

Dr. Dominique Gruyer | Research Director, IFSTTAR-COSYS-LIVIC

Head of the LIVIC laboratory

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Academic background

Habilitation to Manage Research (HDR)

28 February 2014

Data Fusion : from environment perception to the cooperative systems
University of Evry Val d'Essonne, France

PhD. In Systems Control (highly commended mention)

02 December 1999

*Study of the imperfect data processing for the multi-target tracking:
Applied to the road situations*
University of Technology of Compiègne, France

Master's degree In Systems Control

September 1995

University of Technology of Compiègne, France

Research activities

Manager of the IFSTTAR's research program "**Autonomous and Connected Vehicle**"

from 06/2018 to now

Head of the LIVIC laboratory, department COSYS, IFSTTAR (5 years)

from 01/2015 to now

Scientific Director « perception and data fusion » in ESI-group (CIVITEC)

from 04/2015 to now

Research Director in IFSTTAR (equivalent full professor)

from 10/2014 to now

Scientific Expert and **co-founder** for the CIVITEC company (start-up IFSTTAR)

from 2009 to 2012

Senior researcher and team leader

from 2006 to 2014

Researcher in INRETS

from 2001 to 2005

Research fields: Autonomous driving, cooperative systems, ego-localization, environment perception, extended perception, sensors simulation for ADAS prototyping, risk assessment.

Research skills: multi-sensor data fusion, belief theory, theories of uncertainties, theory of estimation.

Research valorization and supervising (Google scholar H index: 23)

Journal paper with reviewers:

36

International conference with reviewers and proceedings:

156

French conference with reviewers and proceedings:

14

Invited conferences and seminars

28

Books chapters:

7

Research reports (French and international)

46

Patents, License agreements:

10

Start-up: CIVITEC (now a subsidiary of ESI group)

1

Query	Source	Papers	Cites	Cites/year	h	g	hI,norm	hI,annual	*Count	Query date
✓ Dominique Gruyer	Google Scholar	198	2286	120.32	23	41	12	0.63	8	31/10/2018

Post Doctorate:

7

PhD thesis:

12 defended,

(1 will be defended in March 2019)

3 in progress

Master/engineer internships:

30

Research engineers (short term contract):

17

Involvement in juries, authorities, and committees

Involvement in PhD thesis juries:

25

Involvement in Scientific committees

- **Committee of experts** (Selection Advisory Commission) for Mines Paris Tech in 2018
- **Committee member** of the Paris-Saclay doctoral school (domain 1: Information and Communication Sciences and Technologies) from 2017
- **Scientific committee** of the ADAS group from June 2016 (group of companies working on the development of cooperative and active ADAS for road safety)
- **Nominated member of the CS** (Committee of experts) 61st section of the University Paris Sud XI - Orsay from 2004 to 2006, 2008-2009
- **Member of the CCSU** (University Selection Advisory Commission) 61st commission section of the University Paris Sud XI - Orsay in 2011 to 2013, the University of Evry Val d'Essonne in 2012, and the INSA Rouen Commission in 2012.

Involvement in editorial committees and conference committees:

2012: RFIA-VISAGE Program Committee (<http://visage.univ-bpclermont.fr>)

2013 : Editorial committee for the special issue IJNCS 2013 in the **Journal of Intelligent Systems**.

2013 - 2018: International Committee and Associate Editor for the International IEEE Intelligent Vehicle Symposium (IV).

2018: Member of the International Committee and Associate Editor of the IEEE ITSC conference

2016: Member of the International Committee and Associate Editor of the IFAC / IEEE CPHS Conference (Florianopolis, December 2016, Brazil)

2018: guest editor for the special issue "Sensors data fusion", journal **SENSORS**

Projects, contracts, and expertise

Projects: 7 (French), 8 (European), 2 (International: Canada and Australia)

Contracts: 8 (Renault, FAAR, Transdev, ESI, VEDECOM, CTA, ...)

Expertises: 6 (Fujitsu, Renault, DGA, ANR, ANRT, ESI-CIVITEC, VEDECOM, DGITM, ...)

Awards

1999: highly commended mention for the PhD thesis (only 10% of the French PhD thesis)

2011-2015: Award of Scientific Excellence (PES) awarded by INRETS in 2011 for 4 years

1 journal paper and 4 international conference papers have been nominated or awarded:

- L. Rivoirard, M. Wahl, P. Sondi, M. Berbineau, and **D. Gruyer**, "CBL: A Clustering Scheme for VANETs." in The 6th International Conference on Advances in Vehicular Systems, Technologies and Applications (VEHICULAR 2017), July 23 - 27, 2017 - Nice, France. **Best paper award**
- **D. Gruyer**, S. Demmel, B. d'Andrea-Novell, G. Larue, A. Rakotonirainy, « Simulating Cooperative Systems Applications: a New Complete Architecture", in International Journal of Advanced Computer Science and Applications (IJACSA), Volume 4, 2013. **(Best paper award for Volume 4, 2013)**
- S. Glaser B. Vanholme, S. Mammar, **D. Gruyer**, "Probability and risk maneuver planning for collision avoidance", in FAST-ZERO (Future Active Safety Technology) 2011, Tokyo, Japan, September 5-9, 2011. **(nominated for the best paper award)**
- A. Ndjeng Ndjeng, A. Lambert, **D. Gruyer** and S. Glaser, "Experimental Comparison of Kalman filters for vehicle localization", In Proceedings IEEE international Symposium on Intelligent Vehicles (IV'09), Xi'an Shaanxi, China, 3-5 june 2009. **(nominated for the best poster award)**
- A. Lambert, **D. Gruyer**, B. Vincke, E. Seignez, « Outdoor Vehicle Localization by Bounded-Error Sate Estimation", in IROS'09, October 2009, Saint Louis, USA. **(Award for Finalist of the best paper award)**.

Main international activities

Queensland University of technology (Brisbane, Australia) , lab **CARRS-Q**
Common project (FAST), PhD co-tutelles, journal and conference papers ...

from 2004 to now

University of Sherbrooke (Sherbrooke, Canada), lab **LIV** **from 2009 to now**
Common project (CooPerCom), co-supervising of PhD thesis, journal and conference papers, AUTO21 expert

University of Tongji (Shanghai, China) **from 2016 to now**
High End Foreign Expert in China (2016, 2018), invited professor (2017), journal papers, Cai Yuan Pei (2018, 2 PhD thesis in co-tutelle), teachings and seminars ...

University of British Columbia (Kelowna, Canada), lab **ACIS** **from 2016 to now**
Student hosting, invited professor, journal and conference papers, seminar ...

Teaching activities

UTEC, University of Technology and consular teaching, **(Le) (Tu) (La)**
Chamber of Commerce and Industry of Meaux-Melun
2000:: computer science, Digital electronic, Algorithmic, Computer architecture

University of Technology of Compiègne (engineer degree) **(Le) (Tu) (La)**
1995-2003: Human/Machine communication, AI and problem solving, Virtual Reality, Computer sciences, Digital electronic and microprocessor, introduction to programming, compilation techniques

University Paris XI (Orsay) (engineer and master degree) **(Le) (Tu) (La)**
2013- 2015: “simulation of autonomous systems”, **responsible** of the module, POLYTECH Paris Sud.
2002-2013: « Data fusion for the obstacles detection and tracking ». Master SETI (Electronic System and data processing).

National school of Mines de Paris (engineer) **(La)**
2005-2018: Teaching in the MAREVA option (Vision, morphology, Robotic and control theory).

University Evry Val d’Essonne (master degree) **(Le) (Tu) (La)**
2016-2018: **responsible** of the module « Localisation, map, path planning », master « Mobil Autonomous Systems ».
2005-2012: « The technics of data fusion for the embedded ego-positioning », Master RVSI (VR and intelligent systems).

IFP SCHOOL (engineer) **(Le)**
2018 : module PowerTrain, “Close and Far perception: A key issue Management, Processing and Fusion of sensors and data imperfections”.

