

Jayaprakash K S

Date of birth : 31 March, 1989

CONTACT

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EDUCATION

Standard 10	Passed out in 2004 with an aggregate of 87% from PERKS MHSS, Coimbatore
Higher Secondary	Passed out in 2006 with an aggregate of 86% from PERKS MHSS, Coimbatore
Bachelor of Engineering in Mechanical	Passed out in 2010 with a CGPA of 8.74 from Coimbatore Institute of Technology
Master in Technology	Passed out in 2014 with a CGPA of 9.05 from National Institute of Technology, Calicut

CURRENT PROFILE

Currently doing Doctoral research in Mechanical Engineering at Indian Institute of Technology, Madras. Though a mechanical engineer by back ground, I am working in a multi-disciplinary field of Microfluidics which has enormous applications in chemical and biological sciences. During the PhD I have worked in multiple topics such as droplet microfluidics, interfacial phenomena, sorting of particles, droplets and cells, electro coalescence and detection of gasotransmitters in biological samples and have strong experimental knowledge in microfluidics. I am earnest, result oriented, focused learner and collaborative.

KEY RESEARCH SKILLS

Have got good experience in micro fabrication techniques such as photo lithography, soft lithography and micro machining of hard polymers

Have got broad knowledge and experience in optical and fluorescence microscopy and sample handling processes

Important Software packages known: Auto CAD, CATIA, Ansys Fluent and Matlab

PEER-REVIEWED JOURNAL PUBLICATIONS

"Dynamics of Aqueous Droplets at the Interface of Coflowing Immiscible Oils in a Microchannel", K. S. Jayaprakash, U. Banerjee and A. K. Sen *Langmuir*, 32, 2136–2143, 2016.

"Dynamics of rigid microparticles at the interface of co-flowing immiscible liquids in a microchannel", K. S. Jayaprakash, U. Banerjee and A. K. Sen, *J Colloid and Interface Science*, 493, 317–326, 2017.

"Droplet demulsification using ultralow voltage-based electrocoalescence", A. Srivastava, S. Karthick, K. S. Jayaprakash and A. K. Sen, *Langmuir*, 2017 (In Print).

"Continuous splitting of aqueous droplets at the interface of co-flowing immiscible oil streams in a Microchannel", K. S. Jayaprakash and A. K. Sen journal *Soft Matter*, 2018 (In Print)

PEER-REVIEWED INTERNATIONAL CONFERENCE PAPERS

"Migration and sorting of droplets at fluid-fluid interface", U. Banerjee, K. S. Jayaprakash and A. K. Sen, *MicroTAS 2015*, 25-29 October 2015, Gyeongju, South Korea

"Electrocoalescence based manipulation of the droplets in a microchannel", Abhishek Srivastava, S. Karthick, K. S. Jayaprakash and A. K. Sen, *Flow 2017*, 3-5 July 2017, Paris, France

"Droplet breakup at a co-flowing fluid-fluid interface in a microchannel", K. S. Jayaprakash and A. K. Sen, *MicroTAS*

2017, 23-26 October 2017, Savannah, USA

"Dynamics and Separation of Rigid Particles at a Fluid-Fluid Interface Based on Wetting in Microchannels", K. S. Jayaprakash and A. K. Sen, *IHMTC 2017*, 27-30 December 2017, Hyderabad, India

SCHOLARSHIPS

- ✓ MHRD scholarship for doctoral research for the period 2014-2019.
- ✓ MHRD scholarship during M.Tech for the period 2012-2014.

INDUSTRIAL WORK EXPERIENCE

Having a year of experience in managing fabrication processes of different process ducts, furnace-technological structures and building-structures of a Steel Pellet plant. My role was to manage and inspect the fabrication of ducts and collate the fabrication output of the entire plant.

Company Name : ESSAR Projects India Limited
Tenure : June 2010 to Aug 2011
Designation : Assistant manager
Project Involved : 12 MTPA Pellet plant for ESSAR Steel Orissa Ltd.
Paradeep, Odisha.