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SafetyCube - The European Road Safety Decision Support System launched, 2017

The <u>SafetyCube European Road Safety Decision Support System</u> (DSS) was recently launched, developed within EU Horizons 2020 research project <u>SafetyCube</u> with the active contribution of <u>NTUA</u>. SafetyCube DSS is a long waited powerful tool offering for the first time worldwide, scientific evidence on the effects of a large number of road safety risks and related countermeasures on behaviour, infrastructure, vehicle and post-crash care, providing a wealth of scientific evidence to support road safety decision making.

NTUA presentation in the launch event concerned: SafetyCube – the European Road Safety Decision Support System

## HITE / HIT – 8th International Congress on Transport Research (ICTR), Thessaloniki, 2017

The Hellenic Institute of Transportation Engineers (HITE) and the Hellenic Institute of Transport (H.I.T.) co-organized the 8th International Congress on Transport Research (ICTR), which was held with great success on 27-29 September 2017, in Thessaloniki, Greece., with Scientific Committee Chair NTUA Prof. George Yannis. The spotlight theme of the 2017 Congress is: The Future of Transportation in Greece: A Vision for 2030. The ICTR has been a major event in the field of transportation research in Greece for the past 15 years with the active contribution of the research and academic community, the authorities as well as the public and private sector involved in the development and implementation of innovative projects in the field of transport.

NTUA road safety presentations concerned: Show more...

### European Commission – Infographics on Traffic Safety Facts & Figures 2016



New Infographics with key traffic safety facts and figures were recently published at the European Road Safety Observatory (ERSO) of the DG Move Road Safety Unit of the European Commission, with the active contribution of NTUA, KFV and ERF. These Infographics are based on the respective Basic Traffic Safety Facts 2016 published at the ERSO, containing a comprehensive series of statistical tables with the latest available data from the CARE database of the European Commission. These Infographics concern the following key traffic safety topics in relation to the Road Users: [Children, Young people (18-24), Youngsters (15-17),

Elderly (aged >64), Gender Pedestrians, Cyclists, Motorcycles and Mopeds, Car occupants, Heavy Goods Vehicles and Buses], the Road Infrastructure (Motorways, Junctions, Urban areas, Roads outside urban areas) and the Accident Circumstances (Seasonality, Single vehicle accidents).

## United Nations – Improving Global Road Safety Report 2017

United Nations launched the Report on Improving Global Road Safety, prepared by the World Health Organization in consultation with the United Nations regional commissions and other partners of the United Nations Road Safety Collaboration. This Report provides an account of activities undertaken and achievements attained by the global road safety community in pursuance of the objectives of the Decade of Action for Road Safety (2011 -2020) and of target 6 of Sustainable Development Goal 3 (halving road traffic deaths and injuries by 2020). A number of notable high-level events were held in the intervening period, including the activities of the EU Horizons 2020 Research project SaferAfrica – African-European Dialogue Platform on Road Safety with the active contribution of NTUA. The Report concludes with a number of recommendations to the Assembly for achieving the goals of the Decade of Action and Sustainable Development Goal target 3.6.

## PIARC - Advanced technology for data collection and information to users and operators, 2017

The World Road Association-PIARC recently published a Report entitled: "Advanced technology for data collection and information to users and operators". The Report provides brief summaries of projects from around the world, presented in the form of use cases that are representative of innovative ways of collecting, distributing, and making use of mobile data to assist transportation officials in their winter maintenance operations and to provide information to the travelling public. The use cases or case studies were selected because it is the belief of the authors that, when deployed, any of the technologies described will have a positive impact on transportation safety, mobility, the environment, and/or more efficient use of human and material resources needed to carry out their winter maintenance duties.

ETSC – Call for urgent action on vehicle safety standards 2017

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A coalition of Industry, NGOs, Consumer Groups and Cities are calling on the European Commission to urgently bring forward new minimum safety standards for new cars, vans and trucks, waited since long. The European Association of Automotive Suppliers (CLEPA), the European Cyclists Federation (ECF), POLIS, the European Transport Safety Council (ETSC) and Transport & Environment (T&E) released a letter suggesting that new minimum vehicle safety standards are 'absolutely critical' to reducing deaths and serious injuries on European roads.

## ETSC positions on regulations on general safety and on pedestrians, September 2017



The <u>European Transport Safety Council (ETSC)</u> has published two position papers on regulations on general safety and on pedestrians. Position Paper: "<u>Revision of the General Safety Regulation</u>": Within the context of the EU target to halve road deaths between 2010 and 2020, the forthcoming revision of the General Safety Regulation will require bold action to ensure that road deaths continue to fall, and that vehicle safety improvements are not limited to the wealthiest consumers or member states.

Position Paper: "Review of the Pedestrian Protection Regulation 78/2009". ETSC welcomes the initiative of the European Commission to review the legislation on the protection of pedestrians and other vulnerable road users (VRUs). It is of paramount importance that the EU takes steps to improve the safety of this often neglected category of road users.

## Road fatalities per million population, European Union 2007 – 2016



According to the EU road fatalities infographic of the NTUA Road Safety

Observatory, ten countries have a better performance than the EU average, namely Sweden, UK, Netherlands, Denmark, Spain, Germany, Ireland, Finland, Austria, and Slovakia. Greece is ranked 24th in 2016. Lithuania demonstrated the highest road fatalities rate reduction (72%) in the last decade, followed by Estonia (63%) and Latvia (58%), whereas the EU average 10-year reduction is 42,5% and for Greece is 48%.

