Josep M. Aymamí

Regional Manager, Business Development

Aimsun contact details:

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Years of experience:

11

Key areas of expertise:

- Project management
- Traffic and pedestrian modelling
- Real-time decision support systems
- Traffic forecasting
- Evacuation time estimates

Education:

MSc Civil Engineering, "Transportation and Urban Planning", Technical University of Catalonia (UPC), 2007

Post-graduate diploma Transportation Planning and Management, Technical University of Catalonia (UPC), 2007

Professional affiliations:

Standardization committee ISO TC204 Working Group 9: "Integrated Transport Information, Management and Control"

Standardization committee AEN/CTN 178 - CIUDADES INTELIGENTES. Subcomitee SC3 "Gobierno y movilidad"

Standardization committee AEN/CTN 159 - SISTEMAS INTELIGENTES DE TRANSPORTE. Subcomitee, SC2 "Tráfico"

Colegio de Ingenieros de Caminos Canales y Puertos, Member 24.710

Josep is a domain expert in Aimsun Next and Aimsun Live and has been with Aimsun in technical roles for the last 11 years. Since 2015 he has been particularly focused on Aimsun Next applications in Spain and Latin America.
Josep's technical work includes planning, traffic management and public transport optimisation projects using Aimsun Next and pedestrian modelling using Legion Studio. He is particularly closely involved in the development of Aimsun Live and the use of Aimsun Next as a tool for evacuation time estimates.
In addition to technical project management of very large-scale, international Aimsun Live projects, Josep has contributed to integrated mobility projects in Zaragoza, Spain and the analysis and design for the European FP6 Research Project INTRO: Intelligent Roads and eMOTION: Europe-wide multi-Modal On-trip Traffic InformatiON.

Selection of relevant experience:

uTRAQ: Urban Traffic Management and Air Quality, Leicester and Northhampton, UK | 2014–ongoing
Project type: Aimsun Live (real-time decision support systems)
End client: European Space Agency (ESA)
Role: Technical project manager
Josep provided support during the process of integrating Aimsun Live modules into uTRAQ, undertaking real time simulation modelling and traffic control with the objective of improving urban air quality. He supervised monitoring and continuous prediction and strategy management based on SCOOT-UTC, coordination of data analysis; systems/interface with Aimsun Live; model validation; system verification and quality testing.

ICM project on Interstate 15, San Diego | 2011–14
Project type: Aimsun Live (real-time decision support systems)
End client: San Diego Association of Governments (SANDAG)
Role: Technical project manager
Josep provided support for the process of integrating Aimsun Live, the real-time modelling tool for the decision support system (DSS) of the integrated corridor management initiative on Interstate 15. He supervised monitoring and continuous prediction (NPS) and strategy management (RTSS); coordination of data analysis; creating control APIs for ITS infrastructure within the model; systems/interface with Aimsun Live; model validation; system verification and quality testing.

Adelaide CBD model, Australia | 2012
Project type: mesoscopic, macroscopic
End client: Barbara Hardy Institute Transport Systems – University of South Australia. End client: Department of Planning, Transport and Infrastructure of South Australia.
Role: Project manager
Josep oversaw the import of the model from the Cube model of the wider area with a custom import of pseudo-actuated traffic control data and provided support to mesoscopic modelling in addition to the customisation necessary for supporting multiple scenarios at the macroscopic and mesoscopic level.

Customised Modelling and Simulation Tool (CMST), New Jersey NJ | 2011-12
Project type: Aimsun Live (real-time decision support systems)
End client: Port Authority of New York and New Jersey (PANYNJ)
Role: Project engineer & manager
Aimsun developed a real-time decision support system based on mesoscopic simulation to manage traffic during an emergency evacuation of Newark International Airport and Port Elizabeth in New Jersey. Josep helped to define the integration of the microscopic-mesoscopic-macroscopic levels, to define study area and to calibrate the mesoscopic scenario.

