

Information for Potential Students

1. Current research topics available:

(a) Formation of encapsulated microspheres

Due to the wide application of controlled drug release in capsules, biodegradable microsphere fabrication technologies have been favored in the biomedical industry since the discovery of many protein and peptide therapeutics. A concentric compound jetting device is to be redesigned and manufactured to fabricate encapsulated microspheres. Such an encapsulated microsphere will have a core and shell structure, and the structure geometry is expected to be fully controllable using the new compound jetting device.

(b) Machining of ultrafine-grained/nanostructured titanium

Ultrafine-grained/nanostructured titanium excels in strength, wear resistance, ductility, and high strain-rate superplasticity, with promising applications in medical industries such as dental posts. Precision machining work is generally indispensable for further applications of ultrafine-grained/nanostructured titanium. Machinability and microstructure instability of such titanium is to be studied using turning and different microscopy technologies, respectively.

2. Contact information:

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3. Requirements:

Resume and references are required.

Note: for exchange students, the ideal duration is six months.

4. Wage information:

16 K/year stipend plus tuition waiver for Ph.D. students

Clemson Advanced Manufacturing & System Integration Laboratory (CAMSIL)

