2019 ML-MSM Posters

Author Name	Affiliation	Poster Title	Group #	Poster #	Model Type
Aaron Meyer	University of California Los Angeles	Adapter-Layer RTK Signaling: Basic Understanding & Targeted Drug Resistance	2	28	data
Ahmet Erdemir	Cleveland Clinic	Software for Practical Annotation and Exchange of Virtual Anatomy (æva): Design Considerations	1	5	ODE
Amir Barati Farimani	Carnegie Mellon University	Discovery of Partial Differential Equations Using Deep Convolutional Networks	1	10	PDE
Andrzej Przekwas	CFD Research Corporation	Multiscale Simulation Framework for Personalized Pharmacology	1	12	PDE
Andy Somogyi	Indiana University	Multi-Cellular Model Specification and Simulation	1	19	theory
Ashlee Ford Versypt	Oklahoma State University	CAREER: Multiscale Modeling of a Virtual Kidney during the Onset and Progression of Diabetic Kidney Disease	1	14	theory
Assad Oberai	University of Southern California	Deep Generative Priors for Quantifying Uncertainty	2	30	data
Benjamin Gyori	Harvard Medical School	Ecosystem of Machine-maintained Models with Automated Analysis (EMMAA)	1	2	ODE
Chi-Hua Yu	Massachusetts Institute of Technology	Using Artificial Intelligence to Generate de novo Thermally Stable Collagen Sequences	2	34	data
Danh-Tai Hoang	NIDDK	Classification with multiscale hidden variables using Expectation Reflection	2	27	data
Daniel Faissol	University of Vermont	Precision medicine as a control problem: using simulation and deep reinforcement learning to discover adaptive, personalized multi-drug therapies.	2	25	data
David Nordsletten	University of Michigan	Towards Automated Biomechanical Analysis of Patients with Hypertrophic Cardiomyopathy	2	29	data

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Elsje Pienaar	Purdue University	A computational bridge between in vitro MIC and in vivo efficacy of antibiotics against MAC infection	1	9	ODE
Emily Greenspan	National Cancer Institute	NCI-DOE Collaborations: Extending Frontiers of Predictive Oncology and Exascale Computing	2	26	data
Eric D.	Galois Inc.	Automated Scientific Knowledge Extraction with AMIDOL	1	3	ODE
Farid Yaghouby	Center for Devices and Radiological Health	Sex-Specificity in a Safety of Vagus Nerve Stimulation: An Investigation on Cardiovascular and Immune Systems	2	33	data
Francisco Sahli Costabal	Pontificia Universidad Católica de Chile	Multi-fidelity classification using Gaussian processes: accelerating the prediction of large-scale computational models	2	31	data
Gary An	University of Vermont	Genetic Algorithms for model refinement and rule discovery in a high-dimensional agent-based model ofinflammation	1	13	theory
Herbert Sauro	University of Washington	Using perturbation data and ML to determine kinetic models	1	4	ODE
Jacob Barhak	None	Supervised Learning of Units of Measure	2	23	data
Jessica Zhang	Carnegie Mellon University	Artificial Intelligence Data-driven Model for Adolescent Idiopathic Scoliosis: Analysis, Prediction and Treatment	2	35	data
John Bachman	Harvard Medical School	An Automated Scientific Discovery Framework	1	1	ODE
Jorg Peters	University of Florida	Tri-variate C 1 elements for curved domains	1	11	PDE
Jungmin Han	NIDDK	Obesity and the Sustainability of Calcium Oscillations in Hepatocytes: Explicitly Modeling Mitochondria-associated ER Membranes	1	8	ODE
Kanaka Rajan	Icahcn School of Medicine at Mount Sinai	Multi-region 'Network of Networks' Recurrent Neural Network Models of Adaptive and Maladaptive Learning	1	18	theory
Krishna Garikipati	University of Michigan	Artificial Intelligence guided multi-scale multi-physics framework for discovering complex emergent materials phenomena	1	6	ODE

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Linwei Wang	Rochester Institute of Technology	End-to-End Uncertainty Quantification in Multiscale Models via Bayesian Active Learning	2	32	data
Manu Aggarwal	NIDDK	Topological data analysis applied to pancreatic-islet architecture	2	20	data
Misha Pavel	Northeastern University	Multiscale Digital Twin Models of Health Behaviors and Behavioral Change	1	15	theory
Paris Perdikaris	University of Pennsylvania	Machine learning in cardiovascular flows modeling: Predicting arterial blood pressure from non-invasive 4D flow MRI data using physics-informed neural networks	1	16	theory
Parya Aghasafari	University of California Davis	Predictive multiscale in silico cardio-pharmacology	2	21	data
Paul Aiyetan	Frederick National Laboratory for Cancer Research	Towards A Universal Multiscale Data Representation and Knowledge Integration	2	22	data
Peng Zhang	Stony Brook University	Machine Learning in Multiscale Modeling and Validation of In Vitro Experiments of Blood Flow and Platelet Mediated Thrombosis Initiation	2	36	data
Ravi Radhakrishnan	University of Pennsylvania	Computational Algorithms for In Silico Profiling of Activating Mutations in Cancer	1	17	theory
Samuel Britton	University of California Riverside	Learning Regulation and Optimal Control of Enzyme Activities to Preserve Solvent Capacity in the Cell	2	24	data
William Barnett	Georgia State University	Brainstem mechanisms of cardio-ventilatory coupling	1	7	ODE