

FACULTY MENTOR

Saharnaz Baghdadchi

PROJECT TITLE

Generation of spatial polarization and phase patterns at focus

PROJECT DESCRIPTION

Description: In this project, we will perform Matlab simulations of calculating the phase distribution of incident light fields for generating the desired spatial polarization distributions at the focus of laser light. You will also build the optical setup and test the generation of the designed patterns and use the focused beams to trap and move particles.

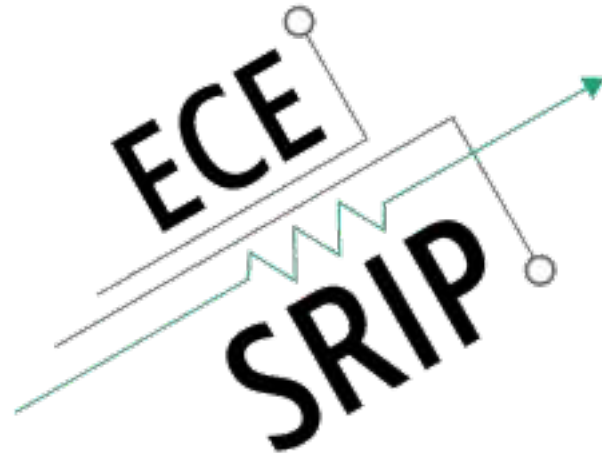
INTERNS NEEDED

2 BS and 1 MS

PREREQUISITES

Required Qualifications:

1. Knowledge of Matlab
2. Background in optics



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PROJECT TITLE

Fiber-based endoscopy

PROJECT DESCRIPTION

Description: The goal of the project is to develop an imaging setup using optical fibers and structured light fields to construct wide-field fluorescence images of biological tissues and record quantitative spectral images of the target regions.

INTERNS NEEDED

1 BS and 1 MS

PREREQUISITES

Required Qualifications:

1. Knowledge of Matlab
2. Background in optics