Aswan Kishore Das

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Objective

"To use my skills and knowledge in the field of Photonics and Optics to develop technologies of societal importance, especially in the areas of Optical Sensors, Imaging systems and Laser systems.
To work with encouraging and Optimistic group of people with similar interests in a challenging research field and gain more knowledge for a career in Photonics."

Education

- **Cochin University of Science and Technology** **8.14 /10 GPA**
  Five year Integrated MSc in Photonics, 10th Semester *2015–Present*
- **Kerala State higher Secondary Board** **89%**
  Kerala State Higher Secondary Examination, *2014*

Research and Work Experience

- **Indian Institute of Science Education and Research** **Expected May 2020**
  Master Thesis Student *Mohali, India*
  'High frequency (>100 MHz) large bandwidth Photo-acoustic sensor development for Photo-acoustic Microscopy System.'
  Guide : **Dr Samir Kumar Biswas, Assistant Professor, IISER, Mohali**

- **Hind High Vacuum Company Pvt. Ltd.** **June -July 2019**
  Project Intern - Thin Films and Optics Division. *Bangalore, India*
  'Design, Fabrication and Inspection of High Precission Optical Windows for Lasers.'
  - Specifications : Surface Flatness $\lambda/2$, Surface Finish 20 - 10 and Parallelism 20 arc sec.

- **Indian Institute of Science Education and Research** **May - July 2018**
  Summer Research Internship *Kolkata, India*
  'Dissociative Electron Attachment Studies to Cold Supersonic Jet of Oxygen Molecules.'
  Guide : **Dr Dhananjay Nandi, Professor, IISER Kolkata.**
  - The DEA to Oxygen clusters were studied by observing the negative ion mass spectrum as a function of incident electron energy using a time sliced velocity map imaging Spectrometer.

- **International School of Photonics** **December 2017 - April 2018**
  Academic Curriculum Project *CUSAT, India*
  'Charecterization of meteals by Optical Emission Diagnostics of Laser (Nd:YAG) produced plasma.'
  Guide : **Dr Pramod Gopinath, Professor and Director International School of Photonics, CUSAT.**
  - Metal samples were placed in high Vacuum chamber. High energy Nd:YAG pulses were focused onto the sample and resulting plasma was collected via fiber optics for Spectrometer analysis.

Short courses and Workshops

- Short course and Hands on Workshop on **"Nanoscale Interaction of Laser with matter"** Organized by Indian Laser Association, RRCAT, Indore.
- 8 week short course on **'Lasers : Fundamentals and Applications'** from Indian Institute of Technology, Kanpur via NPTEL with a consolidated score of **82%**.
- Workshop on Opticaol Design and Illumination softwares **Zemax, TracePro and OSLO** at International School of Photonics.

Computer Skills

- **Programming Languages:** C++, MATLAB, PYTHON, .
- **Application Softwares:** ZEMAX, COMSOL ORIGIN, SOLIDWORKS,

Coursework

- **Physics :** Classical Mechanics, Quantum Mechanics (Basic and Advanced), ElectromagneticTheory and Relativity, Thermodynamics, Solid State Physics(Basic and Advanced), NuclearPhysics.
- **Optics :** Opto-mechanical Engineering, Geometrical and Physical Optics, Atomic and Molecular Spectroscopy, Optical Instrumentation, Non Linear Optics, Optical signal processing, Quantum Optics.
- **Photonics :** Optoelectronics, Optical Communication, Nanophotonics, Nanobiotechnology, Biophotonics, Fiber Optics, Laser Physics, Laser Systems and Applications, Laser Spectroscopy.
- **Electronics :** Basic Electronics, Digital and Analog Electronics, Microprocessors and their Applications, Electronic Instrumentation, Digital Signal Processing, RF and Microwave Technology.
- **Mathematics :** Differential and Integral Calculus, Statistical Mechanics, Tensor Analysis, Mathematical Physics.
- **Lab Courses :** Basic Optics, Photonics, Analog and Digital Electronics, Microprocessor.
- **Audited Course :** Biomedical Instrumentation

Participations and Activities

- Attended National Photonics Symposium 2019 at International School of Photonics, CUSAT
- Elected as Placement Cell Coordinator (2018-2019), International School of Photonics, CUSAT.
- Attended IONS KOCHI 2017 (International OSA network of students).
- Attended Annual Photonics Workshop (APW) (26th -28th February 2016) at International School of Photonics, Cochin University of Science and Technology (CUSAT).
- Attended National Photonics Symposium (NPS) (27th February - 1st March 2017.)

References

References upon request.