Dintre numeroasele mecanisme de securitate aplicabile in ITS tratate in teza de doctorat, doresc sa evidentiez in mod deosebit urmatoarele ce definesc obiectivele majore (auto)impuse de catre autor, precum si felul in care se regasesc in lucrarile publicate. Pe parcursul doctoratului, autorul a publicat 8 lucrari, prezentate in cadrul unor conferinte internationale, jurnale internationale, capitole de carte, indexate IEEExplore si Elsevier.

* Proiectarea unui mecanism de securitate folosit pentru definirea politicilor de securitate, aplicabil in ITS, care ofera participantilor posibilitatea de a controla accesul la datele sensibile colectate inainte ca acestea sa fie partajate cu aplicatiile ITS.
  1. Catalin Gosman, Tudor Cornea, Ciprian Dobre, Constandinos X. Mavromoustakis, George Mastorakis, ‘Secure model to share data in Intelligent Transportation Systems’, in ‘IEEE Melecon’, 2016
  2. Catalin Gosman, Tudor Cornea, Ciprian Dobre, Florin Pop, Aniello Castiglione, ‘Controlling and Filtering Users data in Intelligent Transportation System’, in ‘Special Issue on Security and Privacy Issues’ in ‘Fog Computing’, Elsevier Journal, 2018.
* Proiectarea unui mecanism de securitate folosit pentru determinarea nivelului de incredere in informatiile partajate de participanti in ITS.
  1. Catalin Gosman, Tudor Cornea, Ciprian Dobre, Florin Pop, Aniello Castiglione, ‘Putting the User in Control of the Intelligent Transportation System’, in ‘21st Australian Conference on Information, Security and Privacy’, Melbourne, Australia, 2016.
  2. Catalin Gosman, Tudor Cornea, Ciprian Dobre, Florin Pop, Aniello Castiglione, ‘Controlling and Filtering Users data in Intelligent Transportation System’, in ‘Special Issue on Security and Privacy Issues’ in ‘Fog Computing’, Elsevier Journal, 2018.
* Proiectarea unui mecanism de securitate folosit pentru agregarea datelor partajate in prezenta unui agregator de date care nu este de incredere. Mecanismul ajuta utilizatorii sa isi pastreze cerintele de confidentialitate in timpul partajarii de informatii, previne si stopeaza cazurilor de utilizare unde modificari nedorite ale datelor apar la nivelul agregatorului (din cauza unui comportament malitios sau defectuos).
  1. Catalin Gosman, Ciprian Dobre, Florin Pop, ‘Privacy-preserving data aggregation in Intelligent Transportation Systems’, ‘IEEE - Workshop on Future Networks for Secure Smart Cities, DISSECT’, 2017.
  2. Premiul I pentru posterul: Catalin Gosman, Ciprian Dobre, Florin Pop, ‘Privacy-preserving data aggregation in Intelligent Transportation Systems’, ‘IEEE - Workshop on Future Networks for Secure Smart Cities, DISSECT’, 2017
* Proiectarea platformei colaborative MobiWay care incorporeaza mecanismele de securitate propuse in teza de doctorat. MobiWay este o platforma colaborativa deschisa, standardizata care asigura interoperabilitatea intre echipamente mobile de colectare de date si o gama larga de aplicatii ITS. Implementarea platformei este parte a proiectului european de cercetare MobiWay: Integrated Platform for Intelligent Transportation Systems of Tomorrow. Project PN-II-PT-PCCA-2013-4, No. 16/2014.
  1. Ciprian Dobre, George Suciu, Cristian Chilipirea, Catalin Gosman, ‘Mobility beyond individualis: an integrated platform for intelligent transportation systems of tomorrow’, in ‘ITS Romania Congress’, 2014.
  2. Catalin Gosman, Tudor Cornea, Ciprian Dobre, ‘Cloud Services for Smart City Applications’, ‘Elsevier Book: Adaptive mobile computing: advances in processing mobile data sets’, 2015
  3. Tudor Cornea, Catalin Gosman, Raluca Constanda, Ciprian Nutescu, Ciprian Dobre, ‘Cloud Services for Smart City Applications’, Elsevier Book, Adaptive mobile computing, 2017.