Construction & Transport Infrastructure Management

Our Research Areas

Our research focuses on construction and transport infrastructure management, with emphasis on the following thematic areas:

- Building information models (BIM), risk management, resource-constrained scheduling, information technologies, networks, transport systems, design and operation, intelligent transport systems (ITS), traffic modeling, travel behavior, and safety; decision-making process and classification, pavement management systems.

- Construction management: Traditional and IT-based construction engineering and management, with emphasis on project scheduling and cost controls, risk management, decision support systems and artificial intelligence, competitive bidding and qualifications-based selection.

- Building Information Models (BIM): BIM in construction engineering and management, construction information, parametric modeling, BIM-based building energy calculations, autonomous generation of BIM, fully integrated and automated processes.

- Analysis of Travel Behaviour: Studying the underlying phenomena of transport travel behavior at the disaggregate (drivers, persons, forwarders, operators, etc.) as well as the aggregate level (demand, organization, social networks formation, travel choices, cargo flows organization, collective spatio-temporal decision making, etc.), following international state-of-the-art methodological and quantitative approaches.

- Transport Systems Design and Operations: Optimal design and operations of transport infrastructure for all modes of transport, covering areas from the ‘soft-side’ (e.g., urban and freight systems, transport networks, ITS, vehicles, equipment, rail safety, travel and transportation systems, maintenance, transport systems economics, service and logistic systems, as well as from the ‘hard-side’ (e.g., terminal facilities, highways design, ports, airports, harbors, bridges, and tunnels).

- Research Team:

  Our research team consists of both experienced and emerging researchers, and graduate and undergraduate students, with a strong interest in construction and transport engineering and management. Research associates work in interdisciplinary teams and in synergy with other research organizations and public agencies, under the auspices of our two research laboratories:

  - EUPALINOS - Construction Engineering & Water Distribution Networks Management Laboratory:
    - The lab hosts research on construction management, BIM, water and roadway networks, and risk analysis.
  - Laboratory for Transportation Engineering (LTE):
    - The lab hosts research on the design and operations of transport systems and on travel behavior.

- Research Awards And Professional Recognition:

  Our research labs and their Directors, Dr. S. Christodoulou and Dr. L. Dimitriou, have over the years been the recipients of professional recognition and of several awards, most noteworthy of which are the following:

  - Research Award Recipient of the Hellenic 2015 Transport and Logistics Excellence Award for innovation in maritime transport.
  - ISICBE BoD Elected on the Board of Directors (BoD) of the International Society of Computing in Civil and Building Engineering.
  - Scientific Reviewing Active reviewers for over 50 international scientific journals and 20 technical scientific committees.
  - National Attachés Cyprus’s national attachés to several international committees, on matters pertaining to transport and urban development.

- For Us, Research Is A Way Of Life And Academic Success Is The Result Of Not Only Ingenious Ideas But Also Of Preparation, Hard Work and Perseverance.

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