

Focused Seminar Series on Microdevices in Biological Studies
25 Jul 2016 – 10 Oct 2016**Mechanophenotyping of Breast Cancer Cells**

Ms. Yasaman NEMAT

NUS Graduate School for Integrative Sciences and Engineering (NGS)

Date: 3rd October 2016, Monday

Time: 12pm to 1pm

Venue: Perseverance Room, Enterprise Level 5

**Abstract**

Metastasis accounts for most cancer related deaths. Epithelial to mesenchymal transition (EMT) is a dynamic process and has been known as a main mechanism which drives a cell to metastasize by causing changes in its morphological, biological, and mechanical characteristics. Morphological changes have so far been the main focus in understanding this process; however, mechanical properties have shown a great potential in marker-free phenotyping of cancer cells. In our study, we have employed our custom-designed microfluidic device to study the interplay of cell's physical, mechanical and metastatic characteristics using experimental and theoretical approach.

Short Biography

Yasaman Nemat is a PhD student at the NUS Graduate School for Integrative Sciences and Engineering (NGS), NUS. She received her Bachelor's Degree with honors in Mechanical Engineering from Georgia Institute of Technology before receiving the prestigious National Science Foundation (NSF) Scholarship to continue her Master's Degree in the field of Bioengineering. After moving to Singapore in 2012, she started an internship at Prof Chwee Teck Lim's lab and fell in love with the field of cancer mechanics. Her main goal is to investigate the mechanical properties of circulating tumor cells and correlate this information to metastasis potential of these cells.