

## French-American Doctoral Exchange Program

FADEx 2016 – Agenda, July 4-8, 2016  
*Cyber-Physical Systems*

--- Monday, July 4, 2016 ---  
Grenoble

Auditorium, Espace colloques au rez-de-chaussée  
du **bâtiment IMAG**

(<http://www.openstreetmap.org/relation/6158280>)

700 avenue Centrale - Domaine Universitaire - 38401  
Saint Martin d'Hères  
Tram B & C - Arrêt Gabriel Fauré

9:00 am: *Introduction*

9:30 am – 11:15 am: *Keynote Speeches*

**Joseph Sifakis** “A Research Agenda for CPS”

**Rahul Mangaram**, University of Pennsylvania  
“Three Challenge Problems with CPS”

11:30 am – 12:30 pm: *Panel discussion*  
Scientific challenges on CPS

Joseph Sifakis, Rahul Mangaram, Carlos Canudas de Wit,  
Claude Castelluccia

2:00 pm – 5:00 pm: *Students Presentation*  
Chairs: *Nicolas Halbwachs, Nicolas Marchand*

**Chuchu Fan**, University of Illinois at Urbana-  
Champaign, “Verification of the cyber-physical  
systems: invariance and conformance”

**Ayman Aljarbouh**, Université de Rennes,  
“Accelerated Simulation of Hybrid Systems (Language  
and Compilation)”

**Achin Jain**, University of Pennsylvania, “Data  
Predictive Control for Cyber-physical Systems”

**Berk Celik**, Université de Technologie de Belfort-  
Montbéliard, “Adaptive and anticipative energy  
management applications to the coupling of the smart  
buildings with electric vehicles by using multi-agent  
systems”

**Imane Lamrani**, Arizona State University, “Robust  
Controller Software Synthesis for Non-linear Safety  
Critical Cyber-Physical Systems”

**Maëlle Kabir-Querrec**, Université Grenoble Alpes,  
“Cybersecurity of smart-grid control systems: intrusion  
detection in IEC 61850 networks”

**Arsalan Mohsen Nia**, Princeton University, “Security  
and Privacy Challenges in Cyber Physical Systems”

**Blazo Nastov**, Université de Montpellier, “Towards  
V&V suitable Domain Specific Modeling Languages  
for MBSE: A tooled approach”

**Nidhi Rastogi**, Rensselaer Polytechnic Institute,  
“Using Information Centrality for Anomaly Detection  
and Attack information in Large Networks”

**Aurélien Palisse**, Université de Rennes, “Malware  
Analysis and Detection”

--- Tuesday, July 5, 2016 ---  
Grenoble

**Centre de recherche Inria Grenoble - Rhône-Alpes**  
655 avenue de l'Europe - 38 330 Montbonnot-Saint-Martin  
Bus 6070 - Arrêt Inria  
Accueil Salle A103

9:00 am – 10:30 am: *Platform Visits*  
GTL/Grenoble Traffic Labs, Amiqua4Home

10:45 am – 12:45 pm: *Workshop between US and  
French PhD students*  
Chairs: *Alain Girault, Alain Kibangou*

--- Wednesday, July 6, 2016 ---  
Paris

UPMC - LIP6  
4 Place Jussieu  
Bâtiment 25-26  
75005 Paris

Laboratoire LIP6: Bâtiment 25-26/Salle 105

9:00 am – 9:30 am: *Introduction*

9:30 am – 10:15 am: *Keynote Speech*  
**Robert Plana** “Cyberphysical Systems: enablers for  
Industry 4.0”

10:30 am – 12:00 pm: *FADEx Laureates' Pitch*  
**Chuchu Fan**, University of Illinois at Urbana-  
Champaign, **Ayman Aljarbouh**, Université de Rennes,  
**Achin Jain**, University of Pennsylvania, **Berk Celik**,  
Université de Technologie de Belfort-Montbéliard,  
**Imane Lamrani**, Arizona State University, **Maëlle  
Kabir-Querrec**, Université Grenoble Alpes, **Arsalan  
Mohsen Nia**, Princeton University, **Blazo Nastov**,

