Yaman Parasher

🎓 EMJMD student in Photonic Integrated Circuits, Sensors & Networks (PIXNET)
✉ parasheryaman19@gmail.com
🌐 https://parasheryaman19.github.io/
🔗 www.linkedin.com/in/yaman-parasher

About Me

Summary   Graduate researcher in Electronics & Communication Engineering with background in optical communication & photonics. Experience encompasses working on various in lab optical system design software tools & workbench alongwith expertise in modeling, design, & simulation of advance photonic integrated circuits. Published research papers in reputed Science Cited Indexed (SCI) journals such as Elsevier, Springer and international conference of Optical Society of America (OSA), LAOP-2018 in Peru.

Education

Sept. 2019 – Aug 2021   **Erasmus Mundus Joint Master Degree-PIXNET**
Specialization *Photonic Integrated Circuits, Sensors & Networks*
Scuola Superiore Sant'Anna, Pisa, Italy (Sept. 2019-Aug 2020)
Aston University, Birmingham, UK (Sept. 2020-March 2021)
Osaka University,Osaka, Japan (April 2021-Aug 2021)

2013 – 2018   **Integrated Dual Degree B.Tech + M.Tech**
Electronics & Communication Engineering
Specialization *Wireless Communication & Networks*
Aggregate CGPA :8.12/10 (First Division with Distinction)
School of ICT,Gautam Buddha University (State Government University)
Greater Noida, Uttar Pradesh, India

Academic Achievements

2019   Awarded prestigious **Erasmus Mundus Joint Master Degree** in Photonic Integrated Circuits, Sensors and Networks (PIXNET). As a part of the degree program, I will be spending my first year (1st & 2nd Semester) at TeCIP, Scuola Superiore Sant'Anna, Pisa, Italy, second year (3rd Semester) at Aston Institute of Photonic Technologies, Aston University, UK and the last or the (4th Semester) at the Photonics Center Osaka University, Japan.

2010   Awarded **Merit Certificates** by Central Board of Secondary Education (CBSE) and Kendriya Vidyalaya Sangathan (KVS) for being in the top 0.1% among all candidates passing that subjects in All India Secondary School Examination (Class X) 2010 across the whole of India.

Skills

Programming	C, Python, R, SQL, TCL/TK, LaTeX
Photonic CAD tools	OptiSuite, OptSim, COMSOL, Lumerical (FDTD, MODE, DEVICE, INTERCONNECT)
Layout Design Tools	KLayout, Mentor Graphics L-Edit
Scientific softwares	MATLAB, ns2/3, QualNet
EDA Tools	OrCAD, Multisim, LTSpice, EAGLE
Misc.	Knowledge of Silicon Microfabrication/Nanofabrication Technologies

Certification

2019   edX course UBCx: Phot1xSilicon Photonics Design, Fabrication and Data Analysis by Prof. Dr. Lukas Chrostowski. Here, I was able to design, model, and characterize photonic intergated circuits - passive devices like like Directional, Grating Couplers, Y-Splitters,Spot Size Converters, Bragg Gratings, MZIs, Ring Resonators & circuits like MZI/ Ring Resonator based Wavelength Selective Switch, Polarization Splitting Rotator based on Sub-Wavelength Grating (SWG) waveguides, & etc. in Lumerical Suite, KLayout & Mentor Graphics L-Edit.

Related Work Experience

Jul. 2020-Aug. 2020   **TeCIP Institute, Scuola Superiore Sant'Anna, Pisa, Italy**
Worked as a Software Development Intern
Project (TeCIP-Telecom Italia(TIM)) : Emergency Vehicle Localization.

- Created a service that tracks the real time proximity of the emergency vehicle with the user's vehicle across the city.
- Worked with Python, JS, HTML & CSS.

Aug 2018–Aug 2019   **Delhi Technological University (DTU), New Delhi, India**
Project Associate, Optical Communication & Photonics Group
Project : Simulation/Modeling of high speed Optical Transmission Systems
- Design & Performance analysis of WDM, DWDM, S-MDM based hybrid optical communication systems & networks using OptiSystem.
- Documented technical projects proposals & book chapters, research papers.
- Tool Used : OptiSuite, & MATLAB.

May 2018–Jul. 2018   **National Chung Cheng University (CCU), Chiayi, Taiwan**
Worked as AIM-HI, CCU International Research Intern
Project : GeSn-based RCE (Resonant-cavity-enhanced) - PD (Photodetector) on SOI substrate with Si/SiO2 Distributed Bragg reflectors (DBRs)
- Design highly reflective Si/SiO2 based DBRs, embedded in GeSn based PD structure on SOI substrate in COMSOL.
- Gain expertise in working with fabrication processes like Photolithography and RIE(Reactive Ion Etching) for various MEMS-based applications.

