Automation and Operations Research Laboratory at ENAC

Félix Mora-Camino

Automation and Operations Research Laboratory
Air Transport Department
ENAC, Toulouse, France
Ecole Nationale de l’Aviation Civile

- Initial Training
- Specialist diplomas
- Continuing Education
- Research activities
- International activities
Initial training at ENAC

2000 students

- French Civil Aviation Authority
- French and foreign companies in the aerospace field and associated sectors
Initial Training

- ENAC Engineer (Air Transportation, Electronics, Computer Science)
- Air Traffic Control Engineer
- Electronician
- Airport Technician
- Air Transport Pilot
- Airline Dispatcher
Satellite-based Communication, Navigation and Surveillance
Aviation Safety, Aircraft Airworthiness
Air Operations and Air Traffic Management
Satellite-based Communication, Navigation and Surveillance
Aviation Safety, Aircraft Airworthiness
Air Transport Management
Airport Management
Human-Machine Interactions
Collaborative Avionics
Research activities

- Communication, navigation and surveillance systems-CNS
- Information Technology, Simulation
- Air Transport and ATC Economics
- Systems engineering
- Applied mathematics
International activities

- 450 foreign students and trainees from 5 continents.
- Exchanges with foreign universities: USA, Germany, UK, Finland, Italy, Spain, Sweden, Ukrain, Australia, Mexico, Viet Nam, Brazil, Singapore,
- Member of PEGASUS, the European network of the main aeronautical colleges and universities
- Cooperation with foreign Civil Aviation Training Centres and Universities
Automation and Operations Research Laboratory

LARA

Air Transportation Department

ENAC

http://www.enac.fr/recherche/lara/pages/accueil.html
Research Area I

**Air Transportation Operations and Planning:**

*Airlines operations*: flight programming, fleet planning, maintenance management, crew assignment, market modeling, revenue management.

*Airport operations*: capacity issues, traffic management, security management, environmental issues (noise).
Research Area II

**Airborne systems**


**Traffic Control and Management:** Automatic separation, relative guidance, Formation Flight.
LARA/TA/ENAC

Staff

Félix Mora-Camino, Professor, PhD
Catherine Mancel, Assistant Professor, PhD
Antoine Drouin, Res.Eng.

+ Karim Achaibou, INPT, PhD, Pr., associate researcher
  André Doncescu, INSA, Pr., associate researcher
  Thierry Miquel, SDER/DGAC, PhD
Aicha Alou, Niger: Optimization of Air Transportation Networks
- Geanina Andrei, Roumania: Fault Detection and Soft Crash
- Hamdan Alfazari, Oman: Optimization of Fleet Maintenance
- Nan Zhang, China: Fault Detection and Identification
  Rakia Kaffa, Niger: Management of Airport Security
  Rabah Felloua, Algeria: Fault Detection in Airborne Systems
  Ivomar Soares, Brazil: Airport Ground Operations
  Antoine Drouin, France: Non Linear Flight Control
  Minesh Poudel, Nepal: Aircraft Emergency Evacuation Modelling


Sample of recent publications


Any Questions?