CERINE LAL

Galway, IRELAND | P: +353894122009 | cerinelal@gmail.com | https://www.linkedin.com/in/cerinelal/

EXPERIENCE

VALEO VISION SYSTEMS, GALWAY *2022 - Present*

Image Quality Function Owner

- As an image quality function owner for the automotive camera development, liaise with internal and external stakeholders to gather requirements and prepare technical reviews for on time delivery of image quality features to the customer.
- Characterize and optimize the image sensor performance and validate the camera image quality performance of autonomous driving and surround view cameras to the latest international standards and customer requirements.
- Prepare technical reports for the customer.
- Work with the industrial process and test teams to validate mass production of cameras meeting specific image quality KPI's and support the new product introduction process.
- Develop algorithms and process methodologies for data analysis and to characterize the sensor.

DECIPHEX, DUBLIN *2021 – 2022*

Research Scientist

- Carry out research and development of machine learning techniques to enhance the capabilities of the product, Patholytix.
- Identify and implement improvements to experimental procedures and workflows.
- Work with pathologists and experts to gain insights from their domain knowledge to annotate and develop datasets for training and validating AI models.

NATIONAL UNIVERSITY OF IRELAND, GALWAY

Post Doctoral Researcher *2020 – 2021*

- Conducting research as part of the STARSTEM and IMCUSTOMEYE projects – EU Horizon 2020 funded schemes.
- Worked closely with principal investigators, scientists and physicians to develop funding proposals, applications and advance state of the art optical coherence tomographic imaging systems.
- Supervised PhD students by sharing technical expertise and providing feedback and guidance.
- Preparing ethical application and approval forms according to HSE protocols.

Graduate Researcher *2014 – 2020*

- Designed and developed optical coherence tomography (OCT) system for *in-vivo* and *ex-vivo* imaging applications.
- Developed signal and image processing algorithms for mapping and visualization of blood vessels in ophthalmic and dermatology applications.
- Developed optical systems and processing algorithms for photothermal imaging of gold nanoparticles using the OCT system.
- Conducted preclinical imaging studies for the assessment of stem cell treatment in ocular injuries and analysis and documenting the results .
- Co-ordinated work with scientists and graduate students within the team and across departments leading to 5 first authored international journal publications and 8 conference proceedings.

Teaching (Casual Employment) *2014 – 2019*

Delivered tutorials on problem solving and electronics to experimental physics undergraduate students.
Supervisor for experimental physics labs to undergraduate students.
Corrected exams and assignments as needed.

Event Manager and Organizer *2016 -2020*

Organized and advertised international biennial graduate summer school for students across the globe with renowned lecturers in photonics with 500+ participants (2016, 2018, 2020).
Organized ‘Advanced Laser Technologies’ international conference held in Galway in 2016, with 100+ talks and 500 attendees from around the world.

EDUCATION

Doctor of Philosophy	**Ph.D. in Physics** (Optics and image/signal processing), National University of Ireland, Galway	*2014-2020*
Postgraduate	**MS in Biomedical engineering** Indian Institute of Technology, Madras, India	*2010-2013*
Undergraduate	**Applied electronics and instrumentation engineering**, Mahatma Gandhi University, India	*2006-2010*

Research Publications : *Google scholar*

Professional Membership

Society of photo electronic instrumentation engineers (SPIE) *2011 – Present*

SPIE Treasurer, 2016-2017; SPIE President, University of Limerick- Galway student chapter, 2017-2018

TECHNICAL AND TRANSFERABLE SKILLS

- Optical design and instrumentation.
- Electronic circuit design and troubleshooting.
- Proficient in signal, image processing and data analytics in the MATLAB environment.
- Python, R, C, C++, LabVIEW.
- Strong computer skills, including MS Excel, Outlook, and Word.
- Technical writing and presentation skills (experienced lecturer and presenter at international conferences).
- Project management (leading and planning research from concept phase to prototype building and testing).
- Excellent interpersonal and communication skills with proven leadership abilities.

ACCOLADES AND FUNDING

- Invited Talk, SPIE Photonics West, San-Francisco 2020.
- SPIE Student Author Travel Grant, 2020.
- Student Author Travel Grant, 2018, NUIG.
- College of science graduate student fellowship, NUIG, 2014-2019.
- Institute travel grant from IIT Madras, 2012.
- Ministry of Human Resource Development (Government of India) scholarship for pursuing masters 2010-2013.

REFERENCES

Professor Martin J. Leahy, DPhil CPhys FInstP FSPIE
Chair of Applied Physics
School of Physics
National University of Ireland, Galway Ireland
Email: martin.leahy@nuigalway.ie
TEL: +353 91 494260 FAX: +353 91 495529

Hrebesh M. Subhash, MS MPhil PhD
Senior Technical Associate/Tech Lead Personal Care Technology / Clinical Method Development
Strategic Innovation and Technology Alliances Colgate-Palmolive Global Technology Center
Colgate-Palmolive Company
909 River Road
Piscataway, NJ 08855 USA
Email: hrebeshmollysubhash@colpal.com , Ph: +1-732-878-7855