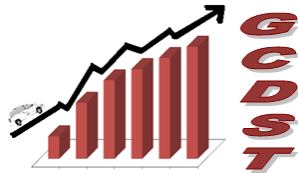


TRANSPORT SYSTEMS RESEARCH GROUP

Contact details

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Areas of expertise

Intelligent Transport Systems – monitoring activity with GPS and weight-in-motion systems.
Transport impact on urban mobility – survey deployment and analysis, transport macroscopic modeling.
Economic, health and environmental impacts of transport systems; – congestion analysis, population safety and exposure, environmental impact assessment. Intermodal regional transport; Integrated transport and land-use planning – modal distribution analysis, modal shift policies;
Laboratory testing and field studies for road structures and materials.

Team

Prof.Dr.Eng. **Mihai ILIESCU**; Assoc. Prof. Dr.Eng. Gavril Hoda ; Assist. Prof.Dr.Eng. Cadar Rodica
Assist. Prof.Dr.Eng. Mihai Liviu Dragomir ; Assist. Prof.Dr.Eng. Andrei Florin Clitan; Assist. Prof.Dr.Eng. Ciont Nicolae
Assist. Prof.Dr.Eng. Ciocan Remus; Assist. Prof.Dr.Eng. Roib Voichița; Assist. Dr. Eng. Toșa Cristian, Assist. Dr. Eng. Boitor Melania; Assist. Dr. Eng. Beca Ilinca Mirela;
Technician/analys: Jecan Daciana

Representative projects

THE ISSUE – “Traffic Health Environment Intelligent Solutions for Sustaining Urban Economies”, Associated partner within the North West Development Region of Romania. Starting October 2012.
“Mobility study to support the introduction of local public transport system in Floresti commune, Cluj County” - CONTRACT Nr. 20788/14.11.2012. Project study period: 3rd December 2012 - 28th February 2013
“Traffic study on rehabilitated county road” DJ 151 Km 45+810 – Km 126+712 between Mureș and Bistrița Counties. Project study period: July 2013 - September 2013.
“Study of road asphaltic mixtures improved with bitumen additives”, Contract 18/18.10.2013, for C.N.A.D.N.R. S.A

Significant results

The most representative publications of the past 5 years:

1. M.Iliescu., R.D.Cadar, N.Ciont, The Influence of Traffic on the Design of Road Structures in Urban and Interurban Areas on a European Road in Romania Authors: CC2013 The Fourteenth International Conference on Civil, Structural and Environmental Engineering Computing Cagliari, Sardinia, Italy 3-6 September 2013.
2. Millien A., Dragomir M.L., Iliescu M., Petit C., Wendling L., Geogrid interlayer performance in pavements: tensile-bending test for crack propagation, 7th Rilem International Conference on cracking in pavements- edited by Scarpas, A., Kringos, N., Al-Qadi, I., Loizos, A., 1359p., XII, 2012, ISBN 978-94-007-4565-0, Editura Springer, 2012.
3. Boitor M., Antov D., Iliescu M., Antso I., Mae R.Sustainable urban transport planning. Romanian Journal Of Transport Infrastructure; Volume 2, 2013, Issue 1; ISSN 2286-2218.
4. Boitor M., Antov D., Antso I., Iliescu M. Analyzing the transportation accessibility for the city of Cluj-Napoca, a sustainable approach. Journal of International Scientific Publications: Ecology& Safety; Vol. 7, Part 2; ISSN 1313-2563, Bulgaria, 4 Apr. 2013.

