Rohan Sanda

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EDUCATION

Stanford University (Palo Alto, CA), GPA 4.0 / 4.0 — Class of 2025
B.S. in Electrical Engineering
Minors in Mathematics and Computer Science
Relevant Coursework: Linear Algebra and Multivariable Calculus, Mechanics and Special Relativity, Programming Abstractions in C++, Integral Calculus, Computer Systems from the Ground Up, Ordinary Differential Equations, Electricity Magnetism and Waves, Probability for Computer Scientists

Tamalpais High School (Mill Valley, CA), GPA 4.55 / 4.0 — Class of 2020

TECHNICAL EXPERIENCE

Radio Glaciology Lab, Intern (Prof. Dustin Schroeder, Stanford University) — Dec 2020 – present
- Wrote signal processing scripts for bistatic ice-penetrating radars in MATLAB to recover bed echo powers at multi-kilometer offsets using quadratic least squares fitting and fine-scale phase-alignment of upsampled data
- Processed SDR data from Store and Thwaites Glaciers and estimated the one-way averaged attenuation rates at different path lengths
- Developed new field protocol for predicting recording times at different offsets currently being deployed in the field

MATLAB, link budgets, signal processing, RF, spectrum analyzer, SDR, Thwaites Glacier, Store Glacier

Summer Science Program in Biochemistry, Intern (Prof. Elizabeth Komives, UCSD) — June – Aug 2019
- Amplified and purified the CzCdc14 protein tyrosine phosphatase protein in the fungus *Cercospora Zeina*
- Performed assays to determine the catalytic properties, IC_{50} values, and reversibility mechanisms for candidate substrates with CzCdc14
- Optimized a novel *in silico* inhibitor molecule to CzCdc14 using laboratory data and the Molecular Operating Environment software package

Molecular Operating Environment, SDS-PAGE, Bradford Assay, IC_{50} values, reversibility mechanisms

MIT THINK Program, Finalist (Cambridge, MA) — Feb – June 2019
- Designed a novel biomedical device to prevent the formation of diabetic foot ulcers in at-risk patients using a network of flexible force sensitive resistors and a specially shaped orthosis
- Wrote C++ scripts to evaluate analog input data from an Arduino 1010 MKR Wi-Fi board and wirelessly log data into a Google Spreadsheet using webhooks to better inform patient-physician conversations
- Fabricated and tested the device prototype with a local physician and podiatry laboratory

C++, microcontrollers, IoT, force-sensitive resistors, serial communication, 3D-printing, insole fabrication

RELEVANT EXTRACIRRICULARS

Stanford Student Space Initiative, Balloonerang Lead and Outreach Co-lead — Sept 2020 – present
- Lead a team of eight students building an autonomous glider to recover payloads from high-altitude balloons
- Building a telemetry communication system in C++ using the Iridium Satellite Network
- Designing and testing a reusable, cost-effective parachute deployment system

Leadership, Python, C++, Rockblock 9603, Pixhawk Cube Orange, Px4, Fusion 360, 3D-printing

AWARDS

- Semi-Finalist in the Regeneron National Science Talent Search — 2020
- 1st Massachusetts Institute of Technology THINK Competition — 2019

PRESENTATIONS AND PUBLICATIONS

- *Informing Bistatic Radar Experiments at Thwaites Glacier Using Bistatic Data from Greenland and West Antarctica* – American Geophysical Union (AGU) – Fall Meeting [Hybrid Poster Presentation] — 2021
- N. Bienert, D. Schroeder, S. Peters, E. MacKie, E. Dawson, M. Siegfried, **R. Sanda**, P. Christoffersen, "Post-Processing Synchronized Bistatic Radar for Long Offset Glacial Sounding," IEEE TRANS. Geosci. Remote Sens., in review. Submitted Oct 13. 2021. — 2021

- *A Preventative Solution to the Formation of Diabetic Foot Ulcers* – THINK Finalists' Presentations – Massachusetts Institute of Technology [Oral Presentation] 2019

SKILLS
Programming: C++, C, Python, MATLAB, R, Git
Software: Molecular Operating Environment, Autodesk Fusion 360
Hardware: Arduino hardware, soldering, spectrum analyzer, SDRs
Languages: English, Hindi (oral), Spanish (intermediate)