Tongji University (China) (Post graduate: master and PhD) **(Le)**
2016 : Lectures 1,2 and 3: From the connected and perceptive vehicle toward the autonomous car. Issue, Methods, and applications
“Close and Far perception: A key issue. Management, Processing and Fusion of sensors and data imperfections”
2018 : Lectures 1, « Is autonomous driving the silver bullet for safety, consumption, and traffic congestion issues. Benefits and weakness”

Changsha University of Science & Technology (Post graduate : master and PhD) **(Le)**
2018: Lecture in the school of traffic & transportation engineering, « Is autonomous driving the silver bullet for safety, consumption, and traffic congestion issues. Benefits and weakness”.

Languages

French: mother tongue

English: fluent

Chinese: A1.1 level

Some relevant publications about my research

- [1] Jessica Van Brummelen, Marie O'Brien, **Dominique Gruyer**, and Homayoun Najjaran, "Autonomous Vehicle Perception: The Technology of Today and Tomorrow", accepted for publication in Transportation Research Part C: Emerging technologies. February 2018. *Impact Factor: 3.805*
- [2] Lucas Rivoirard, Martine Wahl, Patrick Sondi, Marion Berbineau, **Dominique Gruyer**, "Chain-Branch-Leaf: A clustering scheme for vehicular networks using only V2V communications." in Ad Hoc Networks (2017), Volume 67, December 2017, Elsevier, <https://doi.org/10.1016/j.adhoc.2017.10.007>. *Impact Factor: 3.047*
- [3] **Dominique Gruyer**, Valentin Magnier, Karima Hamdi, Laurène Claussmann, Olivier Orfila, Andry Rakotonirainy, "Perception, information processing and modeling: critical stages for autonomous driving applications », in Annual Reviews in Control, volume 44, pages 323-341, November 2017. *Impact Factor: 2.627*
- [4] Olivier Orfila, **Dominique Gruyer**, Karima Hamdi, Sébastien Glaser, , "Safe and Ecological Speed Profile Planning Algorithm for Autonomous Vehicles Using a Parametric Multiobjective Optimization Procedure", accepted in the fourth international symposium on Future Active Safety Technology (FAST-ZERO 2017), Nara Kasugano International Forum, Nara, Japan, 18-22 September 2017
- [5] Olivier Orfila, Camila Freitas Salgueiredo, Guillaume Saint Pierre, Haihao Sun, Ye Li, **Dominique Gruyer**, Sébastien Glaser, "Fast computing and approximate fuel consumption modeling for Internal Combustion Engine passenger cars", in Transportation Research Part D: Transport and Environment, Elsevier, Volume 50, January 2017, Pages 14–25. *Impact Factor: 2.341*
- [6] Lucas Rivoirard, Martine Wahl, Patrick Sondi, Marion Berbineau, **Dominique Gruyer**, " Using real-world car traffic dataset in vehicular ad hoc network performance evaluation.", accepted for publication in International Journal of Advanced Computer Science and Applications (IJACSA), Volume 7 Issue 12 December 2016. *Impact Factor: 1.324*
- [7] **Dominique Gruyer**, Ines Ben Jemaa, Sebastien Glaser, Philippe Desouza, Jean-Sebastien Barreiro, Serge Laverdure « Simulation Platform for the Prototyping, Testing, and Validation of Cooperative Intelligent Transportation Systems. », 23rd ITS World Congress, Melbourne, Australia, 10–14 October 2016.
- [8] **Dominique Gruyer**, Sébastien Demmel, Valentin Magnier, Rachid Belaroussi, « Multi-Hypotheses Tracking using the Dempster–Shafer Theory, application to ambiguous road context.", in Information Fusion, Elsevier, Volume 29, May 2016, Pages 40-56. DOI: 10.1016/j.inffus.2015.10.001. *Impact Factor: 3.681*
- [9] **Dominique Gruyer**, Sébastien Demmel, Brigitte d'Andrea-Novel, Grégoire Larue, Andry Rakotonirainy, « Simulating Cooperative Systems Applications: a New Complete Architecture", in International Journal of Advanced Computer Science and Applications (IJACSA), Volume 4, 2013. **(Best paper award for Volume 4, 2013)** *Impact Factor: 1.32*
- [10] Benoit Vanholme, **Dominique Gruyer**, Benoit Lusetti, Sebastien Glaser, Said Mammar, "Highly automated driving on highways based on legal safety", in IEEE Transaction on Intelligent Transportation Systems, No 14 (1), pp 333-347, 2013. *Impact Factor: 2.472*

Annex

Full list of the publications

Book chapters

[O7] T. Bellet, P. Mayenobe, J.C. Bornard, J.C. Paris, **D. Gruyer**, B. Claverie “Human driver modeling and simulation into a virtual road environment.”, in Human Modeling in Assisted Transportation: Models, Tools and Risk Methods, Springer, 2011, Part 3, pages 251-262, DOI: 10.1007/978-88-470-1821-1_27.

[O6] J. Schindler, C. Harms, U. Noyer, A. Richter, F. Flemisch, F. Koster, T. Bellet, P. Mayenobe, **D. Gruyer**, “JDVE: A Joint Driver-Vehicle-Environment Simulation Platform for the Development and Accelerated Testing of Automotive Assistance and Automation Systems”, in Human Modeling in Assisted Transportation, Springer, 2011, Part 2, pages 233-240, DOI: 10.1007/978-88-470-1821-1_5.

[O5] R. Labayrade, M. Perrolaz, **D. Gruyer**, D. Aubert, “Sensor Data Fusion for Road Obstacle Detection” published in "Sensor Fusion and its Application", ISBN 978-953-307-101-5 published by InTech, August 2010. Chapter 16, pp 375-394.

[O4] F. Boukour, S. Coutel, **D. Gruyer**, J. Marais, « Innovation dans les transports guidés urbains et régionaux », Ouvrage collectif INRETS PFI ITGUR, (Traité Systèmes Automatisés, I2C) Hermes Science Publications – Lavoisier, 2010, Chapitre 7, pp 101-114.

[O3] C. Laugeau, “Le siècle de la voiture intelligente”, participation à la rédaction du chapitre 1, partie 2 (pp 157-159), ISBN : 978-2-911256-10-3. Edition Presse des Mines, collection mathématique et informatique, novembre 2009.

[O2] R. Labayrade, **D. Gruyer**, C. Royere, M. Perrolaz, « Obstacle Detection in Outdoor Environments Based on Fusion Between Stereovision and Laser Scanner » published in « Mobile Robots: Perception & Navigation », ISBN 3-86611-283-1. Published by InTech, February 2007. Chapter 5, pp 91-110.

[O1] J. Vrignon, A. Rakotonirainy, **D. Gruyer**, G. Saint-Pierre, “The impact of subjective factors on driver vigilance: A driving simulator study” published in “Driver Behaviour and Training. Volume III”, ISBN 978-0-7546-7203-6, Ashgat edition 2008, chapter 29, pp 367-377.

