

JASSIM ABDUL GAFOOR

PROJECTS

- Clock Buffer Design** | *Cadence Virtuoso, MATLAB* Feb 2021
- Created signal buffer layout to minimize clock skew between different capacitance loads
 - Modelled delay and fanout of 4 different stages to meet rise/fall timing requirements
 - Calculated power consumption through simulating current and activity
- Chip Layout 45nm architecture** | *Cadence, SystemVerilog* Dec 2020
- Synthesized a Finite State Machine module to control a user-driven lighting system
 - Created CMOS layout of my integrated circuit using Cadence Virtuoso toolkit
 - Performed simulations and analysed waveforms to meet timing requirements
- Bragg interferometer** | *KLayout, Lumerical Interconnect, MATLAB, Python* Jan 2020
- Created Transfer Matrix Model in MATLAB to generate design parameters for Bragg grating and Fabry-Perot cavity
 - Optimized sizing of Fabry-Perot cavity to increase quality factor by 50% of optical laser by running simulations in Lumerical Interconnect
 - Designed layout in KLayout to fabricate my design in silicon foundry
 - Tested laser design in lab using optical apparatus which achieved high quality factor
- MEMS Gyroscope Project** | *AutoDesk Inventor, Solidworks, Clewin* Dec 2018
- Designed a Micro-Electro-Mechanical Systems Gyroscope with CAD 0.2mmx0.2mm
 - Generated mask layouts in Clewin for fabrication with SOI-MUMPS process
 - Modelled energy and information flow diagrams for gyroscope to improve reliability
 - Minimized cross talk to less than 5% between driving and sensing oscillations

WORK EXPERIENCE

- TELUS Vancouver** Jul 2019 - Apr 2020
- Co-op Student** | *HTML/CSS, Confluence, Jira*
- Planned migration of 3000 SharePoint documents to new Confluence platform
 - Created templates and checklists for process, transferred 50% more documents per day and trained team members to follow a standardised procedure
 - Coordinated user needs into technical requirements for building Confluence tools
 - Performed software validation of all developed tools and search functionality
 - Drove project timeline forward by repurposing \$10,000 software to transfer 9000 catalogue items slated for future migration

EDUCATION

- UNIVERSITY OF BRITISH COLUMBIA** Aug 2016 – May 2021
- Bachelor of Applied Science** | *Integrated Engineering*
- Focus on Microelectromechanical systems, Semiconductor lasers, Digital VLSI systems.
 - Also exposed to Water management, Mining and Process operations
 - Safety Officer for UBC Thunderbikes Design Team (2 years)
 - Landing Gear Sub-Team Member for UBC Aerodesign Team (1 year)
 - Marketing Executive at UBC Enlivening Paper Inventions Club (2 years)

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SOFTWARE

- Intel Quartus
- Cadence
- Adobe Photoshop
- MATLAB
- SolidWorks
- KLayout
- Ansys Lumerical
- Blender

PROGRAMMING

- Python
- C++
- SystemVerilog HDL
- Assembly
- HTML/CSS

HARDWARE

- Altera FPGA
- Raspberry Pi
- Arduino
- Decawave UWB

INTERESTS

Electronics hobbyist who builds computers and servers. Avid sports enthusiast who plays volleyball and badminton.