Melbourne mesoscopic city-wide model, Australia | 2011-12
Project type: mesoscopic

Representative papers & publications:

Aymamí J M, Estrada M, Mensión J, Torres L "Bus control strategies in corridors with signalized intersection" Transportation Research Part C: Emerging Technologies Volume 71, Pages 500–520, 2016

Aymamí J, Breen M, Casas J, Perarnau J, Ruiz de Villa A "Metodología (presente y futuro) para la implementación de sistemas de ayuda a la toma de decisiones en la gestión del tráfico" XIII Congreso Español sobre Sistemas Inteligentes de Transporte. 2013

Aymamí J, Casas J, Juckes M, Torday A "Sistemas predictivos en la gestión integrada de corredores: el Proyecto ICMS de San Dieg", XIII Congreso Español sobre Sistemas Inteligentes de Transporte, 2013

Aymamí J M, Breen M, Casas J, Delgado M, Ruiz de Villa A "Dinamización de la demanda para modelos de simulación" 18th Pan-American Conference of Traffic and Transportation Engineering and Logistics. Santander, Spain, 2014

Aymamí J M, Casas J "Sistemas predictivos basados en simulación. Experiencias urbanas e interubanas en Londres y San Diego" 18th Pan-American Conference of Traffic and Transportation Engineering and Logistics. Santander, Spain, 2014

Aymamí J M, Juckes M, Pujadas S, Torday A, Torres L "Sistemas predictivos basados en simulación: lecciones aprendidas y future" XIV Congreso Español sobre Sistemas Inteligentes de Transporte, 2014

Aymamí J M, Casas J, Juckes M, Torday A "The use of TMDD Center-to-Center Data Standards with the use of Real-Time Simulations: The San Diego Case" ISTS Symposium IWTDCS Workshop, 2014

End client: VicRoads
Role: Project engineer
This wide area simulation of the city of Melbourne was to support Monash University's investigation into a possible future Decision Support System (DSS) based on Aimsun Live real-time traffic management. Josep helped to import the Melbourne metropolitan Cube model, time slicing and calibrating mesoscopic parameters for a large-scale dynamic mesoscopic model of the entire metropolitan area of the city of Melbourne.

Predictive modelling demonstrator, London, UK | 2011
Project type: Aimsun Live (real-time decision support systems)
End client: Transport for London (TfL)
Role: Project manager
Aimsun provided a demonstrator for a predictive modelling capability for traffic conditions in London, modelling a range of alternative potential scenarios for the same timeframe to enable traffic managers to select and implement the most suitable suite of traffic signal timings within 5 minutes or less.

Pickering Evacuation Time Estimation (Canada) | 2010
Project type: mesoscopic
End client: Ministry of Transportation of Ontario
Role: Project manager
Evaluation of the evacuation times for two nuclear plants looking at different scenarios with mesoscopic simulation.

Manhattan Traffic Model (MTM) New York (USA) | 2010-11
Project type: integrated: micro-meso-macro
End client: New York City Department of Transportation
Role: Transportation engineer
Building, data integration and calibration of a mesoscopic and microscopic model covering over 1,000 miles of roads across Manhattan, the Bronx, Brooklyn and New Jersey.

Northbank model in Brisbane city centre (Australia) | 2007-08
Project type: microscopic
End client: Queensland Main Roads
Role: Transportation project engineer
Revision of the import of the Strategic Model into Aimsun Next, Traversal generation and subnetwork of the Northbank area, calibration of the base model and implementation and evaluation of future scenarios (with new development, including increased pedestrian flows).

Vitoria city-wide control plan optimisation (Spain) | 2008-09
Project type: microscopic
End client: City of Vitoria
Role: Project manager
Josep helped coordinate design, testing and implementation of a new control system for Vitoria including redefinition of the regulation areas, new fixed schedules, and new timings and phasing for each regulator in the city. The new control plan has been successfully implanted in the city.

Study of traffic management strategies for M30 ring road, Madrid (Spain) | 2006-07
Project type: Aimsun Live (real-time decision support systems)
End client: Telvent, City of Madrid
Role: Transportation project engineer
Validating microsimulation model for southern Madrid including the entire influence area of the new M-30 tunnel and implementation of selected traffic management strategies.

INTRO: Intelligent Roads | 2006-08
6th Framework Program European Research Project
Project type: R&D, microscopic
End client: European Comission (6th Framework Programme)
Role: Project engineer

	Responsible for Aimsun's contributions to Working Group 5, involving V2V communication, floating car data traffic information and its relationship with simulation inputs and safety indicators.