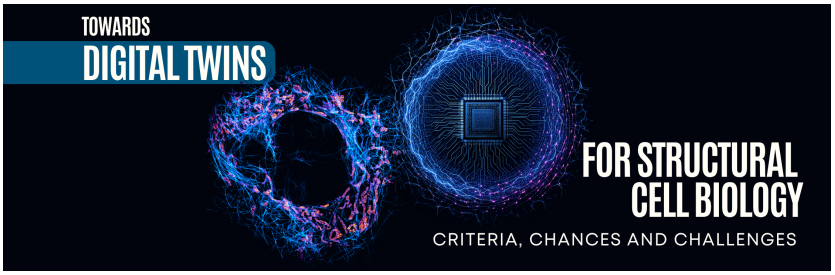

Contribution ID: **30** Type: **not specified**

Multiscale Investigation of Membrane Remodeling during Selective ER-phagy

Wednesday, 4 March 2026 17:30 (20 minutes)

FAM134B drives selective ER-phagy to maintain ER homeostasis. Modeling, coarse-grained MD, and experiments capture RHD-driven curvature induction/sensing (isoform-specific), ubiquitination-triggered clustering, and IDR-amplified ER budding. These self-organizing principles inform a hierarchical digital twin of the ER–phagophore contact site linking membrane mechanics/curvature, FAM134B–LC3B tethering, and ATG9-mediated lipid scrambling to predict nascent phagophore recruitment, growth, and maturation.

Presenter: Dr BHASKARA, Ramachandra M. (Goethe University)

Session Classification: Short Talk