



+91 9830141300

✉ [math.saikat@gmail.com](mailto:math.saikat@gmail.com)

Skype: [saikatmath@outlook.com](https://www.skype.com/people/saikatmath)

## Curriculum Vitae

### Personal Information

Full Name	Saikat Saha	Date of Birth	February 10th, 1987
Gender	Male	Nationality	Indian
Father Name	Swaraj Saha	Mother Name	Putul Saha
Permanent-Address	Vill: Kulberia, PO: Bamangachi, PS: Duttapukur, Dist: North 24 Parganas, West Bengal, India, Pin: 743248		

### Research Interests

Fluid Mechanics, Applied Mathematics

### Professional Experiences

October, 2021 - present **Assistant Professor**, Department of Mathematics.  
Indian Institute of Technology-Roorkee, Roorkee-247667, Uttarakhand, India

2019 - 2021 **Post Doctoral Fellow**.  
Technion - Israel Institute of Technology, Haifa, Israel  
Research Advisor: Prof. Ehud Yariv

2018 - 2019 **Research Associate**.  
Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India  
Research Advisor: Prof. Meheboob Alam

2009 - 2010 **Assistant System Engineer**.  
Tata Consultancy Services, Kolkata, India

### Education

2011 - 2017 **Doctor of Philosophy (Ph.D.)**.  
Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India  
Thesis: *Nonlinear Hydrodynamics and Rheology of Granular and Gas-Solid Suspensions*  
Advisor: Prof. Meheboob Alam  
Examiners: Prof. Prabhu R Nott, Prof. Donald L. Koch

2007 - 2009 **Master of Science (M.Sc.) in Applied Mathematics**.  
University of Calcutta, West Bengal, India  
Thesis: *Steady Surface Waves Over a Bump*  
Advisor: Prof. Uma Basu  
Examiner: Prof. Sudeshna Banerjea

2004 - 2007 **Bachelor of Science (B.Sc.) in Mathematics**.  
Barasat Govt. College, University of Calcutta, West Bengal, India

### Awards/Scholarships/Grants

- Recipient of the best Ph.D. thesis award in Engineering Mechanics, *The Roddam Narasimha Award*, 2018
- Foreign Travel Grant from CSIR-Govt. of India, 2016
- International Travel Support from SERB-Govt. of India, 2015
- CSIR NET in Mathematical Sciences-2011, All India Rank: 87
- Junior Research Fellowship for the Ph.D. program in Indian Statistical Institute, 2010
- Lectureship NET in Mathematical Sciences-2009, All India Rank: 46
- N.C. Chatterjee Birth Centenary Students Welfare Fund, 2008
- West Bengal Government Merit-Cum-Means Scholarship, 2007

---

## Publications

1. Saikat Saha and Ehud Yariv  
Phoretic self propulsion of a slightly inhomogeneous disk (submitted)
2. Saikat Saha, Ehud Yariv and Ory Schnitzer  
Isotropically-active colloids under uniform force fields: from forced to spontaneous motion  
*Journal of Fluid Mechanics*, **916**, 2021, A47-1–A47-19
3. Saikat Saha and Meheboob Alam  
Burnett-order constitutive relations, second-moment anisotropy and co-existing states in sheared dense gas-solid suspensions  
*Journal of Fluid Mechanics*, **887**, 2020, A9-1–A9-45
4. Meheboob Alam, Saikat Saha and Ronak Gupta  
Unified theory for a sheared gas-solid suspension: from rapid-granular suspension to its small Stokes-number limit  
*Journal of Fluid Mechanics*, **870**, 2019, 1175 – 1193
5. Saikat Saha and Meheboob Alam  
Revisiting ignited-quenched transition and the non-Newtonian rheology of a sheared dilute gas-solid suspension  
*Journal of Fluid Mechanics*, **833**, 2017, 206 – 246
6. Meheboob Alam and Saikat Saha  
Normal stress differences and beyond-Navier-Stokes hydrodynamics  
*EPJ Web of Conferences*, **140**, 2017, 11014
7. Saikat Saha and Meheboob Alam  
Normal stress differences, their origin and constitutive relations for a sheared granular fluid  
*Journal of Fluid Mechanics*, **795**, 2016, 549 – 580
8. Saikat Saha and Meheboob Alam  
Non-Newtonian stress, collisional dissipation and heat flux in the shear flow of inelastic disks: a reduction via Grad's moment method  
*Journal of Fluid Mechanics*, **757**, 2014, 251 – 296

---

## Preprints

1. Saikat Saha and Ehud Yariv  
Shear driven diffusiophoresis of isotropic colloids, 2021
2. Saikat Saha and Meheboob Alam  
Nonlinear 14-moment theory for dense granular and gas-solid suspensions: from Burnett to Navier-Stokes order, 2021

---

## Referee

Journal of Fluid Mechanics

---

## Invited Talks

1. Recent Advances in Applied Mathematics: Theory and Computation,  
Department of Applied Mathematics, University of Calcutta, March-2021

---

## References

1. Dr. Meheboob Alam, Professor  
Engineering Mechanics Unit, JNCASR, Bangalore-560064, India  
email meheboob@jncasr.ac.in
2. Dr. Ehud Yariv, Associate Professor  
Department of Mathematics, Technion-Israel Institute of Technology, Haifa-32000, Israel  
email udi@technion.ac.il
3. Dr. Birendra Nath Mandal  
Professor (Retired), NASI Senior Scientist Platinum Jubilee Fellow (2009-2014)  
Physics and Applied Mathematics Unit, Indian Statistical Institute, Kolkata-700108, India  
email bnm2006@rediffmail.com birenisical@gmail.com