

# Profile and Research Areas

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# My Research at a Glance

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- **Software Infrastructures for Cyber-Physical Systems**
- **Continuous Engineering and DevOps Frameworks**
- **Service Oriented Computing and Resource Oriented Computing**
- **Adaptive Systems**
- **Dynamic Analysis, Compliance, Verification**

# Focal Points of my Research

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- **Services Computing**
  - Resource Oriented Architectures
  - Middleware Technologies
  - Integration and Interoperability
  
- **System Analysis**
  - Static Analysis
  - Dynamic Analysis
  - Run-time policy verification and simulation
  
- **Intelligent Systems**
  - Personalized Web Tasking Systems
  - Micro-services and Collaborative systems
  - Trust and Distributed Affordances

# Industrial Projects

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- **IBM (Toronto Lab)**
  - Adaptation of back end web services to Restful services. REST bindings for SCA.
  - Specification and design of the Personalized Web Tasking (PWT) run-time model. Foundation for Digital Assistants.
  - Model Synchronization Frameworks. Rational Software Architect.
- **Computer Associates (CA Labs)**
  - Root Cause Analysis frameworks. Willey, CMDB.
  - Large scale event log analysis and filtering.
  - Business process compliance analysis and policy enforcement.

# Research Topics I am Interested In

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## Frameworks

- **Middleware for IoT and Cyber-Physical Systems**
- **Model-based engineering methodologies**
- **Simulation, verification and validation tools**
- **Adapt-reuse technologies**
- **Integration, interoperability, modularity, composability**
- **Efficient deployment – Short Release Cycles - DevOps**
- **Data and meta-data modeling and reasoning**

## Applications Areas and Projects

- **End-user systems – Intelligent Digital Assistants**
- **Processes – Risk identification & management**
- **Operations – Autonomic and Adaptive systems**

# Contacts

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