May. 2017-Jul. 2017   **Indian Institute of Technology(IIT),Patna, India**
Worked as a Research Intern , Incubation Center for Medical Electronics
Project : Micro Thermal Energy Harvesting Systems for Biomedical Implants.
- Worked on bringing a standalone thermoelectric platform that can integrate TEG based Power Supply with Internal Startup Circuit (power management IC) with customized TEH (Thermoelectric Heat Pump) into a single microsystem.
- This system is capable to provide regulated output power roughly twice the power needed to operate a biomdeical implant like pacemaker inside the body.

Research Publications

Journal Articles

1. Kaur, G., Kumar, A., Parasher, Y., & Singh, P. (2019). Design of Multichannel Optical OFDM System using Advanced Modulation techniques. *Journal of Optical Communications, Degruyter.*
   🔗 https://doi.org/10.1515/joc-2018-0062

2 Kaur, G., Srivastava, D., Singh, P., & Parasher, Y. (2019). Development of a novel hybrid PDM/OFDM technique for FSO system and its performance analysis. *Optics & Laser Technology, Elsevier, 109,* 256–262. 🔗 https://www.sciencedirect.com/science/article/abs/pii/S0030399217316730

3 Kaur, G., Rani, N., Parasher, Y., & Singh, P. (2018). Design and Implementation of Electro-optic 2× 2 Switch and Optical Gates using MZI. *Journal of Optical Communications ,Degruyter, 41,* 269–277. 🔗 https://doi.org/10.1515/joc-2017-0198

4 Parasher, Y., Kaur, G., Srivastava, A., & Singh, P. (In Process). Machine learning based Predictive Modelling for failure management of Optical Spatial Division Multiplexing System. *International Journal of Communication Systems, Wiley.*

Conference Proceedings

1 Parasher, Y., Kaur, G., Tomar, P., & Kaushik, A. (2020). Development of Artificial Neural Network to predict the Concrete Strength, Smart Systems, IoT: Innovations in Computing, Springer. 🔗 https://doi.org/10.1007/978-981-13-8406-6_36

2 Saxena, P., & Parasher, Y. (2019). Application of Artificial Neural Network (ANN) for Animal Diet Formulation Modeling, Procedia Computer Science, Elsevier. 🔗 https://doi.org/10.1016/j.procs.2019.05.018

3 Parasher, Y., Kaushik, A., Kaur, G., & Singh, P. (2018). Modelling of structural and material parameters of optical planar waveguide to control birefringence, Latin America Optics & Photonics Conference, Optical Society of America (OSA). 🔗 https://doi.org/10.1364/LAOP.2018.Th4A.36

Books & Chapters

1 Kumari, S., Parasher, Y., Mehra, S., & Singh. (2020). *Digitization in agriculture – insight into the network world.* Artificial Intelligence; IoT-Based Technologies for Sustainable Farming; Smart Agriculture, IGI Global. 🔗 https://bit.ly/34VkuTg

2 Parasher, Y., Kaur, G., & Tomar, P. (2019). *Green smart environment for smart cities.* Green; Smart Technologies for Smart Cities, CRC Press. 🔗 https://bit.ly/34RZ09W

3 Parasher, Y., Singh, P., & Kaur, G. (2019a). *Green smart security system.* Green; Smart Technologies for Smart Cities, CRC Press. 🔗 https://bit.ly/3kV1xWz

4 Parasher, Y., Singh, P., & Kaur, G. (2019b). *Green smart town planning.* Green; Smart Technologies for Smart Cities, CRC Press. 🔗 https://bit.ly/2TOiLIX

5 Parasher, Y., Kedia, D., & Singh, P. (2018). *Examining current standards for cloud computing and iot.* Examining Cloud Computing Technologies Through the Internet of Things, IGI Global. 🔗 https://doi.org/10.4018/978-1-5225-3445-7.ch006

Relevant Courseworks

Modelling & Characterization of Fibre Photonic Devices	Photonics Intregrated Circuits
Laboratory of Photonic Integrated Circuits	Photonic Technologies
Photonic Integration for Sensing	Photonic Integrated Technologies
Microwave Photonics	Optoelectronic Devices for Metrology
Fundamentals of Applied Optics	Electromagnetic Fields & Propagation

References

Available on Request