International journal papers with review committee (ACL)

[ACL28] V. Judalet, S. Glaser, **D. Gruyer**, S. Mammar, « Fault Detection and Isolation via the Interacting Multiple Model Approach applied to Drive-By-Wire Vehicles», in Sensors 2018, volume 18 (issue 7), 2332; <https://doi.org/10.3390/s18072332>, special issue "Sensors for Fault Detection", July 2018. *Impact Factor: 2.475 (2017)*

[ACL27] Lucas Rivoirard, Martine Wahl, Patrick Sondi, Marion Berbineau, **Dominique Gruyer**, "Chain-Branch-Leaf: A clustering scheme for vehicular networks using only V2V communications." in Ad Hoc Networks (2017), Volume 67, December 2017, Elsevier, <https://doi.org/10.1016/j.adhoc.2017.10.007>. *Impact Factor: 3.047*

[ACL26] **Dominique Gruyer**, Valentin Magnier, Karima Hamdi, Laurène Claussmann, Olivier Orfila, Andry Rakotonirainy, "Perception, information processing and modeling: critical stages for autonomous driving applications », in Annual Reviews in Control, volume 44, pages 323-341, November 2017. *Impact Factor: 2.627*

[ACL25] Jessica Van Brummelen, Marie O'Brien, **Dominique Gruyer**, and Homayoun Najjaran, "Autonomous Vehicle Perception: The Technology of Today and Tomorrow", in Transportation Research Part C: Emerging Technologies, Volume 89, April 2018, Pages 384–406. <https://doi.org/10.1016/j.trc.2018.02.012>, *Impact Factor: 3.805*

[ACL24] Lghani Menhour, Brigitte d'Andréa-Novel, Michel Fliess, **Dominique Gruyer**, Hugues Mounier, "An efficient model-free setting for longitudinal and lateral vehicle control. Validation through the interconnected pro-SiVIC/RTMaps prototyping platform", in IEEE Transactions on Intelligent Transportation Systems, Volume: 19, Issue: 2, Feb. 2018, Page(s): 461 – 475, Date of Publication: 13 June 2017,INSPEC Accession Number: 17541831, DOI: 10.1109/TITS.2017.2699283

[ACL23] Lucas Rivoirard, Martine Wahl, Patrick Sondi, Marion Berbineau, **Dominique Gruyer**, " Using real-world car traffic dataset in vehicular ad hoc network performance evaluation.", in International Journal of Advanced Computer Science and Applications (IJACSA), Volume 7 Issue 12 December 2016. *Impact Factor:1.324*

[ACL22] Olivier Orfila, Camila Freitas Salgueiredo, Guillaume Saint Pierre, Haihao Sun, Ye Li, **Dominique Gruyer**, Sébastien Glaser, "Fast computing and approximate fuel consumption modeling for Internal Combustion Engine passenger cars", in Transportation Research Part D: Transport and Environment, Elsevier, [Volume 50](#), January 2017, Pages 14–25. *Impact Factor: 2.341*

[ACL21] A. R. Amhed Bacha, **D. Gruyer**, A. Lambert, "New reactive-cooperative filter for high dynamic ego-vehicle localization: Test and validation of the OKPS", in Positioning journal, 2016, 7, 1-20, Published Online February 2016 in SciRes. <http://www.scirp.org/journal/pos>, <http://dx.doi.org/10.4236/pos.2016.71001>. DOI: 10.4236/pos.2016.71001. *Google-based Impact Factor: 0.69*

[ACL20] M. Rohani, D. Gingras, **D. Gruyer**, « A Novel approach for Improved Vehicular Positioning using Cooperative Map Matching and Dynamic base station DGPS concept», in IEEE Transaction on Intelligent Transportation Systems, Volume 17, Issue 1, pages 230-239, published in January 2016, ISSN: 1524-9050, DOI: 10.1109/TITS.2015.2465141. *Impact Factor: 2.38*

[ACL19] **D. Gruyer**, S. Demmel, V. Magnier, R. Belaroussi, « Multi-Hypotheses Tracking using the Dempster–Shafer Theory, application to ambiguous road context.", in Information Fusion, Elsevier, Volume 29, May 2016, Pages 40-56. DOI: 10.1016/j.inffus.2015.10.001. *Impact Factor: 3.681*

[ACL18] **D. Gruyer**, R. Belaroussi, M. Revilloud, "Accurate lateral positioning from map data and road marking detection", in Expert Systems with Applications, Elsevier, Volume 43, January 2016, pages 1-8, <http://dx.doi.org/10.1016/j.eswa.2015.08.015>. *Impact Factor: 2.24*

[ACL17] Anh Tuan Giang, Anthony Busson, Alain Lambert, **Dominique Gruyer**, "Spatial capacity of IEEE 802.11p based VANET: models, simulations and experimentations", in the IEEE Transaction on Vehicular Technology. September 2015. Volume PP, Issue 99, ISSN: 0018-9545, DOI number: 10.1109/TVT.2015.2474156. *Impact Factor: 1.978*

- [ACL16] M. Rohani, D. Gingras, V. Vigneron, **D. Gruyer**, « A New Decentralized Bayesian Approach for Cooperative Vehicle Localization based on fusion of GPS and VANET based Inter-vehicle Distance Measurements », in IEEE Intelligent Transportation Systems Magazine, special issue on connected vehicle, volume:7, Issue:2, pages 85-95, ISSN: 1939-1390, DOI: 10.1109/MITS.2015.2408171, summer 2015. *Impact Factor: 0.821*
- [ACL15] S. Demmel, A. Lambert, **D. Gruyer**, G. Larue, A. Rakotonirainy, « IEEE 802.11p Empirical Performance Model from Evaluations on Test Tracks”, in Journal of Networks, Academy publisher, ISSN 1796-2056. 2014. *SJR: 0.26, Cites per doc: 0.55, Total cites: 485, Q3, RG Journal impact 0.66.*
- [ACL14] **D. Gruyer**, S. Demmel, B. d’Andrea-Novel, G. Larue, A. Rakotonirainy, « Simulating Cooperative Systems Applications: a New Complete Architecture”, in International Journal of Advanced Computer Science and Applications (IJACSA), Volume 4, 2013. **(Best paper award for Volume 4, 2013)** *Impact Factor: 1.32*
- [ACL13] A. R. Amhed Bacha, **D. Gruyer**, A. Lambert, “A robust hybrid multisource data fusion approach for vehicle localization”, in the journal Positioning (ISSN: 2150-8526), Special Issue on “GPS and Satellite Navigation”, Scientific Research, volume 4, number 4, November 2013, DOI: 10.4236/pos.2013.44027. *Google-based Impact Factor: 0.69*
- [ACL12] M. Perrollaz, R. Labayrade, **D. Gruyer**, A. Lambert and D. Aubert, “Proposition of Generic Validation Criteria Using Stereo-vision for On-Road Obstacle Detection”, in IJRA (International Journal of Robotic and Automation), ACTA Press, volume 29, pages 65-87, 2014, ISSN (online): 1925-7090, DOI: 10.2316/Journal.206.2014.1.206-3765. *Impact Factor: 0.408*
- [ACL11] T. Bellet, J. C. Bornard, P. Mayenobe, **D. Gruyer**, B. Claverie “Modelling visual distraction effects on driver’s perception and cognition” in International Journal of Human Factors Modeling and Simulation (IJHFMS). 2012 Vol.3, No.1, pp.48 - 65. DOI: 10.1504/IJHFMS.2012.050072.
- [ACL10] **D. Gruyer**, A. Lambert, M. Perrollaz, D. Gingras, « Experimental Comparison of Bayesian Positioning Methods based on Multi-sensor Data Fusion”, in International Journal of Vehicle Autonomous Systems, 2014 Vol.12, No.1, pp.24 – 43. DOI: 10.1504/IJVAS.2014.057852.
- [ACL9] B. Vanholme, **D. Gruyer**, B. Lusetti, S. Glaser, S. Mammar, “Highly automated driving on highways based on legal safety”, in IEEE Transaction on Intelligent Transportation Systems, No 14 (1), pp 333-347, 2013. *Impact Factor: 2.472*
- [ACL8] T. Bellet, P. Mayenobe, J-C. Bornard, **D. Gruyer**, B. Claverie “A computational model of the car driver interfaced with a simulation platform for future virtual Human Centered Design applications: COSMO-SIVIC”, published in Engineering Applications of Artificial Intelligence, – The International Journal of Intelligent Real-Time Automation. Volume 25 Issue 7, October, 2012, Pages 1488-1504, Pergamon Press, Inc. Tarrytown, NY, USA. *Impact Factor: 1.625*
- [ACL7] J.-P. Tarel, N. Hautière, A. Cord, H. Halmaoui, Laurent Caraffa, **D. Gruyer**, “Vision Enhancement in Homogeneous and Heterogeneous Fog”, in IEEE Intelligent Transportation System Magazine, volume 4(2): 6-20, 2012. DOI: 10.1109/MITS.2012.2189969. *Impact Factor: 0.821*
- [ACL6] Anthony Busson, Alain Lambert, **Dominique Gruyer** and Denis Gingras. Analysis of inter-vehicle communication to reduce road crashes. IEEE Transactions on Vehicular Technology. Volume 60, Issue 9, Pages 4487-4496. December 2011. *Impact Factor: 1.921*
- [ACL5] S. Glaser, B. Vanholme, S. Mammar, **D. Gruyer**, L. Nouvelière, “Maneuver based trajectory planning for highly autonomous vehicles on real road with traffic and driver interaction “, in IEEE Transactions on Intelligent Transportation Systems, volume 11, issue 3, pp 589-606, ISSN: 1524-9050, 30 Août 2010. *Impact Factor: 2.234*
- [ACL4] A. Lambert, **D. Gruyer**, A. Busson, H. M. Ali « Usefulness of Collision Warning Inter-Vehicular Systems » in International Journal of Vehicle Safety, vol. 5, No. 1, pp 60-75, 2010. *(in scopus, Q4, SJR: 0.16, Cites per doc: 0.33, Total cites: 12)*

