

2019 CPS V&V GRAND PRIX



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• **A P T I V** •

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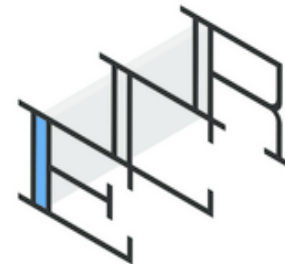


MIT-IBM Watson AI Lab

SIEMENS

Google™

HRL
LABORATORIES



EDGE CASE RESEARCH

JUDGES

Michael Maass
Aptiv

Jim Kapinski
Amazon

Grant Passmore
Aesthetic Integration

David Orr
Google

Alwyn Goodloe
NASA

Aleksey Nogin & Michael Warren
HRL

Nathan Fulton
MIT-IBM

Aaron Kane
Edge Case Research

Christof Budnik & Christoph Brand
Siemens

PROJECTS



“Modelling Safe and Efficient Tumbles of
an Acrobatically Inclined Robot”

Rachel Cleaveland



“Modeling and Orb-Weaver Capture Spiral”

Benjamin Smith



“Versatile CPS for Data Center Cooling”

John Rollinson and Yunjie Su

PROJECTS

$$\frac{\sigma(\rho(\alpha, P), p) \xrightarrow{d\mathcal{L}} Q}{\langle\!\langle\alpha\!\rangle\!\rangle P \leq p \xrightarrow{d\mathcal{L}} Q} \text{ (d}\mathcal{L}\text{-}\langle\!\langle\cdot\!\rangle\!\rangle\text{)}$$

“Nondeterministic Discrete Stochastic
Differential Dynamic Logic”

Sam Kim

CPS

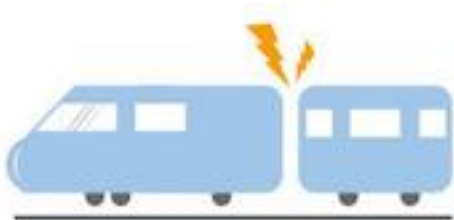
“Facilitating Concurrency in Hybrid Programs”

Long Pham and Haithem Turki



“Verified Cruise Control System on RC Vehicle”

Yufei Wang and Shashank Ojha



“Lots & Lots of Trains: Efficient Transit
with Distributed Hybrid Systems”

Karen Bowman and Joshua Kalapos