Mukesh Mondeddula

DATE OF BIRTH:
12/03/1993

CONTACT

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ABOUT ME

Experienced in the field of laboratory measurement technology. Having a solid knowledge in the field of IBS coating process and vacuum technology . Result oriented with a proven track record of working collaboratively with team members to achieve goals. Proficient in programming languages and data analysis.

EDUCATION AND TRAINING

01/04/2017 – 26/10/2020 – Hannover, Germany

Master of Science (M.Sc.): Optical Technology - Photonics & Laser Technology

Gottfried Wilhelm Leibniz Universität Hannover

Focus Areas:

- **Product & Process Development** in diverse optical and mechanical engineering areas.

01/06/2012 – 21/06/2016 – Hyderabad, India

Bachelor of Technology (B.Tech.): Mechanical Engineering

Jawaharlal Nehru Technological University

Bachelor Thesis:

- Designed and Fabricated a Kart using 4-stroke petrol Engine (main focus: Hydraulic Braking System)

WORK EXPERIENCE

01/11/2019 – 26/10/2020 – Hannover, Germany

Thesis and Research Assistant in the Field of Fiber-Optics Technology

Laser Zentrum Hannover e.V. (LZH)

- Non-sequential ray-tracing simulations using Zemax to determine peak intensity distribution at different fiber lengths in order to analyze the laser-induced damage distribution in Polymer Optical Fibers (POFs) .
- Prepared the manufactured POFs using polishing devices and aligned the fiber in the experimental setup.
- Designed and optimized a complex optical system (using Nano-second pulsed Nd:YAG laser) with a 4f-imaging setup to measure intensity distribution in POFs.
- Identified various aberrations in 4f-setup while measuring the intensity distribution inside the fiber.
- Captured the images of intensity distribution at different fibre lengths using a CCD camera and analyzed the images using python.
- Verified experimental results with simulation results and investigated the homogeneity of intensity.
- Successfully determined the intensity distribution and analyzed the laser-induced damage distribution in POFs.

01/03/2019 – 30/06/2019 – Hannover, Germany

Internship in the Field of Fiber-Optics Technology

Laser Zentrum Hannover e.V. (LZH)

- Calibrated an optical system for various pulse energies (0.1mJ, 0.35mJ, 0.5mJ and 1mJ).
- Identified and resolved issues in the experimental setup.

- Prepared the manufactured POFs using polishing devices and aligned the fiber in the experimental setup.
- Conducted R-on-1 ramp tests to determine homogeneity of damages in passive POFs (according to the aging process)
- Carried out S-on-1 multi-shot tests to examine transmission losses in active and passive POFs.
- Observed laser-induced damages in POFs using differential interference microscopy.
- Successfully investigated the degradation of active and passive POFs using Nano-second pulsed Nd:YAG Laser.

01/09/2018 – 28/02/2019 – Hannover, Germany

Master Research Project in the field of Hot-Embossing Technology

Hannover Centre for Optical Technologies (HOT)

- Designed and developed the force unit.
- Built a heating unit with cartridge heaters to heat the force unit.
- Developed a temperature control unit with Arduino-Uno micro-controller.
- Developed cooling system for force unit.
- Enabled visualization by interfacing micro-controller to the PC.
- Successfully implemented a temperature control unit for a self-made Hot-Embossing system.
- Performed 4 steps of Hot-Embossing process and prepared a few samples of microstructure stamping on PMMA materials.

DIGITAL SKILLS

Optical Design Software

Zemax OpticStudio, Tracepro.

CAD

SolidWorks.

Programming Languages

MATLAB, Python, LabVIEW.

MS Office

Word, Excel, PowerPoint.

Data Analysis Software

OriginLab

LANGUAGE SKILLS

MOTHER TONGUE(S): Telugu

OTHER LANGUAGE(S):

English

Listening	Reading	Spoken production	Spoken interaction	Writing
C2	C2	C1	C1	C1

German

Listening	Reading	Spoken production	Spoken interaction	Writing
B1	B1	A2	A2	B1