[ACL3] A. Ndeng, **D. Gruyer**, S. Glaser, A. Lambert, “Low Cost IMU-Odometer-GPS Ego localization with IMM for unusual Maneuvers”, in Information Fusion (Elsevier), volume 12, Issue 4, October 2011, pp 264-274, Special issue on Information Fusion for Cognitive Automobiles. *Impact Factor: 1.467*

[ACL2] R. Labayrade, C. Royere, **D. Gruyer**, D. Aubert, «Cooperative Fusion for Multi-Obstacles Detection with the Use of Stereovision and Laser Scanner», in the special issue “Robotics Technologies for Intelligent Vehicles” in Autonomous Robots (Springer science), on, volume 19, number 2, pp 117-140, DOI: 10.1007/s10514-005-0611-7, 2005. *Impact Factor: 1.5*

[ACL1] **D. Gruyer**, C. Royère et V. Cherfaoui, «Utilisation de la théorie des croyances pour l’association dans le suivi de cibles », revue des Sciences et Techniques de l’Information (Hermes Science/ Lavoisier), « fusion de données numériques et d’informations symboliques », vol 22 – n°7-8, pp 983-1010, ISBN : 2-7462-0801-6, 2003.

International journal papers with review committee (ACLN)

[ACLN8] olivier orfila, Haihao Sun, **Dominique Gruyer**, ye Li, Dan Zhao, « transportation data management in China », dans La revue des ingénieurs de l'auto, Special issue « congrès SIA », published in January 2018.

[ACLN7] **Dominique Gruyer**, Valentin Magnier, Mohamed Rahal, Guillaume Bresson, “Real-Time Architecture For Obstacle Detection, Tracking And Filtering: An Issue For The Autonomous Driving”, in Journal of Intelligent Computing (DLINE Journal portal), Volume 8, Number 2, June 2017. Print ISSN: 0976-9005, Online ISSN: 0976-9013. <http://www.dline.info/jic/v8n2.php>

[ACLN6] Nicolas Pous, Denis Gingras, **Dominique Gruyer**, “Intelligent Vehicle embedded sensors fault detection and identification using analytical redundancy and non-linear transformations», in Journal of Control Science and Engineering, Hindawi Publishing Corporation, Volume 2017, Article ID 1763934, <https://doi.org/10.1155/2017/1763934>, published in January 2017.

[ACLN5] V. Vigneron, **D. Gruyer**, S. Mammari, “Numerical Intelligence for Mobility and Communication: Tendencies in Automatics and Control”, Editorial in Journal of Intelligent Systems. Volume 23, Issue 2, Pages 109–111, ISSN (Online) 2191-026X, ISSN (Print) 0334-1860, DOI: [10.1515/jisys-2014-0066](https://doi.org/10.1515/jisys-2014-0066), March 2014.

[ACLN4] **D. Gruyer**, R. Belaroussi, V. Vigneron, A. Cord, “How to Manage Conflict and Ambiguities in Localization and Map Matching” in Journal of Intelligent Systems. Volume 23, Issue 2, Pages 171–182, ISSN (Online) 2191-026X, ISSN (Print) 0334-1860, DOI: [10.1515/jisys-2013-0076](https://doi.org/10.1515/jisys-2013-0076), February 2014

[ACLN3] T. Bellet, P. Mayenobe, J-C. Bornard, **D. Gruyer**, B. Claverie, “The living cognition paradigm: An application to computational modeling of drivers mental activities”, in Journal of US-China Education Review (ISSN 2161-6248), B Education Theory. Vol. 1, N° 4, pp 568-578, September 2011.

[ACLN2] H.-J Yoo, F. Goulette, J. Senpauroca, G. Lepere et **D. Gruyer**, « Aide à la conception par simulation de systèmes de cartographie mobiles à scanner laser », publié dans « la revue française de photogrammétrie et télédétection, numéro 192, pp 83-91, ISSN 1768-9791, 2010.

[ACLN1] Dang Hong-She, Han Chong-Zhao, **D. Gruyer**, “A multi-target data association approach for road vehicle tracking”, Journal of Shaanxi University of Science and Technology (Natural Science Edition), 2005.

International conference papers with review committee and proceedings

[CI156] **Dominique Gruyer**, Sebastien Glaser, Jerome Chapoul, "Simulation Platform for the Prototyping, Testing, and Validation of Cooperative Intelligent Transportation Systems at Component Level". 2018 Australasian Road Safety Conference, Sydney, NSW October 2018.

[CI155] Sébastien Glaser, **Dominique Gruyer**, Olivier Orfila, "Local and global evaluation of risk, impact of C-ITS". Accepted in 2018 Australasian Road Safety Conference, Sydney, NSW. October 2018.

[CI154] Sébastien Demmel, **Dominique Gruyer**, Jean-Marie Burkhardt, Sébastien Glaser, Grégoire Larue, Olivier Orfila, Andry Rakotonirainy, « Global risk assessment in an autonomous driving context: Impact on both the car and the driver », accepted as invited paper in the special session "Human-Machine Interactions in Autonomous Driving", 2nd IFAC Cyber-Physical & Human Systems (CPHS 2018), December 14-15 2018, Miami, USA.

[CI153] Laurene Claussmann, Marie O'Brien, Sébastien Glaser, Homayoun Najjaran, **Dominique Gruyer**, "Multi-Criteria Decision Making for Autonomous Vehicles using Fuzzy Dempster-Shafer Reasoning", in 29th IEEE Intelligent Vehicles Symposium (IV 2018), Chang Shu, Suzhou, China, 26-29 June 2018.

[CI152] Lucas RIVOIRARD, Martine WAHL, Patrick SONDI, Marion BERBINEAU, **Dominique GRUYER**, "A Cooperative Vehicle Ego-localization Application Using V2V Communications with CBL Clustering", in 29th IEEE Intelligent Vehicles Symposium (IV 2018), Chang Shu, Suzhou, China, 26-29 June 2018.

[CI151] Lucas RIVOIRARD, Martine WAHL, Patrick SONDI, Marion BERBINEAU, **Dominique GRUYER**, "A new clustering structure for VANET", accepted in 7th TRA 2018 (Transport Research Arena), Vienna, Austria, 16-19 April 2018.

[CI150] Farid Bounini, Denis Gingras, Herve Pollart, **Dominique Gruyer**, "Online Trajectory Planning with a Modified Potential Field Method on Distributed Architectures for Autonomous Vehicles." ITS World Congress (ITSWC 2017), Montreal, Canada, Nov. 2017.

