

Dagstuhl Seminar Emerging Technologies for Performance and Dependability Assessment (26211), May 17.-22. 2026

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	
07:30 - 8:45		Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	
09:00 - 10:15		Welcome & Opening (Paulo Maciel) Participant introductions	ML for safety-critical applications (Evgenia Smirni) Neuroexplicit Models (Verena Wolf)	E1 AI for dependability	E2 Multi-level models and evaluation	T Tool demos / short presentations Tool Integration & Interfacing	Presentation and discussion of results, Dagstuhl report
10:15		Coffee and Tea	Coffee and Tea	Coffee and Tea	Coffee and Tea	Coffee and Tea	
10:45 - 12:00		Introductions	B1 Uncertainty in models	B2 Workflow analysis	Wrap up: present ideas from sessions; further session planning	t.b.d. Follow-up topic sessions	Wrap up; further planning of collaborations and publications
		Data and Models (Kishor Trivedi)					
12:15 - 13:00		Lunch	Lunch	Lunch	Lunch	Lunch	
14:00 - 15:15	Arrival (starting 15:00)	Hybrid Evaluation Methods (Anne Remke & Armin Zimmermann)	C1 Online data collection	C2 Guided simulation and analysis	Hike	t.b.d. Joint publication planning?	Departure at 13:00
15:15	Coffee and Cake	Coffee and Cake	Coffee and Cake	Coffee and Cake			
15:45 - 17:00		A Real-World challenges and applications - <i>bring your own problem</i>	D1 AI and Models	D2 Hybrid simulation and analysis			
17:00		Get to know each other	Get-together: What do we want to achieve?		Get-together: what was done		
18:00	Buffet dinner	Dinner	Dinner	Dinner	Dinner		
	Get-together						

Session	Topic
A	Real-world challenges, use cases and areas of application (industry, reliability, IoT, software aging, smart grids, autonomous systems, resilience ...)
B1	Uncertainty in models: epistemic vs aleatoric; nondeterminism and stochastic models; Data logging and analysis for parametric analysis; uncertainty treatment in tools and systems engineering workflows
B2	Quantitative analysis of workflows of activities with stochastic durations (diagnostic predictive prescriptive for performance dependability)
C1	Online methods for data collection of real-world systems for evaluation / optimization
C2	Guided simulation or analysis (data methods and AI to analyze simulative online results and guide simulation or analytic algorithms; rare-event simulation, importance splitting ...)
D1	AI and models: AI for model generation, learning models from data
D2	Hybrid integration of simulation and analysis methods (state-based and non-state-based methods, hierarchical solutions, fixed-point iterations)
E1	AI for dependability evaluation
E2	Multi-level and multi-formalism models, semantic model interfacing and embedding, multi-level analysis
T	Tool demos; Integration and interfacing of tools (combining data methods, simulation, and symbolic / numeric analysis; digital twins; standardized interfaces ..)