# CURRICULUM VITAE

**Dr. Kalpajyoti Borah**
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Department of Mechanical Engineering
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## EDUCATION

- **Ph.D.** in Fluid and Thermal, Mechanical Engineering, IIT Guwahati
- **M.Tech** in Ocean Engineering & Naval Architecture, IIT Kharagpur
- **B.Tech** in Aeronautical Engineering (specialization Aerodynamics), Aeronautical Society of India
- **12**$^{th}$ from Jawahar Navodaya Vidyalaya, Sivasagar, Assam
- **10**$^{th}$ from Jawahar Navodaya Vidyalaya, Jorhat, Assam

## THESIS TITLES

**Ph.D. Thesis:** Finite Volume and Meshless Algorithms for Ideal Magnetohydrodynamics

**M.Tech Thesis:** Calculation of Reynolds Stress Using Acoustic Doppler Velocimeter

## RESEARCH INTERESTS

- Computational Magnetohydrodynamics
- Computational Gasdynamics
- Finite Volume and Meshfree Algorithms

## PUBLICATIONS

### INTERNATIONAL JOURNAL

- Kalpajyoti Borah, Ganesh Natarajan and Anoop K. Dass, *A novel second–order flux splitting for ideal magnetohydrodynamics*, Journal of Computational Physics, Vol. 313 (2016) 159–180.
- Kalpajyoti Borah, Ganesh Natarajan and Anoop K. Dass, *On a conservative mesh-free framework for one–dimensional ideal magnetohydrodynamics*, Under review in Computers & Fluids.
- Kalpajyoti Borah, Ganesh Natarajan and Anoop K. Dass, *Extending Magneto–acoustic Wave Particle Splitting (MWPS) scheme for two–dimensional simulations of ideal magnetohydrodynamics flows*, Manuscript under preparation.

### INTERNATIONAL CONFERENCES

- Kalpajyoti Borah, Ganesh Natarajan and Anoop K. Dass, *A meshfree framework for ideal magnetohydrodynamics*, $5^{th}$ International and $41^{st}$ National Conference on Fluid Mechanics and Fluid Power (FMFP 2014), IIT Kanpur, India, December 12–14, 2014.
- Kalpajyoti Borah, Ganesh Natarajan and Anoop K. Dass, *A conservative mesh-free framework for one–dimensional ideal magnetohydrodynamics*, $17^{th}$ Annual CFD Symposium, NAL Bangalore, India, August 11–12, 2015.
- Kalpajyoti Borah, Ganesh Natarajan and Anoop K. Dass, *Optimally–dissipative wave–particle splitting scheme for ideal magnetohydrodynamics*, XXVII IUPAP Conference on Computational Physics, IIT Guwahati, India, December 2–5, 2015.

### BOOK CHAPTER

- Kalpajyoti Borah, Ganesh Natarajan and Anoop K. Dass, *A meshfree framework for ideal magnetohydrodynamics*, Fluid Mechanics and Fluid Power–Contemporary Research, Lecture Notes in Mechanical Engineering, (Springer India 2017), ISBN: 978-81-322-2741-4, 1595-1605.