[CI149] Lucas Rivoirard, Martine Wahl, Patrick Sondi, Marion Berbineau, and **Dominique Gruyer**, "From Multipoint Relaying to Chain-Branch-Leaf: Improving the Clustering in OLSR for Vehicular Ad hoc Networks." accepted in 24th IEEE symposium on Communications and Vehicular Technology (SCVT 2017), University of Leuven, Belgium, 2017

[CI148] Xuanpeng LI, Huanxuan AO, Rachid Belaroussi, and **Dominique Gruyer**, "Fast Semi-Dense 3D Semantic Mapping with Monocular Visual SLAM", in proceedings of IEEE 20th International Conference on Intelligent Transportation Systems (ITSC 2017), workshop on Deep Learning for Autonomous Driving Yokohama, JAPAN. October 16 - 19, 2017.

[CI147] Laurène Claussmann, Marc Revilloud, Sébastien Glaser, **Dominique Gruyer**, "A Study on AI-based Approaches for High-Level Decision Making in Highway Autonomous Driving." accepted in the IEEE International Conference on Systems, Man, and Cybernetics. (IEEE SMC 2017), October 5-8, 2017 - Banff, Canada.

[CI146] Lucas Rivoirard, Martine Wahl, Patrick Sondi, Marion Berbineau, and **Dominique Gruyer**, "CBL: A Clustering Scheme for VANETs." accepted in The Sixth International Conference on Advances in Vehicular Systems, Technologies and Applications (VEHICULAR 2017), July 23 - 27, 2017 - Nice, France. **Best paper award**

[CI145] Sébastien Glaser, **Dominique Gruyer**, Olivier Orfila, "Probabilistic Risk Measurement, from traffic safety evaluation to decision in autonomous vehicle", accepted in the fourth international symposium on Future Active Safety Technology (FAST-ZERO 2017), Nara Kasugano International Forum, Nara, Japan, 18-22 September 2017.

[CI144] Olivier Orfila, Sébastien Glaser, **Dominique Gruyer**, "Safe and Ecological Speed Profile Planning Algorithm for Autonomous Vehicles Using a Parametric Multiobjective Optimization Procedure", accepted in the fourth international symposium on Future Active Safety Technology (FAST-ZERO 2017), Nara Kasugano International Forum, Nara, Japan, 18-22 September 2017.

[CI143] Farid Bounini, Denis Gingras, Herve Pollart, **Dominique Gruyer**, “Modified Artificial Potential Field Method for Online Path Planning Applications”, accepted in IEEE Intelligent Vehicles Symposium 2017 (IV 2017), June 11-14 2017, in Crown Plaza, Redondo Beach, CA, USA.

[CI142] V. Magnier, **D. Gruyer**, J. Godelle, « Multi-criteria Similarity Operator based on the Belief Theory: Management of Similarity, Dissimilarity, Conflict and Ambiguities”, accepted in IEEE Intelligent Vehicles Symposium 2017 (IV 2017), June 11-14 2017, in Crown Plaza, Redondo Beach, CA, USA.

[CI141] V. Magnier, **D. Gruyer**, J. Godelle, « Automotive LIDAR objects Detection and Classification Algorithm Using the Belief Theory”, accepted in IEEE Intelligent Vehicles Symposium 2017 (IV 2017), June 11-14 2017, in Crown Plaza, Redondo Beach, CA, USA.

[CI140] Lucas Rivoirard, Martine Wahl, Patrick Sondi, Marion Berbineau, and **Dominique Gruyer**, “Performance evaluation of AODV, DSR, GRP and OLSR for VANET with real-world trajectories”, accepted in 15th International Conference on ITS Telecommunications (ITST 2017), Warsaw, Poland, May 29-31, 2017.

[CI139] **Dominique Gruyer**, Mohamed-Cherif Rahal, Guillaume Bresson, Valentin Magnier, « Real-time architecture for obstacle detection, tracking and filtering: an issue for the autonomous driving”, accepted in First International Conference on real Time Intelligent Systems (RTIS 2016), Beijing, China, September 01-03, 2016

[CI138] Farid Bounini, Denis Gingras, Herve Pollart, **Dominique Gruyer**, « Real Time Cooperative Localization for Autonomous Vehicles”, accepted in 19th IEEE Intelligent Transportation Systems Conference (ITSC 2016), Rio de Janeiro , October 2016.

[CI137] Marc Revilloud, **Dominique Gruyer** and Mohamed-Cherif Rahal, “A lane marker estimation method for improving lane detection”, accepted in 19th IEEE Intelligent Transportation Systems Conference (ITSC 2016), Rio de Janeiro , October 2016.

[CI136] Ines Ben Jemaa, **Dominique Gruyer**, Sebastien Glaser, « Distributed Simulation Platform for Cooperative ADAS Testing and Validation”, accepted in 19th IEEE Intelligent Transportation Systems Conference (ITSC 2016) workshop, Rio de Janeiro , October 2016.

[CI135] Guillaume Bresson, Mohamed-Cherif Rahal, **Dominique Gruyer**, Marc Revilloud and Zayed Alsayed, “A Cooperative Fusion Architecture for Robust Localization: Application to Autonomous Driving”, accepted in 19th IEEE Intelligent Transportation Systems Conference (ITSC 2016), Rio de Janeiro, October 2016.

[CI134] Andry Rakotonirainy, Olivier Orfila, **Dominique Gruyer**, « Reducing driver’s behavioural uncertainties using an interdisciplinary approach: Convergence of Quantified Self, Autonomous Vehicles, Internet Of Things and Artificial Intelligence.”, accepted in IFAC IEEE CPHS 2016, Florianopolis, December 2016.

[CI133] **D. Gruyer**, I. Ben Jemaa, S. Glaser, P. Desouza, J.S. Barreiro, S. Laverdure « Simulation Platform for the Prototyping, Testing, and Validation of Cooperative Intelligent Transportation Systems. », 23rd ITS World Congress, Melbourne, Australia, 10–14 October 2016.

[CI132] D. Geoffroy, **D. Gruyer**, O. Orfila, S. Glaser, A. Rakotonirainy, A. Vaezipour, S. Demmel, « Immersive driving simulation architecture to support gamified eco-driving instructions », accepted in 23rd ITS World Congress, Melbourne, Australia, 10–14 October 2016.

[CI131] Jacques Ehrlich, **Dominique Gruyer**, Olivier Orfila, Nicolas Hautière, « Autonomous vehicle: the concept of high quality of service highway », accepted in FISITA World Automotive Congress 2016, 26-30 September 2016, Busan, Korea.

[CI130] Jean-Claude Kedzia, Philippe de Souza, and **Dominique Gruyer**, « Advanced RADAR Sensors Modeling for Driving Assistance Systems Testing.”, accepted in EuCAP 2016, Davos, 10-15 April 2016, Switzerland.

[CI129] Marc Revilloud, **Dominique Gruyer**, Rahal Mohamed-Cherif, « A new multi-agent approach for lane detection and tracking”, accepted in 2016 IEEE International Conference on Robotics and Automation (ICRA 2016), May 16-21, 2016, Stockholm, Sweden.

[CI128] Nicolas Pous, Denis Gingras, **Dominique Gruyer**, “FDI architecture for proprioceptive sensors using analytical redundancy and road signature”, accepted in 11th IEEE Vehicle Power and Propulsion Conference (IEEE VPPC 2015), 19-22 October 2015, Montreal, Canada.

[CI127] Rachid Belaroussi, **Dominique Gruyer**, “Convergence of a Traffic Signs-based Fog Density Model”, accepted in 18th IEEE International Conference on Intelligent Transportation Systems (ITSC 2015), 15-18 September 2015, Gran Canaria, Spain.

[CI126] Nicolas Pous, **Dominique Gruyer**, Denis Gingras, “Fault detection and identification for proprioceptive sensors using analytical redundancy and road signature determination”, accepted in 18th IEEE International Conference on Intelligent Transportation Systems (ITSC 2015), 15-18 September 2015, Gran Canaria, Spain.

