Announcing the Final Examination of Faraz Khalil Arya for the degree of Doctor of Philosophy

Time & Location: October 30, 2018 at 10:00 AM in Eng1 307
Title: Controlled Bubble Dynamics Inside Micropillar Arrays

Bubble dynamics inside micro domains was manipulated. Micropillars were formed inside two 1.5 mm wide and 220 µm high microchannels with a length of 23 mm. One microchannel had three arrays of micropillars with diameters of 40 µm and the other one had a single array of micropillars with diameters of 30 µm. An array of five 200 µm by 200 µm heaters was deposited inside these micropillar arrays and was used to control bubble size and trajectory. A sequential power switching of the heaters was used to pump liquid in a desired direction with a flow rate of 133 µl/min for the three arrays micropillars microchannel and 44.4 µl/min for the single array micropillars device.

Major: Mechanical Engineering

Educational Career:
Bachelor's of Mechanical Engineering, BS, 2010, University of Tehran
Master's of Mechanical Engineering, MS, 2013, Urmia University
Master's of Mechanical Engineering, MS, 2018, University of Central Florida

Committee in Charge:
Yoav Peles, Chair, Mechanical & Aerospace Engineering
Jihua "Jan" Gou, Mechanical & Aerospace Engineering
Reza Abdolvand, Electrical & Computer Engineering
Alain Kassab, Mechanical & Aerospace Engineering

Approved for distribution by Yoav Peles, Committee Chair, on October 16, 2018.

The public is welcome to attend.