



PyBaMM Conference 2026

DAY 1 - OCTOBER 15

08:15-09:45 Hands-on Training Session
Ionworks

10:00-10:20 Opening Talk
Valentin Sulzer, Ionworks

10:20-10:50 Keynote
Greg Offer, Imperial College London

10:50-12:05 Session 1: Physics Based Degradation Models

Hidden Heterogeneity, Distorted Parameters: Assessing the Limits of 1D DFN Aging Models
Mohammed Asheruddin Nazeeruddin, Imperial College London

Mechanistic Modelling of Capacity Fade and Electrode Volume Evolution in Li-S Batteries
Prakhar Verma, Imperial College London

Extending PyBaMM to Composition-Dependent Electrolytes Design through Coupling with the Advanced Electrolyte Model
Jingwen Weng, Imperial College London

A Vacancy-Assisted Cation-Mixing Model for High-Ni Cells
Sravan Pannala, University of Michigan

12:05-12:35 Invited Talk
Birger Horstmann, German Aerospace Center (DLR)

12:35-14:00 Lunch & Posters

14:00-14:45 Session 2: Thermal and Reduced-Order Models

Physics-based Core-Surface Thermal Models
Mark Blyth, University of Bristol

Design Maps for Blended and Bilayer NMC622/LFP Cathodes in Fast-Charging Li-ion Cells
Fiyanshu Kaka, University of Oxford

A PyBaMM-Implemented Reduced-Order Model for SiO/Graphite Blended Electrodes
Mingjie Tu, General Motors

14:45-15:30 Industry Panel

16:00-17:00 Session 3: Data Driven Models

Physics-Informed Degradation Mapping and Surrogates for Second-Life Battery Assessment
Ali Hassan, University of Michigan

From Deterministic Microstructure Solvers to Operator-Learned Inverse Design of Porous Electrodes
Conrard Giresse Tetsassi Feugmo, University of Waterloo

Battery Lifetime Prediction Beyond Experimental Data with PyBaMM
Hanyu Bai, University of Michigan

Universal Battery Voltage Predictor Using Sim-to-Real Transfer Learning
Tanushree Roy, Texas Tech University



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DAY 2 - OCTOBER 16

08:15-09:45 Hands-on Training Session
Ionworks

10:00-10:30 Keynote Talk
Alexander Bills, Ionworks

10:30-11:15 Session 3: System Level Models

Onboard material-level diagnostics for tracking Si burn-out in Si-graphite batteries
Zhiwen Wan, University of Michigan

A Monte-Carlo Framework for Benchmarking Battery SoH Estimation Algorithms
Elias Hempen, ISEA RWTH Aachen

Integrating Physics-Based Battery Models with Gradient-Based Electric Aircraft Design
Amal Sebastian, University of Michigan

11:15-12:00 Invited Talk
TBC

12:45-13:30 Session 4: Na-ion and Volume Expansion

Physics-Based Swelling Prediction for Consumer Electronics Batteries
Thanh-Son Dao, Microsoft Corporation

Temperature-Dependent Degradation Modeling of HC||NVPF Na-Ion Batteries
Zhu Zhu, Purdue University

Physics-Based Modeling of an NVP/Hard Carbon Sodium-Ion Cell in PyBaMM
Shubham Khange, Aalto University

14:45-15:30 Closing Talk