

Faculty of Engineering

Summer Research Program 2022-2023

Project Title: 3D Printing of Continuous Fiber Reinforced Composites

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Objective

This project will investigate how to print continuously reinforced fibre materials with vitrimer or photopolymer matrix.

Project Details

Currently, most 3D printing techniques for continuous fibre-reinforced materials are using thermoplastic materials as the matrix. This project aims to develop a new manufacturing process that uses thermoset photopolymers or vitrimers as matrix materials. To enable the fabrication of vitrimer or photopolymers, we need to modify the nozzle of 3d printer. In this project, a student will re-design a 3d printing nozzle to enable the fabrication of continuous fibre with vitrimers or photopolymers.



Figure 1 3D printed continuous fibre reinforced materials

Prerequisites

Students who have a polymer background and CAD skills are preferred.

Additional Information

An applicant who is interested in this project please contact Dr. Yunlong Tang Yunlong.tang1@monash.edu. An interview is required.