[CI125] Nicolas Pous, Denis Gingras, **Dominique Gruyer**, « Sensors fault detection architecture in a strongly uncertain environment », accepted in IEEE ITS World Congress 2015, 5-9 October in Bordeaux, France.

[CI124] Nicolas Pous, **Dominique Gruyer**, Denis Gingras, “Fault detection architecture for proprioceptive sensors based on a multi model approach and fuzzy logic decisions”, accepted in International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS 2015), 20-22 May, Lisbon, Portugal.

[CI123] Valentin Magnier, Dominique Gruyer and Jerome Godelle, « Implementation of a multi-criteria tracking based on the Dempster-Shafer Theory”, in IEEE Intelligent Vehicles Symposium 2015 (IV 2015), 28 June-1 July, Seoul, Korea.

[CI122] Olivier Orfila, **Dominique Gruyer**, Vincent Judalet, Marc Revilloud, « Ecodriving Performances of Human Drivers in a Virtual and Realistic world”, accepted in IEEE Intelligent Vehicles Symposium 2015 (IV 2015), 28 June-1 July, Seoul, Korea.

[CI121] Vincent Judalet, Sebastien Glaser, **Dominique Gruyer**, Said Mammar, «IMM-based sensor fault detection and localization for a drive-by-wire vehicle”, accepted in IFAC Safeprocess 2015 (9th International Symposium on Fault Detection, Supervision and Safety for Technical Processes), 2-4 September 2015, Paris, France.

[CI120] **Dominique Gruyer**, Rachid Belaroussi, Xuanpeng Li, Benoit Luseti, Marc Revilloud, Sebastien Glaser, « PerSEE: a Central Fusion Sensors Electronic Control Unit for the development of perception-based ADAS », accepted in The 14th IAPR Conference on Machine Vision Applications (MVA 2015), 18-22 May 2015, Tokyo.

[CI119] Rachid Belaroussi, **Dominique Gruyer**, “Road Sign-Aided Estimation of Visibility Conditions », accepted in The 14th IAPR Conference on Machine Vision Applications (MVA 2015), 18-22 May 2015, Tokyo.

[CI118] Lghani Menhour, Brigitte D'Andrea-Novel, Michel Fliess, Hugues Mounier, **Dominique Gruyer** « A new model-free design for vehicle control and its validation through an advanced simulation platform”, in 14th annual European Control Conference 2015 (ECC 2015), Johannes Kepler University, Linz, 15-17 July 2015, Austria.

[CI117] Mohsen Rohani, Denis Gingras, **Dominique Gruyer**, “Vehicular Cooperative Map Matching”, 3rd International Conference on Connected Vehicles & Expo (ICCVE 2014) Nov 3-7, 2014 | Messe Wien, Vienna, Austria.

[CI116] Mohsen Rohani, Denis Gingras, **Dominique Gruyer**, “Dynamic base station DGPS for Cooperative Vehicle Localization”, 3rd International Conference on Connected Vehicles & Expo (ICCVE 2014) Nov 3-7, 2014 | Messe Wien, Vienna, Austria.

[CI115] A.A. Maranga, H. Zhu, D. Gingras, **D. Gruyer**, «Collision avoidance improvement using a risky area », IEEE 12th International New Circuits and Systems Conference (NEWCAS), 2014, Trois-Rivières, Canada, pp 22-25, 22-25 June 2014.

[CI114] S. Glaser, O. Orfila, L. Nouvelière, **D. Gruyer**, « Enhanced ACC for an electric vehicle with regenerative capacity: Experimental results from eFuture project.”, 12th International Symposium on Advanced Vehicle Control (AVEC 2014), Tokyo : Japan (2014).

- [CI113] Farid Nounini, Vincent Lapointe, Denis Gingras, **Dominique Gruyer**, “Real-time simulator of collaborative autonomous vehicles.”, Accepted in IEEE International Conference on Advances in Computing, Communications and Informatics (ICACCI 2014), 24-27 September 2014, Delhi, India.
- [CI112] Xuanpeng Li, Emmanuel Seignez, **Dominique Gruyer**, Pierre Loonis, “Evidential model and hierarchical information fusion framework for vehicle safety evaluation”, in 17th International IEEE Conference on Intelligent Transportation Systems (ITSC 2014), 8-11 Oct. 2014, Qingdao, China. 10.1109/ITSC.2014.6957970.
- [CI111] **D. Gruyer**, O. Orfila, V. Judalet, S. Glaser, « New 3D immersive platform dedicated to prototyping, test, evaluation and acceptability of eco-driving applications”, in VISION 2014, Versailles France, October 14 & 15, 2014.
- [CI110] **D. Gruyer**, R. Belaroussi, Marc Revilloud, “Map-Aided Localization with Lateral Perception.”, Accepted in IEEE Intelligent Vehicles symposium (IV2014), Dearborn, Michigan, June 8 – 11, 2014, USA.
- [CI109] R. Belaroussi, **D. Gruyer**, « Impact of Reduced Visibility from Fog on Traffic Sign Detection.”, Accepted in IEEE Intelligent Vehicles symposium (IV2014), Dearborn, Michigan, June 8 – 11, 2014, USA.
- [CI108] V. Magnier, **D. Gruyer**, “Dual Multi-Targets Trackings for Ambiguities’ Identification and Solving.”, Accepted in IEEE Intelligent Vehicles symposium (IV2014), Dearborn, Michigan, June 8 – 11, 2014, USA.
- [CI107] A. R. Ahmed Bacha, **D. Gruyer**, A. Lambert, « A Performance Test for a New Reactive-Cooperative Filter in an Ego-Vehicle Localization Application.”, Accepted in IEEE Intelligent Vehicles symposium (IV2014), Dearborn, Michigan, June 8 – 11, 2014, USA.
- [CI106] **D. Gruyer**, S. Choi, C. Boussard, B. d'Andrea Novel, « From Virtual to Reality, How to Prototype, Test and Evaluate New ADAS: Application to Automatic Car Parking.”, Accepted in IEEE Intelligent Vehicles symposium (IV2014), Dearborn, Michigan, June 8 – 11, 2014, USA.
- [CI105] M. Rohani, V. Vigneron, **D. Gruyer**, D. Gingras, « A New Decentralized Bayesian Approach for Cooperative Vehicle Localization based on fusion of GPS and Inter-vehicle Distance Measurements”, accepted in International Conference on Connected Vehicle and Expo (ICCVE 2013), December 2-6, 2013, Las Vegas, Nevada, USA.
- [CI104] A. T. Giang, A. Busson, A. Lambert, **D. Gruyer**, “Topology Control in VANET and Capacity Estimation”, accepted in IEEE Vehicular Networking Conference 2013 (VNC 2013), December 16-18, 2013, Boston, USA.
- [CI103] Aubert D., Brémond R., Cord A., Dumont E., **Gruyer D.**, Hautière N., Nicolle P., Tarel J.-P., Boucher V., Charbonnier P., Foucher P., Fournela F., Greffier F., Muzet V., « Digital imaging for assessing and improving highway visibility », accepted in Transport Research Arena 2014 (TRA 2014). 14-17 Apr 2014 Paris La Défense (France).
- [CI102] **D. Gruyer**, A. Cord, and R. Belaroussi, “Vehicle detection and tracking by collaborative fusion between laser scanner and camera,” in IEEE/RSJ International Conference on Intelligent Robots and Systems IROS’13, 2013.
- [CI101] S. Pechberti, **D. Gruyer**, V. Vigneron, “Optimized simulation architecture for multimodal radar modeling: Application to automotive driving assistance system”, in 16th International IEEE Annual Conference on Intelligent Transportation Systems (IEEE ITSC 2013), Den Hague, Holland, September 2013.
- [CI100] S. Demmel, G. Larue, **D. Gruyer**, A. Rakotonirainy, “An IEEE 802.11p Empirical Performance Model for Cooperative Systems Applications”, in 16th International IEEE Annual Conference on Intelligent Transportation Systems (IEEE ITSC 2013), Den Hague, Holland, September 2013.
- [CI99] S. Demmel, **D. Gruyer**, A. Rakotonirainy, « Simulation architecture for cooperative ITS applications and augmented perception”, In OPTIMUM 2013, Mantra on Salt Beach Resort, Kingscliffe, NSW Australia.
- [CI98] S. Glaser, V. Judalet, **D. Gruyer**, O. Orfila, S. Pechberti, « *Virtual Reality HMD for the test of ADAS system.*”, in FAST-zero 2013, Nagoya, Japan, September 2013.

