Overseeing the development of creative strategies in Innovative Ideas and Prototypes.
- Core Member of CPE and FIST: Contributing to Research infrastructure development.
- British Council certified English language professional

RESEARCH

Citations: 450 h-index: 10 i10-index: 10 Total Impact factor: 29.98

Research area: Nanostructured Materials for Industrial and Biomedical applications

International Publications

- J.Emima Jeronsia, R.Ragu, A. JerlineMary, S.Jerome Das, Elucidating the structural, anticancer and antibacterial traits of Punica granatum peel extracts mediated Ag and Ag/GO nanocomposites, Microscopy Research and Technique 1-12, 2021.
- J.Emima Jeronsia, R.Ragu, R.Sowmya, A. JerlineMary, S.Jerome Das, Comparative investigation on Camellia Sinensis mediated green synthesis of Ag and Ag/GO nanocomposites for its anticancer and antibacterial efficacy, Surfaces and Interfaces, 21 (100787), 2020.

- J Emima Jeronsia, L Allwin Joseph, P Annie Vinosha, A Jerline Mary, S Jerome Das, Camellia sinensis leaf extract mediated synthesis of copper oxide nanostructures for potential biomedical applications, *Materials Today: Proceedings*, 8 (214-222) 2019.
- L Allwin Joseph, R Ragu, M Akilan, J Emima Jeronsia, J Prince Joshua, Structural, optical and magnetic behaviour of cobalt-and ferrous-doped zinc stannate nanoparticles synthesized by hydrothermal method, *Applied Physics A*, 126 (1-8) 2020.
- J Emima Jeronsia, L Allwin Joseph, P Annie Vinosha, A Jerline Mary, S Jerome Das Camellia sinensis leaf extract mediated synthesis of copper oxide nanostructures for potential biomedical application, *Materials Today: Proceedings* (8) 214-222 (2019).
- J. Emima Jeronsia, L. Allwin Joseph, M. Mary Jacqueline, P. Annie Vinosha, S. Jerome Das, Hydrothermal synthesis of zinc stannate nanoparticles for antibacterial applications, *Journal of Taibah University for Science* 10 (2016) 601–606.
- J. Emima Jeronsia, D. J. Vidhya Raj, L. Allwin Joseph, K. Rubini, S. Jerome Das, In Vitro Antibacterial and Anticancer Activity of Copper Oxide Nanostructures in Human Breast Cancer Michigan Cancer Foundation-7 Cells, *J Med Sci* 2016;36(4):145-151.
- J.Emima Jeronsia, L. Allwin joseph, S. Jerome Das, Red apple (*Malus domestica*) skin extract mediated synthesis of silver nanoparticles and its antibacterial activity, *Journal of Chemical and Pharmaceutical Sciences*, ISSN: 0974-2115, Special Issue 11: October 2015, 47-49.
- Emima Jeronsia. J, Allwin Joseph, L. and Jerome Das, S. Investigations On Anticancer And Antibacterial Activities Of Zinc Oxide Nanoparticles, *International Journal of Development Research* Vol. 5, Issue, 10, pp. 5707-5711, October, 2015.
- P. Annie Vinosha, L. Ansel Mely, J. Emima Jeronsia, S. Krishnan, S. Jerome Das, Synthesis and properties of spinel ZnFe₂O₄ nanoparticles by facile co-precipitation route, *Optik* 134 (2017) 99–108.
- L. Allwin Joseph, J. Emima Jeronsia, M. Mary Jacqueline, S. Jerome Das, Investigations on Structural and Optical Properties of Hydrothermally Synthesized Zn₂SnO₄ Nanoparticles, *Physics Research International* Volume 2016, Article ID 1801795, 6 pages.
- Annie Vinosha P, Ansel Mely L, Emima Jeronsia J, Raja K., Queen Sahaya Tamilarsi D, Alison christina Fernandez, Krishnan S, Jerome Das S, Investigation of optical, electrical and magnetic properties of cobalt ferrite nanoparticles by naive co-precipitation technique, *Optik* 127 (2016) 9917–9925.
- P Annie Vinosha, L Ansel Mely, J Emima Jeronsia, F Heartlin Monica, K Raja, S Jerome Das, Study of Structural, optical, dielectric and magnetic properties of zinc ferrite synthesized by co-precipitation, *Nano Hybrids and Composites*, 17 (1-9) 2017.
- J Emima Jeronsia, L Allwin Joseph, M Mary, Hydrothermal synthesis of Zinc Stannate nanoparticles, *Superlattices and Microstructures* (75) 775-784 (2014).
- C. Vignesh, K. Vinoth, J. Emima Jeronsia & L. Chinnappa, Impact of Different Weight Fractions of Zinc Oxide Nanoparticles on Polyaniline/Zinc Oxide Nanocomposites for Thermoelectric Applications. *PHYSICS OF SEMICONDUCTORS AND DIELECTRICS* Volume 67, pages 41–46, (2024)