## Road fatalities by weather conditions, Greece 2015

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According to <u>ELSTAT</u> data, the majority of road accidents and fatalities in Greece occur during clear sky, both inside and outside built-up area. However, both road accidents and fatalities share outside built-up areas is much higher during rainy conditions than normal conditions of clear sky. Furthermore, accident severity is increased by 50% during raining especially inside built-up areas.

### UN ECE - SafeFITS Global Road Safety Model 2017



Safe Future Inland Transport Systems (SafeFITS), the Global Road Safety Model developed by NTUA for the United Nations – Economic Commission for Europe (UNECE) with the support of the International Road Transport Union (IRU) was presented by NTUA Professor George Yannis, at the Global Forum for Road Traffic Safety (WP.1) as part of its Seventy-fifth session in 19 September 2017, in order to showcase current developments and obtain feedback from national representatives. The SafeFITS tool is built around a statistical model based on historical road safety data and the relations between different road safety indicators. SafeFITS will enable Governments to identify the most appropriate road safety measures and policies to save even more lives.

<u>Traffic and safety data analysis: from correlation to causation and policy support, Loughborough, 2017</u>

NTUA Professor George Yannis has given an invited lecture at the School of Architecture, Building & Civil Engineering of Loughborough University on "Traffic and safety data analysis: from correlation to causation and policy support". The Lecture focused on the various facets of road safety data, starting from the need for evidence based road safety policies, followed by key road safety analysis methods, the challenges of road safety measures' assessment and the role of road user behaviour and concluding with an integrated road safety approach from data monitoring and analysis to policy support. A vivid discussion followed under the coordination of Loughborough

#### Latest developments about Drivers and Alzheimer's Disease and Dementia, Athens 2017

University ITS Professor M.Quddus.



On the occasion of the World Day of Alzheimer Disease (21/09/2017), the Department of Mental Disorders / Dementia of the Second Neurological Clinic of the University Hospital "Attikon" organized with great success an informational event on the latest developments in Alzheimer's disease and other dementia diseases, in Attikon General Hospital, on 23 September 2017. The event included speeches by professors of the Athens University Medical School and specialized health professionals who answered questions in relation to the prevention, diagnosis, treatment and other topics related dementias. NTUA presentation concerned:

Assessment of driving behaviour of patients with Dementia, Parkinson's Disease and Mild Cognitive Impairment; Diagnostic and Predictive Indicators

International Conference on Road Safety and Simulation Hague 2017

The Road Safety & Simulation International Conference 2017 organised by the Delft University of Technology in co-operation with the Dutch Institute for ROAD SAFETY & SIMULATION Road Safety Research (SWOV) will take place on 17-19 October 2017, in **Hague**. The conference theme focuses on advancing the safety of all road users with special attention for vulnerable road users. Especially, in the upcoming era of advanced technologies and vehicle automation new safety challenges have emerged. The Road Safety and Simulation Conference was established in Rome in 2007 aiming to create a platform for researchers and road safety professionals from various disciplines to share their expertise and present their innovative research results in the field of road safety and simulation.

Development of driver speed models based on detailed driving data from smartphone sensors, 2017

> A Diploma Thesis titled "Development of driver speed models based on detailed driving data from smartphone sensors" was presented by Christina Gonidi in July 2017. A large data set recorded per second was used, containing information about the exact position of the vehicle, its acceleration and deceleration and the point where 100 drivers performed harsh manoeuvers or speed changes or when they used their mobile phone, etc. In order to analyze the available data, six statistical linear regression models forecasting driver average speed were developed: one general model, two models for the periods inside or outside risky hours and three models for each road type (urban, rural and highways). The results demonstrated a strong correlation between the average speed and the distance covered by the driver as well as driver accelerations and harsh changes. 🧶 🔨

Comparative assessment of the behaviour of drivers with Mild Cognitive Impairment or Alzheimer's disease in different road and traffic conditions, 2017



A paper titled "Comparative assessment of the behaviour of drivers with Mild Cognitive Impairment or Alzheimer's disease in different road and traffic conditions" authored by Dimosthenis Pavlou, Eleonora Papadimitriou, Costas Antoniou, Panagiotis Papantoniou, George Yannis, John Golias and Sokratis G. Papageorgiou, is now published in Transportation Research Part F: Traffic Psychology and Behaviour, Volume 47, May 2017, pp. 122-131. The objective of this research was the analysis of the driving performance of drivers with Mild Cognitive Impairment (MCI) or Alzheimer's disease (AD), in different road and traffic conditions, on the basis of a driving simulator experiment. The results of this research suggest that compensatory behaviours developed by impaired drivers are not adequate to counterbalance the direct effects of these cerebral diseases on driving skills. They also demonstrate that driving impairments increase as cognitive impairments become more severe (from MCI to AD).

## **Upcoming Events**



















# Road Safety Tools









This Road Safety Update aims to support frequently the Greek and the International Road Safety Community with current key road safety knowledge and data, which is gathered, analysed and organised within the research activities of the <u>Department of Transportation Planning and Engineering</u> of the <u>National Technical University of Athens</u>.

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