- [CI97] **D. Gruyer**, S. Pechberti, S. Glaser, « *Development of Full Speed Range ACC with SiVIC, a virtual platform for ADAS Prototyping, Test and Evaluation* », in IEEE IV 2013, Gold Coast, Australia, June 2013.
- [CI96] **D. Gruyer**, A. Cord and R. Belaroussi, « *Target-to-Track Collaborative Association Combining a Laser Scanner and a Camera.* », accepted in IEEE ITSC 2013, Den Hague, Holland, September 2013.
- [CI95] Said Mammar, N. Ait Oufroukh, L. Nouvelière, **D. Gruyer**, « *Integrated Automated Vehicle String Longitudinal Control* », in IEEE IV 2013, Gold Coast, Australia, June 2013.
- [CI94] **D. Gruyer**, O. Orfila, V. Judalet, S. Pechberti, B. Luseti, S. Glaser, « *Proposal of a Virtual and Immersive 3D Architecture dedicated for Prototyping, Test and Evaluation of Eco-Driving Applications.* », in IEEE IV 2013, Gold Coast, Australia, June 2013.
- [CI93] N. Fakhfakh, **D. Gruyer** and D. Aubert, « *Weighted V-disparity Approach for Obstacles Localization in Highway Environments.* », in IEEE IV 2013, Gold Coast, Australia, June 2013.
- [CI92] A. R. Ahmed Bacha, **D. Gruyer**, S. Mammar, « *A new robust cooperative-reactive Filter for Vehicle Localization: The Extended Kalman Particle Swarm 'EKPS'* », in IEEE Intelligent Vehicles Symposium (IV 2013), Gold Coast, Australia, June 2013.
- [CI91] S. Demmel, **D. Gruyer**, A. Rakotonirainy, « *Comparing Cooperative and Non-Cooperative Crash Risk-Assessment* », in IEEE IV 2013, Gold Coast, Australia, June 2013.
- [CI90] M. Revilloud, **D. Gruyer**, E. Pollard, « *A new approach for robust road marking detection and tracking applied to multi-lane estimation* », in IEEE IV 2013, Gold Coast, Australia, June 2013.
- [CI89] **D. Gruyer**, R. Belaroussi, A. Cord, V. Vigneron, « *How to Manage Conflict and Ambiguities in Localization and Map Matching?* », in ICNSC 2013, Paris, April 2013.
- [CI88] A. T. Giang, A. Busson, **D. Gruyer**, A. Lambert, « *An upper bound for capacity of VANET* », accepted 5th International Conference on Advanced Technologies for Communications (ATC 2012), October 10-12, 2012, Hanoi, Vietnam.
- [CI87] T. Bellet, J-C Bornard, P. Mayenobe, J-C. Paris, **D. Gruyer**, B. Claverie, « *Computational simulation of visual distraction effects on car drivers' situation awareness* », 11th International Conference on Cognitive Modeling (ICCM 2012), Berlin, Germany, April 13-15, 2012. Pages 59-65.
- [CI86] J. Godoy, **D. Gruyer**, A. Lambert, J. Villagrà, « *Development of a Particle Swarm Algorithm for vehicle localization* », accepted in IV 2012, Alcalá de Henares, Spain. June 3-7, 2012.
- [CI85] S. Demmel, A. Lambert, **D. Gruyer**, A. Rakotonirainy, E. Monacelli, « *Empirical IEEE 802.11p Performances Evaluation on Test Tracks* », accepted in IV 2012, Alcalá de Henares, Spain. June 3-7, 2012.
- [CI84] **D. Gruyer**, M. Grapinet, P. Desouza, « *Modeling and validation of a new generic virtual optical sensor for ADAS prototyping* », in IV 2012, Alcalá de Henares, Spain. June 3-7, 2012.
- [CI83] Adrien Bak, **Dominique Gruyer**, Samia Bouchafa and Didier Aubert, « *Multi-Sensor Localization – Visual Odometry as a Low Cost Proprioceptive Sensor* », in ITSC 2012, Anchorage, AK, USA; 16 Sep - 19 Sep 2012.
- [CI82] S. Pechberti, **D. Gruyer**, V. Vigneron, « *Radar simulation in SiVIC platform for transportation issues. Antenna and Propagation channel modelling* », in ITSC 2012, Anchorage, AK, USA; 16 Sep - 19 Sep 2012.
- [CI81] **D. Gruyer**, S. Demmel, B. d'Andrea-Novel, A. Lambert, & A. Rakotonirainy, « *Simulation Architecture for the Design of Cooperative Collision Warning Systems* », in ITSC 2012, Anchorage, AK, USA ; 16 Sep - 19 Sep 2012.
- [CI80] M. Revilloud, **D. Gruyer**, E. Pollard, « *Generator of Road Marking Textures and associated Ground Truth. Applied to the evaluation of road marking detection* », in ITSC 2012, Anchorage, AK, USA ; 16 Sep - 19 Sep 2012.

[CI79] A. T. Giang, A. Busson, **D. Gruyer**, A. Lambert, "A packing model to estimate VANET capacity », in proceeding (pages 1119-1124) of 8th International Wireless Communications and Mobile Computing Conference, IWCMC 2012, Limassol, Cyprus, August 27-31, 2012.

[CI78] S. Demmel, G. Larue, A. Rakotonirainy, **D. Gruyer**, "Using cooperative vehicle systems to collect near collision incidents events: a simulation study". In 2nd International Workshop on Traffic Data Collection & its Standardization, September 22-23, 2011, Brisbane, Australia.

[CI77] S. Glaser B. Vanholme, S. Mammar, **D. Gruyer**, "Probability and risk maneuver planning for collision avoidance", in FAST-ZERO (Future Active Safety Technology) 2011, Tokyo, Japan, September 5-9, 2011. **(nominée pour le best paper award)**

[CI76] **D. Gruyer**, S. Glaser, R. Gallen, S. Pechberti, N. Hautiere, "Distributed Simulation Architecture for the Design of Cooperative ADAS", in FAST-ZERO (Future Active Safety Technology) 2011, Tokyo, Japan, September 5-9, 2011.

[CI75] D. Gingras, E. Pollard, **D. Gruyer** "Signal Processing Requirements and Uncertainty Modeling Issues in Cooperative Vehicular Positioning", in IEEE International Workshop on Systems, Signal Processing and their Applications (WOSSPA'2011), May 09-11, 2011, Tipaza Algeria.

[CI74] E. Pollard, B. Vanholme, **D. Gruyer**, « Détection de marquages pour l'assistance à la conduite », 79^{ème} congrès de l'Association Francophone pour le Savoir (ACFAS), mai 2011, Sherbrooke, Canada.

[CI73] B. Vanholme, **D. Gruyer**, S. Glaser, S. Mammar, "A Legal Safety Concept for Highly Automated Driving on Highways ", in IEEE Intelligent Vehicle Symposium, Baden-Baden, Germany, June 5-9, 2011.

[CI72] S. Demmel, **D. Gruyer**, J. Besnier and all, "Collision warning dissemination in vehicles strings: an empirical measurement", in IEEE Intelligent Vehicle Symposium, Baden-Baden, Germany, June 5-9, 2011.

[CI71] **D. Gruyer**, E. Pollard, "Credibilistic IMM likelihood updating applied to outdoor vehicle robust ego-localization ", in 14th International Conference on Information Fusion (Fusion 2011), 5-8 July 2011, Chicago, USA.

