

## PRESS RELEASE

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### Award Winning Technology for Intelligent Transportation Networks



A team from KIOS Research Center for Intelligent Systems and Networks at the University of Cyprus, won 2<sup>nd</sup> place at the international competition organized by the Autonomic Road Transport Support Systems COST Action, aiming at increasing the resilience of road traffic support systems by the use of autonomies.

The competition, which was co-located with the 22<sup>nd</sup> ITS (Intelligent Transportation Systems) World Congress, was conducted in Bordeaux, France, on October 5, 2015. Eight research teams from European universities were selected to compete at the final stage of the competition, where they presented and demonstrated the autonomic systems they developed. Assessment criteria included the degree of resilience, degree of autonomicity, innovation, potential impact to future ITS and technical quality.

The KIOS team was composed of the researchers Dr. Stelios Timotheou, Charalambos Menelaou and Dr. Panayiotis Koliou, as well as Professors Christos Panayiotou and Marios Polycarpou. The team proposed a system for autonomic fault-adaptive traffic state estimation under measurement faults. The system is able to provide real-time estimation of the traffic conditions of different road links that is resilient to situations where a portion of the available measurement devices provide faulty information. In addition, the system can autonomously identify the faulty sensors and estimate the measurement fault magnitude. Providing reliable real-time traffic state estimation is crucial in a plethora of applications which aim at improving the efficiency of transportation networks, including traffic signal control and dynamic route planning. Advanced technology in this area will result in substantial traffic congestion relief, leading eventually to the decrease of travel time, fuel consumption and greenhouse gas emissions, improving the quality of life in general.

This research work, conducted as part of the prestigious ERC Advanced Grant “FAULT-ADAPTIVE”, reflects KIOS’s efforts to be internationally recognized as one of the leading research centers in the area of fault-diagnosis in critical infrastructure systems, including intelligent transportation systems.

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