

Compositional Structures for Systems Engineering and Design

November 03-04, 2022

09:00 – 5:00 PM EDT

Nov 3, Thursday				Nov 4, Friday			
Start	End	Duration	Speaker	Start	End	Duration	Speaker
9:00	9:10	0:10	NIST Introduction	9:00	9:45	0:45	<i>Emergent effects and contextual behaviours in categorical systems theory</i> Jules Hedges
9:10	10:10	1:00	<i>Compositionality and categorical thinking</i> Fabrizio Genovese	9:45	10:15	0:30	<i>AlgebraicJulia: a compositional approach to technical computing</i> Evan Patterson
10:10	10:30	0:20	TBA Esteban Montero	10:15	10:35	0:20	<i>Compassionate Mathematics</i> Priyaa Srinivasan, Pawel Sobocinski
10:30	10:45	0:15	Break	10:35	11:00	0:25	Break (Group photo)
10:45	11:30	0:45	<i>Multiple model synchronization with multiary delta lenses</i> Zinovy Diskin	11:00	11:45	0:45	<i>Electrical circuits with string diagrams</i> Pawel Sobocinski
11:30	11:50	0:20	<i>Sheafification as a critical design technique for creative preservation in complex systems – principles, illustrations and first applications</i> Pascal Le Masson	11:45	12:30	0:45	<i>Higher Knowledge Representation</i> Derek Wise
11:50	12:10	0:20	<i>A contextual affordance model for autonomous systems</i> Angeline Aguinaldo	12:30	13:30	1:00	Lunch
12:10	12:30	0:20	<i>Category Theory as a possible theoretical foundation for Systems Engineering</i> David Perner	13:30	14:15	0:45	<i>Mathematics of the solar system internet</i> Alan Hylton
12:30	13:30	1:00	Lunch	14:15	14:35	0:20	<i>Azure Knowledge Marketplace: Categories for Scale</i> Donald Thompson
13:30	14:30	1:00	<i>What are we tracking? How applied category theory puts thinking on rails</i> David Spivak	14:35	14:55	0:20	TBA Joe Moeller
14:30	15:00	0:30	<i>Algebraic Databases - Lessons Learned</i> Ryan Wisnesky	14:55	15:15	0:20	<i>Sheaves: Where to Find them and How to Use them</i> Daniel Rosiak
15:00	15:15	0:15	Break	15:15	15:30	0:15	Break
15:15	16:00	0:45	<i>Categories, formal methods, learning and compositional problems in autonomy</i> Georgios Bakirtzis	15:30	16:30	1:00	Discussion Session
16:00	17:00	1:00	Discussion Session	16:30	17:00	0:30	Presentation