Conference Publications:

- J. Emima Jeronsia, F. Heartlin Monica, L. Allwin Joseph, J. Ermine Jose, S. Jerome Das. Investigations on structural and optical properties of ZnO and CuO nanoparticles synthesised using Camellia sinensis leaf extract, International Conference on Advances in Light Technologies and Spectroscopy of Materials (ICALTSM -2016), January 16-18, 2016.
- J. Emima Jeronsia, D.J. Vidhya Raj, P. Annie Vinosha, K. Rubini, S. Jerome Das, Impact of pH on the synthesis of copper oxide nanostructures, National Laser Symposium (NLS-24), RRCAT, Indore, 2-5 Dec, 2015.
- D.J. Vidhya Raj, J. Prince Joshua, L. Arun Jose, T.V. Nidisha, J. Emima Jeronsia, S. Jerome Das, "Fabrication and characterization of zinc oxide thin film by spin coating method" International conference in materials sciences for energy and enrolment, ISBN: 978-81-910217-7-6, pp. 96-106.
- P. Annie Vinosha, G. Josena, J. Emima Jeronsia, L. Allwin Joseph, M. Mary Jacqueline, S. Jerome Das. The role of pH on the particle size and magnetic consequence of spinel zinc ferrite by co-precipitation, International Conference on Advances in Light Technologies and Spectroscopy of Materials (ICALTSM -2016), January 16-18, 2016.

RESOURCE PERSON/JUDGE

- One day Workshop on "Intellectual Property Rights" - Protecting your Intellectual Property- St. Francis De Sales College, Seminary Hills, Nagpur.
- Talk on the topic "For the Love of Physics" - Jamshedpur Workers College, Jamshedpur, Jharkhand.
- Orientation to Staff Members of GTN arts and Science College Dindigul on the topic, Institution Innovation Council.
- Session on Idea Generation- GTN arts and Science College, Dindigul.
- Session on IPR and Technology Transfer, MAM Engineering College, Trichy
- Session on Idea Generation, MAM Engineering College, Trichy.
- Session on "Be a Job Provider not a Job Seeker" PG & Research Department of Rehabilitation Science, Holy Cross College (Autonomous), Trichy.
- Session on Academic Perspective of Innovation and Startup Ecosystem, Holy Cross College (Autonomous), Trichy.
- Session on Incubation Opportunities for Students – Early Stage Entrepreneurs, Holy Cross College (Autonomous), Trichy.
- Workshop on Design thinking: Solve the problem and serve the need, PG & Research Department of Physics, Holy Cross College (Autonomous), Trichy.
- Awareness session "Building an Entrepreneurial Mindset: Lessons from Industry Leaders", Holy Cross College (Autonomous), Trichy.