5. Toşa C., Antov D., Köllő G., Marek H., Rannala, A methodology for modeling traffic related emissions in suburban areas, Transport Journal, Taylor and Francis Group, ISSN 1648-4142 (Print), 1648-3480 (Online).
6. Mihai Iliescu, Rodica Dorina Cadar, Nicolae Ciont, Applications of the Mobility Indexes Investigation System in the Evaluation of the Urban Traffic Conditions. C60 International Conference, 2013.
7. Mirela Beca, Rodica Cadar, An assessment model of urban noise performed through SIMITR subsystem. Conferinta EENVIRO 2013 Sustainable Solutions for Energy and Environment, Bucharest, ROMANIA, 2013.
8. Dragomir M.L., Petit C., Thermal shrinkage bending test in characterizing reinforcement advantages over bituminous mixtures, Acta Tehnica Napocensis Civil Engineering and Architecture, Vol.54, No.1, Cluj-Napoca, 2011, ISSN 1221-5848, pg.112-121.
9. Hoda G., Dragomir M.L., Beca Ilinca, Noi îmbrăcăminți rutiere cu proprietăți antizgomot, Simpozionul național de Materiale și tehnologii noi în construcția și întreținerea drumurilor și podurilor, Ediția XI, Cluj-Napoca, mai 2015.
10. Iliescu M., Clitan A.F., Curves settlement in areas with large gradients and the danger of aquaplaning in these areas, Acta Tehnica Napocensis, Vol.54, Nr.2, pp.57-65, Nov.2011, ISSN:1221-5848
11. Dragomir M.L., Iliescu M., Utilizarea unor materiale neconvenționale în mixturile asfaltice, Simpozionul Internațional CAR București, iulie 2015.
12. Mihai Iliescu, Rodica Dorina Cadar, Nicolae Ciont, Applications of the mlocator device in the urban transportation system. conferința științifică internațională Cercetare, Administrare Rutieră, "CAR 2013", București, 4-5 iulie 2013.
13. Iliescu M., Boitor M. Mobility for wheelchair bounded people in the city of Cluj-Napoca. Acta Technica Napocensis: Civil Engineering&Architecture; Vol. 56, Part 1; ISSN 1221-5848, 30 nov. 2013.
14. Boitor M., Iliescu M., Antov D., Rouk H. Analyzing the Urban Mobility. The Case Study of Cluj-Napoca. C60 International Conference; 7-9 nov. 2013.
15. Roib V., Mărincean M., Aspects Regarding the Modernization of Public Transport in Cluj-Napoca City. C60 International Conference; Cluj-Napoca, 7-9 nov. 2013
16. Mihai Iliescu, Rodica Cadar, Remus Ciocan, "Review of time losses due to horizontal and vertical road design", First International Conference for PhD students in Civil Engineering, CE-PhD 2012, 4-7 November 2012, Cluj-Napoca, Romania, Editura Eikon, ISBN 978-973-757-710-8;

Products and technologies:

1. Road Traffic and Transport measurements:

Weight in motion system hi-trac 90, hi-trac 100, Laser TruCAM (All-in-one Digital Video Camera/Laser Speed and Ranging Device), MCLocator system for fleet management and location (6GPS vehicle test), Portable Skid Resistance Tester Device, GPS Leica GS09 NetRover RTK, GPS Data Logger Performance Meter, Weather Center Tehnoline WS 550, Sound Level Meter DeltaOHM HD2010UC, Infrared and Contact Thermometer FLUKE 561, Video camera Sony XR160E, Digital Camera Canon EOS1100D, QuickMap 3D (QM3D) 5.0 from Laser Technology; Transportation planning and traffic modelling software (Transyt, Arcady, Picady, VISUM, VISSIM), Programming language MATLAB, Graphing and data analysis software OriginPro.

2. Road materials/structures-laboratory and field studies:

Marshall test, Unitronic Frame, Proctor, Asphalt and Cement concrete: recipes, preparation and laboratory tests; Lucas plate test, Zorn plate test, Benkelman test; Bitumen tests (ductility, ball and ring, penetration, RTFOT).

The offer addressed to the economic environment

Research & development	<u>Research on traffic</u> safety and solution development; Development of traffic models (road network and junctions); Development of original solutions regarding survey structure for transport mobility studies in urban and rural areas; Development of statistical analyses for collected traffic data; <u>Research on ecological road materials</u> using recycled material or different waste materials (bricks, old pavements, old concrete form demolition etc.); Development of new road materials or different pavement solutions; Research on laboratory analyses on road materials and development of improved road materials.
Consulting	Technical assistance in projects; Consulting, design, research and assistance for infrastructural projects (roads, parking lots, bridges and railroads); Award of contracts in urban roads field. Valuation: investments, acquisitions, economic costs, financial reporting, sales. Public transport planning.
Applied engineering services	<u>Mobility studies</u> ; Road network capacity assessment; Air quality assessment; Spot speed studies for enforcement measures in the urban environment; Traffic studies regarding speed profiles and fleet composition; <u>Laboratory tests and reports on road materials</u> ; Field measurements: load capacity, deflections, flatness, core extractions; Analyze asphalt/cement concrete recipes – for different utilities: (road, playgrounds, bridge decks, parks alleys etc). Studies on stabilized materials (with different types of binder); Studies on mineral skeleton (the main part of all construction materials)
Training	Actual standards and legal framework in road construction; Rehabilitation projects and road rehabilitation methods; Traffic safety - Audit and Inspection Training.