Jade Chongsathapornpong

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Education

Massachusetts Institute of Technology **September 2019 – June 2024**

Bachelor of Science, Physics *GPA 5.0/5.0*

Recent Coursework:

- Statistical Physics I
- Quantum Physics I
- Continuum Applied Math
- Physics Comp. Data Sci.

Experience

ITER Organization **June 2021 – November 2021**

Intern, Disruption Mitigation Systems *Saint-Paul-lès-Durance, France*

- Studied shattering behavior of desublimated deuterium-neon gas pellets to inform design of injectors for plasma disruption mitigation in the ITER tokamak. Detected discrepancies with established statistical fragmentation model.
- Developed computer vision, tracking, and 3D reconstruction tools to support shard size and velocity distribution analysis, via single or synchronized cameras. Used these to produce IPP Garching single-camera data.
- Stereo camera setup, synchronization, alignment and calibration at ORNL.

Scaletech GmbH **November 2020 – March 2021**

Intern, Cleantech Consulting *Potsdam, Germany*

- Assessed feasibility and viability of solar milling equipment in off-grid Malawi for a major development bank.
- Gathered information on local agricultural needs and background, aided in GIS mapping efforts.
- Simplified model of motor performance for high-inertia loads to predict power supply needs.
- Identified and compared electrical and milling equipment candidates, established rapport with prospective suppliers.
- Reported to client and fielded technical questions.

MIT Bates Research and Engineering Center **December 2019 – January 2020**

Undergraduate Research Assistant *Middleton, MA*

- Streamlined data acquisition for research oxygen-lean biomass torrefaction reactor. Consolidated sensor inputs to use 1 device instead of 3. Adapted Python and shell scripts to automate complicated manual data collection process.
- Aided in calculations relevant to potential applications in forestry.

UCSB Materials Research Laboratory **June 2018 – August 2018**

Research Intern *Santa Barbara, CA*

- Characterized trends in structural and electronic properties of systematically strained epitaxial heterostructures.
- Utilized Python to process and visualize data from instruments. Operated thin-film XRD.
- Data used in subsequent Phys. Rev. Materials publication (2019)

Capabilities

- Computer Aided Design (SolidWorks CAD)
- Prototyping (Machine tools, Additive Mfg.)
- FEA, CFD (SolidWorks, ANSYS)
- Python, Rust, C++
- Data Acquisition, Data Science
- Electronics, Embedded Systems
- Photography, Videography, Audio
- English, French, Spanish

Activities

MIT Solar Electric Vehicle Team **September 2019 – Present**

- Layup and use of composite parts. Responsible for design and fabrication of vehicle canopy mechanisms.
- Managed social media outreach and publicity. Video editing and voiceover for series on science and engineering.
- Reverse-engineering of ANSYS software for script interoperability with undocumented features in CFD pipeline.

MIT Terrascope **September 2019 – December 2019**

- Collaborated with approximately 40 students to research, review, and refine suggestions for Puerto Rico's storm response and recovery; presented proposals to experts and public during livestreamed event.