

# Chinmay Rozekar

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## OBJECTIVE

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Post-Silicon Validation Engineer seeking to transition to Defect Metrology, aiming to apply technical expertise in system testing and equipment engineering to enhance semiconductor defect analysis.

## PROFESSIONAL SUMMARY

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- Leveraging 4+ years in Post-Silicon Validation to excel in Defect Metrology, aiming to advance recipe optimization and equipment functionality for superior defect detection.
- Experienced in Fab Technology Process Flow, Device Characterization, and Data Analysis through both coursework and applied projects at RIT's Semiconductor Microsystems Fabrication Laboratory (SMFL).
- Demonstrated expertise in project leadership, effectively reducing costs and enhancing product designs through analytical rigor and proactive equipment oversight.
- Skilled in fostering teamwork across functions, driving advancements in testing methodologies, and ensuring equipment reliability to uphold stringent industry norms.

## EXPERIENCE

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### Product Development Engineer

July 2020 – Present

*Advanced Micro Devices (AMD)*

*Austin, TX*

- Led system-level testing for AMD's Ryzen 8040 'Hawkpoint' series, Accelerated Processing Units (APUs), ensuring adherence to customer environment standards.
- Collaborated with Diagnostic, BIOS, and Design teams to enhance CPU performance features, contributing to product specification improvements.
- Spearheaded Test Time Reduction (TTR) analysis, eliminating redundant tests, significantly shortening test cycles, and reducing operational costs.
- Innovated a JTAG protocol-based solution for debugging returned parts, enhancing product quality and customer satisfaction.
- Established and managed an in-house server farm and APU client board setup, ensuring robust testing environments and streamlining development.
- Maintained the test program codebase repository using BitBucket/GIT, overseeing the development and release of test content.

### Product Engineering Co-Op

Jan. 2019 – Dec. 2019

*Advanced Micro Devices (AMD)*

*Austin, TX*

- Designed and automated test programs for Human Body Model Testing, reducing Engineering time by 90%.
- Reverse-engineered and redesigned a 20-year-old robotic graphical user interface in Python, reducing engineering time by 95%.
- Conducted stress tests on AMD products according to industry standards, qualifying products for production.
- Performed scheduled calibration and waveform verification for preventive maintenance as per ISO 9000 standards
- Conducted Design of Experiments on AMD products for Capacitive Modeling to optimize protection circuitry

### Graduate Research Assistant

Jan 2020 – May 2020

*Rochester Institute of technology*

*Rochester, NY*

- Developed a process flow for thin film IC development, covering various fabrication steps such as Dry Etch, Wet Etch, Ion Implantation, PVD and CVD.
- Designed and simulated NMOS devices to determine sub-threshold voltages and model transistor leakage current
- Conducted electrical device characterization and Meterology to optimize gate oxide thickness on NMOS devices.

## TECHNICAL SKILLS

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**Languages:** Java, Python, BASH, C/C++, SQL, HTML/CSS, XML, Markdown, MATLAB, Perl

**Libraries:** Matplotlib, Pandas, Numpy, Scikit-learn, Selenium

**Developer Tools:** Git, Jira, Confluence, Linux, CI/CD, IntelliJ Idea, VS Code, PyCharm, Eclipse, Jupyter, Anaconda, JSON, Notepad++, LaTeX

**Protocols:** JTAG, PCIE, DFT, Boundry SCAN, ATPG

**Simulation:** KiCAD, SolidWorks, COMSOL Multiphysics, Silvaco-Athena, Pyxis(Mentor Graphics)

**Data Analysis:** Excel, Power-BI, JMP, Python

## PROJECTS

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### **Review of Thin Film Technologies for Flexible Electronics**

Jan 2020 – May. 2020

- Designed a simulation model for growing a 1  $\mu\text{m}$  layer of flexible crystalline Si substrate on top of Tungsten metal layer using SOI method in Silvaco Athena.

### **A Thermally actuated four-legged MEMS based Silicon Micro-robot**

May 2018 – Dec. 2018

- Designed and fabricated a thermally actuated MEMS based Silicon micro-robot. Modeled design in CAD / Solidworks and Heat Transfer using COMSOL multi-physics FEA.

## EDUCATION

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### **Rochester Institute of Technology**

Rochester, NY

*Master of Science, Electrical Engineering*

*Aug. 2017 – May 2020*

### **Bharati Vidyapeeth University**

Pune, India

*Bachelor of Technology, Electrical Engineering*

*Aug. 2012 – June 2016*