Annual Report of the MISS of Rouen INSA Center: RIC-MISS (2006)

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Previous website: http://miss.insa-rouen.fr/
Present web site : dependends of the LITIS web site (under construction: www.litislab.eu).
LITIS is a new research laboratory (computer science, information processing and systems) gathering four past research laboratories. The center has important links with this laboratory.

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: LITIS EA 4051,
    See also http://recherche.insa-rouen.fr/ for research domain aspects.
    - And works with the new structures (CERTI) for Technology Transfer from INSA to Industry.

Center research activities

Main projects at LITIS:

Subject	Title	Project/ Topic	Years
Methodologies&Techniques	MOV'EO - Prestige (submitted)	Project	2006-07
Methodologies&Techniques	Algorithms evaluation for Image processing	Project	2004-06
Industry	Pattern recognition of road defaults	Project	2004-06
Methodologies&Techniques	Pedestrian detection in urban environment	Project	2002-06
Distributed Simulation	P2P and distributed simulation	Topic	2005-2006
Logistics, Virtual Reality	Platforms for Transportation Simulation	Project	2004-06

AI	Assistance in simulation	Topic	2002-06
Logistics, Virtual Prototyping	Multimodal Transportation Platform	Project	2005-07
Logistics, AI, Communications	MAS and CLP: case of transportation on demand.	Topic/ Project	2005-08
Education-Training-Support	De-structuring and restructuring Electronic documents	Topic/ Project	2005-08

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
...
Some thesis that have been defended (LITIS) this year:
- David Lefee: Pedestrian detection in urban environment
- 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 helped the promotion of simulation in French speaking communities: MOSIM (MODeling and SIMulation) conference 2006 at Rabat, Morrocco.
- A cooperation protocol is under discussion with UALR (Arkansas). Invitation of Pr. Srini Ramaswamy on June 2006.
- 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.
- An EC-Tempus project concerning logistics and education (Estonia, Finland, France, Morrocco, Spain) is submitted.

Publications

To be available on the website.