

Annual Report of the MISS of Rouen INSA Center: RIC-MISS (2005)

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Website: <http://miss.insa-rouen.fr/>

Center highlights

The RIC-MISS is located in the INSA (National Institute of Applied Sciences) of Rouen, one node of the national INSA network. <http://www.insa-rouen.fr/>

The centers activities are linked to:

- Some INSA Education Departments (mainly Information Technology Engineering: ASI; Fine Chemistry and Chemical Engineering: CFI; Mathematics and Software Engineering: GM; Mechanical Engineering: MECA)

<http://asi.insa-rouen.fr/presentation/gb.php>

<http://cfi.insa-rouen.fr/anglais/anglais.php>

<http://gm.insa-rouen.fr/jmgm/index.do>

<http://meca.insa-rouen.fr/anglais/anglais.php>

- Some INSA Laboratories (Research), mainly (Mathematics: LMI, Mechanics: LMR; Process Engineering Laboratory: LRCP; Data Processing and Information Systems: PSI FRE CNRS 2645,

See also <http://recherche.insa-rouen.fr/> for research domain aspects.

- And will work with the emergent structures (CERTI) for Technology Transfer from INSA to Industry.

The center has a multidisciplinary Management Committee with links to the Education Departments and Research Laboratories. It is composed of the Director, the Co-Director and four Associate Directors. It is interesting to mention that Prof. Ralph Huntsinger who has the position of Professor Associate within the PSI Research Lab. joins the MISS Associate Directors group to help in the emerging international links and projects. The following staff constitutes the RIC-MISS office:

- Prof. Dr. Aziz Bensrhair: ASI Dept. and Director of the PSI
- Prof. Dr. Abdelkhalak Elhami: MECA Dept. and LMR
- Prof. Dr. Lionel Estel: CFI Dept. and LRCP
- Prof. Dr. Ralph Huntsinger: PSI, in charge of International Affairs
- Dr Mhamed Itmi: GM Dept., PSI and responsible of CERTI-STI project
- Prof. Dr. Jean-Pierre Pecuchet GM Dept., PSI and Director of the SSI.

Center research activities

Main projects:

Subject	Title	Project/ Topic	Years
Methodologies&Techniques	ARCOS Obstacle detection	Project	2003-05
Methodologies&Techniques	Algorithms evaluation for Image processing	Project	2004-06
Industry	Pattern recognition of road defaults	Project	2004-05
Methodologies&Techniques	Pedestrian detection in urban environment	Project	2002-06
Distributed Simulation	P2P and distributed simulation	Topic	2005
Logistics, Virtual Reality	Platforms for Transportation Simulation	Project	2004-06
AI	Assistance in simulation	Topic	2002-05
Logistics, Virtual Prototyping	Multimodal Transportation Platform	Project	2005-07
Logistics, AI, Communications	MAS and CLP for Transportation Simulation	Topic/ Project	2005-08
Education-Training-Support	De-structuring and restructuring Electronic documents	Topic/ Project	2005-08

Projects concerning Mechanics and Process engineering are not mentioned in the present report. They should appear in the website.

Some topics may evolve to projects.

- A cooperation project (France-Italy) concerning Image Analysis of road environment is in preparation (2006)
- An INTAS project (2006-09) is in preparation.
- Other projects are under preparation in collaboration with some MISS centers (Bialystok, Hungary). More centers will be contacted (Sept, Oct 2005).

Center facilities

Standards (PC computers, scanners, fax...), one car for sensors experiments and tests, vision material...

Center simulation tools

Numerous industrial tools and several prototypes locally developed (Petri nets, management of a harbor container terminal, optimization, a platform for multi-agent systems...),

Center thesis PhD, MsC

Different thesis and master reports are works in progress in the domains of &-learning, Multi-Agent Systems, Simulation, mechanical engineering, process engineering, safety transportation systems...

Other studies (masters or equivalent) are continued:

- Simulation of urban transportation
- OpenGL and visualization
- MAS approach for ITS
- Traffic security.
- User interaction with a simulator: the Agent aspect
- Simulation and stock markets

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Thesis to be defended soon (not exhaustive)

- David Lefee: Pedestrian detection in urban environment (July, 2005)
- Moustafa Harmazi: One stereovision sensor design for driving assistance
- Mohammed Aziz: Learning in spiking Neural networks
- Elamri Fouad: An Intelligent assistant for simulation decision-making

Some cooperation activities

- The center helps the promotion of simulation in French speaking communities: MOSIM (MODELing and SIMulation) conference 2006 at Rabat, Morocco.

- The center is improving its Cooperation with MISS Center at Bialystok (Poland): visit of Pr Ralph C. Huntsinger.

- The center pursues its relation development with the Parma University, Italy in the vision domain: invitation of Pr A. Broggi, Director of the Artificial Vision and Intelligent Systems Lab.

Publications

The list is not finalized. It will appear in the update of the website.