Université de Montpellier, **Nidhi Rastogi**, Rensselaer Polytechnic Institute, **Aurélien Palisse**, Université de Rennes, **Jared Frank**, New York University, **Yuko Sasa**, Université Grenoble Alpes, **Kapil Sharma**, University of Texas, **Christophe Viel**, Université Paris Saclay, **Jill Jermyn**, Columbia University, **Maxime Puys**, Université Grenoble Alpes, **Juhi Ranjan**, University of Virginia, **Baptiste Goupille-Lescar**, Université de Rennes, **Aditya Zutshi**, University of Colorado, Boulder, **Anas Motii**, Université de Toulouse - Paul Sabatier

12:00 pm – 2:00 pm: *Visit of Labs and ISIR Platforms*

2:00 pm – 2:45 pm: *Keynote Speech*

**James Crowley** “Qualities for Smart Objects”

2:45 pm – 3:30pm: *Labex Presentations*

**Persyval-Lab** (Marie-Christine Rousset), **SMART** (Mohamed Chetouani), **CominLabs** (Patrick Bouthemy)

4:00 pm – 5:00 pm: *Discussions on international mobility opportunities*

**CNRS** (Anne Doucet, INS2I, International Affairs) **Inria** (Tania Castro), **ANR** (Nazim Agoulmine, Nakita Vodjani), **Labex Smart** (Raja Chatila), **Persyval-Lab** (Marie-Christine Rousset), **CominLabs** (Patrick Bouthemy)

--- Thursday, July 7, 2016 ---  
Rennes

**Institut de recherche en informatique et systèmes aléatoires (IRISA)**

Campus de Beaulieu - 263 avenue du Général Leclerc  
35042 Rennes – Salle Métivier

1:30 pm – 2:00 pm: *Introduction*

2:00 pm – 5:30 pm: *Students Presentation*

**Jared Frank**, New York University, “Immersive Mobile Interfaces for Enhanced Human-Robot Interaction”

**Yuko Sasa**, Université Grenoble Alpes, “Intelligence in a Socio-Affective perspective for a Robot: Language Primitives for a Scalable Interaction with a Smart Home's Robot”

**Kapil Sharma**, University of Texas, Austin, “Micro models of traffic flow with human in loop, and game theoretic analysis for predicting collisions”

**Christophe Viel**, Université Paris Saclay, “Determination of command control and observator for multi-agent system with reduced information”

**Jill Jermyn**, Columbia University, “Scaling Network Attack Detection Using Network Function Virtualization”

**Maxime Puys**, Université Grenoble Alpes, “Certified filters generation process for control systems”

**Juhi Ranjan**, University of Virginia, “Sensing Human Context using Cyber Physical Systems”

**Baptiste Goupille-Lescar**, Université de Rennes, “Introducing Dynamicity in High Performance Real-Time Computing Platforms for Sensors”

**Aditya Zutshi**, University of Colorado, Boulder, “Falsification of Safety Properties of Hybrid Systems”

**Anas Motii**, Université de Toulouse - Paul Sabatier, “Incremental pattern-based modeling and safety/security analysis for correct by construction systems design”

5 :30 pm – 6 :00 pm : *Presentation on Drones*  
**François Bodin**

--- Friday, July 8, 2016 ---  
Rennes

**IRISA**

Campus de Beaulieu - 263 avenue du Général Leclerc  
35042 Rennes - Salle Métivier

9:00 am – 9:45 am: *Keynote Speech*

**Benoit Caillaud** “Its About Time...Time Domains in Hybrid Systems Modeling”

9:45 am – 11:00 am: *Presentation of local research groups*

11:30 am – 12:00 pm: *Poster Session*

1:00 pm – 3:30 pm: *Workshop between US and French PhD students*

3:45 pm – 4:45 pm: *Visit of the Immersia platform*

**Partners**