[CI70] R. Toledo, **D. Gruyer** and A. Lambert, "A Theoretical Analysis of the Extended Kalman Filter for Data Fusion in Vehicular Positioning", in IEEE International Conference on ITS Telecommunications (ITST 2011), August 23-25, 2011, Saint-Petersburg, Russia.

[CI69] F. Gallee, C. Appere, D. Leroux, A. Peden, M. Ney, **D. Gruyer** "Development of a simulation platform for ACC radar application", accepted in IEEE International Conference on ITS Telecommunications (ITST 2011), August 23-25, 2011, Saint-Petersburg, Russia.

[CI68] E. Pollard, **D. Gruyer**, J.P. Tarel, S. S. Ieng, A. Cord, "Road Marking Extraction with Combination Strategy and Comparative. Evaluation on Synthetic and Actual Images ", accepted in IEEE ITSC 2011, October 5-7, 2011, The Georges Washington University, Washington D.C., USA.

[CI67] B. Vanholme, B. Lusetti, **D. Gruyer**, S. Glaser and S. Mammar, "A Highly Autonomous Driving System on Automotive microprocessors", accepted in IEEE ITSC 2011, October 5-7, 2011, The Georges Washington University, Washington D.C., USA.

[CI66] A. Belbachir, J.C. Smal, J.M. Blosseville, **D. Gruyer**, "Simulation-Driven Validation of Advanced Driving-Assistance Systems", accepted in Transport Research Arena conference (TRA 2012), April 23, 2012, Athens, Greece.

[CI65] Bellet T., Bornard J.C., Mayenobe P., **Gruyer D.** "A computational model for car drivers Situation Awareness simulation: COSMODRIVE". First International Symposium on Digital Human Modeling, 14-16 June 2011, Lyon, France.

[CI64] Bornard J.C., Bellet T., Mayenobe P., **Gruyer D.**, Claverie B. "A perception module for car drivers visual strategies modeling and visual distraction effect simulation". First International Symposium on Digital Human Modeling, 14-16 June 2011, Lyon, France.

- [CI63] S. Mammari, L. Nouveliere, N. Minoiu-Enache, S. Glaser, B. Luseti, **D. Gruyer**, “*Vehicle yaw motion control using Takagi-Sugeno modeling and quadratic boundedness via dynamic output feedback*”, Conference on Engineering Systems Design and Analysis (ESDA 2010), pp 209-218, Istanbul, Turkey, 12 – 14 July 2010.
- [CI62] B. Vincke, A. Lambert, **D. Gruyer**, A. Elouardi, E. Seignez, “*Static and Dynamic Fusion for Outdoor Vehicle Localization*”, accepted in ICARCV 2010, Singapore, December 2010.
- [CI61] S. Demmel, **D. Gruyer**, A. Rakotonirainy, «*V2V/V2I augmented maps: state-of-the-art and contribution to real-time crash risk assessment*”, accepted in Canadian multidisciplinary Road Safety Conference, Niagara falls, USA, 6-9 june 2010.
- [CI60] J. Schindler, C. Harms, U. Noyer, A. Richter, F.k Flemisch, T. Bellet, P. Mayenobe, **D. Gruyer**, “*JDVE: A Joint Driver-Vehicle-Environment Simulation Platform for the Development and Accelerated Testing of Automotive Assistance and Automation Systems*”, accepted in HMAT2010 (Human Modeling in Assisted Transportation), Belgirate, Italia, 30 june- 02 july 2010.
- [CI59] T. Bellet, P. Mayenobe, J.-C. Bornard, J.-C. Paris, **D. Gruyer**, B. Claverie, “*Human driver modelling and simulation into a virtual road environment*”, accepted in HMAT2010 (Human Modeling in Assisted Transportation), Belgirate, Italia, 30 june- 02 july 2010.
- [CI58] Y. Dhome, N. Tronson, A. Vacavant, T. Chateau, C. Gabard, Y. Goyat and **D. Gruyer**, «*A Benchmark for Background Subtraction Algorithms in Monocular Vision: a Comparative Study*”, accepted in IPTA 2010 (International Conference on Image Processing Theory, Tools and Applications), July 7-10 Paris, France.
- [CI57] **D. Gruyer**, N. Hiblot, P. Desouza, H. Sauer, B. Monnier, “*A new generic virtual platform for cameras modeling*”, in proceeding of International Conference VISION 2010, 6-7 October 2010, Montigny-le-Bretonneux, France.
- [CI56] J.S. Barreiro, N. Hiblot, **D. Gruyer** & B. Monnier, “*Pro-SiVIC™, a new way for managing, cameras in tunnel*”, accepted to Road Safety Conference 2010, Canberra, and September 2010.
- [CI55] N. Hiblot, **D. Gruyer**, J.S. Barreiro, B. Monnier, “*Pro-SiVIC and ROADS, A Software suite for sensors simulation and virtual prototyping of ADAS*”, in DSC 2010, Paris, 9-10 September, 2010.
- [CI54] B. Vanholme, **D. Gruyer**, S. Glaser, S. Mammari, “*Fast prototyping of a Highly Autonomous Cooperative Driving System for public roads*”, in IV 2010, San Diego, June 2010.
- [CI53] S. Pechberti, **D. Gruyer**, D. Gingras and F. Dupin, “*Design of a Modular Demonstrator for Safety Application Systems: the CVIS Project*”, in IV 2010, San Diego, June 2010.
- [CI52] **D. Gruyer**, S. Pechberti, D. Gingras and F. Dupin, “*Robust Positioning in Safety Applications for the CVIS Project*”, in IV 2010, San Diego, June 2010.
- [CI51] J. Bossu, **D. Gruyer**, J.C. Smal, J.M. Blossville, “*Validation and Benchmarking for Pedestrian Video Detection based on a Sensors Simulation Platform*”, in IV 2010, San Diego, June 2010.
- [CI50] J.P Tarel, N. Hautiere, A. Cord, **D. Gruyer**, H. Halmaoui, “*Improved Visibility of Road Scene Images under Heterogeneous Fog*”, accepted in IV 2010, San Diego, June 2010.
- [CI49] Bellet T., Mayenobe P., Bornard J.C., **Gruyer D.**, Mathern B., “*COSMO-SIVIC: a first step towards a virtual platform for Human Centred Design of driving assistances*”, Proceeding of the 11th IFAC/IFIP/IFORS/IEA Symposium on Analysis, Design and Evaluation, 30 August-03 September 2010, IFAC, Valenciennes (on CD-Rom, 6 pages).
- [CI48] B. Chrétien, F. Holzmann, **D. Gruyer**, S. Glaser, “*Improvement of E/E architecture design using functional approach*”, accepted to FISITA’10, Budapest, Hungary, 30 may-4 june 2010.
- [CI47] **D. Gruyer**, S. Glaser, B. Monnier, “*SIVIC, a virtual platform for ADAS and PADAS prototyping, test and evaluation*”, in proceeding of FISITA’10, Budapest, Hungary, 30 may-4 june 2010.

- [CI46] **D. Gruyer**, S. Glaser, B. Monnier, « Simulation of vehicle automatic speed control by transponder-equipped infrastructure », IEEE ITST 2009, 20-22 October 2009, Lille, France.
- [CI45] S. Demmel, A. Rakotonirainy, **D. Gruyer**, « Articulating Cooperative systems and driver behavior theories”, in ITS world 2009, 21-25 September 2009, Stockholm, suède.
- [CI44] S. Demmel, A. Rakotonirainy, **D. Gruyer**, « Crash Risk Assessment with Cooperative Systems”, in Road Safety Conference 2009, 11-13 November 2009, Sydney, Australia.
- [CI43] A. Ndjeng Ndjeng, **D. Gruyer** and S. Glaser, « New Likelihood Updating for the IMM Approach Application to Outdoor Vehicles Localization”, IROS’09, October 2009, Saint Louis, USA.
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