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# *High-Confidence Embedded Systems 2003 Workshop*

[www.cs.cmu.edu/~weigand/aro/index.html](http://www.cs.cmu.edu/~weigand/aro/index.html)

Workshop Program

Discussion Topics

Wireless Connection



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# *Verification Tools for Embedded Systems*

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# *Three Main Thrusts of Our Project*

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## Verifying system integrity

- Synchronization constraints
- Resource constraints
- Real-time constraints

## Modeling the environment

- Hybrid dynamics
- Stochastic models

## Usability

- Extracting models
- Explaining tool feedback



# *Cross-Cutting Themes*

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Exploit **model checking** techniques and tools.

Focus on the **task level**.

Incorporate **continuous domains** in our models.



# *Research Updates*

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## Generation and Applications of Scenario Graphs

- Oleg Sheyner (Jeannette Wing)

## Verification of Real-Time Operating Systems (MicroC/OS)

- Ed Clarke

## Model Checking Publish Subscribe Systems

- David Garlan

## Modeling and Verifying Exception Handling

- Reid Simmons



# *Posters (Krogh)*

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## The Verification Toolbox (VTB)

- Ansgar Fehnker

## VTB Model Relations Manager

- Rajesh Kumar

## Systematic Simulation for Embedded Control System Design

- James Kapinski

## Model Reduction for Verification of Hybrid Systems

- Zhi Han