- **Workshop on Mastering the IPR- The Know How, PG & Research Department of Psychology, Holy Cross College (Autonomous), Trichy.**
- **Session on Unlocking creativity- Idea Generation, PG & Resaecrh Department of Library sciences, Holy Cross College (Autonomous), Trichy.**
- **A Seminar on Highlighting the role of Innovation and Start-up for Sustainable Development, Workshop on Mastering the IPR- The Know How, PG & Research Department of Psychology, Holy Cross College (Autonomous), Trichy.**
- **Session on Unlocking creativity- Idea Generation, PG & Resaecrh Department of Library sciences, Holy Cross College (Autonomous), Trichy.**
- **World Entrepreneurs Day Celebration Shark Tank Competition Judge, Holy Cross College (Autonomous), Trichy.**
- **Seminar on IPR for Innovation & Growth, Holy Cross College (Autonomous), Trichy.**
- **Session on Business Incubation Traits & Start-Up Etiquettes, Holy Cross College (Autonomous), Trichy.**
- **Orientation Innovative Technology & Start-up Ecosystem, Holy Cross College (Autonomous), Trichy.**

INTERNATIONAL/NATIONAL/ CONFERENCE/ SEMINAR/FDP/WORKSHOPS ATTENDED _____

- **UGC Sponsered sixteenth online Faculty Induction Programme (03.07.2024 to 31-07-2024)**
- **FDP on “PHYSICS OF RENEWABLE ENERGY SYSTEMS” NPTEL-AICTE (12 WEEKS) JULY-OCTOBER 2023 .**
- **IIC Innovation Ambassador Training on “IPR” organized by IIC - MHRD’s Innovation Cell hosted by R.M.K. Engineering College, Tiruvallur, on 8 th & 9 th January 2020.**
- **Online Sessions on Innovation, IPR, Entrepreneurship, and Start-ups conducted byIIC-MIC, MHRD’s Innovation Cell, New Delhi, from 28th April 2020 to 22nd May 2020.**
- **Webinar on “Everything Started with Nothing – Make a Start” organized by Crescent Innovation & Incubation Council (CIIC), Chennai, on 13th May 2020.**
- **Webinar on “Re imaging Research in the Era of Disruptions and Uncertainties” organized by Holy Cross College (Autonomous), Trichy, on 21st May 2020**
- **Webinar on “Art of writing Scientific Articles and Project Proposals” organized by PG and Research Department of Physics, Holy Cross College (Autonomous), Trichy, on 22nd May 2020**
- **Faculty Development Webinar series on “Remote Classrooms-Digital Technology in Teaching Learning” organised by Holy Cross College (Autonomous), Trichy on 30th May 2020**

- Webinar on "Terahertz spectroscopy: Forbidden gap transforming into an Advanced application" organised by PG & Research Department of Physics, Holy Cross College (Autonomous), Trichy, on 9th June 2020 .
- One week online International Faculty Development Program (FDP) on "Artificial Intelligence and IoT- Heuristic Trans disciplinary perspectives" organised by CICRSD, Holy Cross College (Autonomous) held during 4th to 10th July 2020.
- Webinar on "Preparation Methods and Deposition Techniques of Nanostructures" organized by PG & Research Department of Physics on 25th July 2020.
- Webinar on "The Implications of the NEP 2020 for Higher Education and Role of Teachers" organized by IQAC, Holy Cross College (Autonomous), Trichy, on 25th August 2020.
- "International Webinar on Advanced Functional Materials (IWAFM) 2021" organized by PG & Research Department of Physics, Holy Cross College (Autonomous), Trichy, on 15th February 2021.
- International Conference on Recent Advances in Physical Sciences (ICRAPS 2024) organized by School of Physical Sciences in collaboration with Mullai Academia International Pvt. Ltd., at Holy Cross College (Autonomous), Tiruchirappalli, held on 19th & 20th January 2024

PERSONAL DETAILS

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Phone: 9677166256

DECLARATION

I hereby declare that the information provided is true and accurate to the best of my knowledge.