

## List of Publications

### Theses & Books

- [1] C. LAUGIER, R. SIEGWART, A. MARTINELLI (Guest Editors), *Int. Jour. of Robotics Research (IJRR)*. Special issue on "Robots in Open and Dynamic Environments", Publication scheduled for Spring 2008.
- [2] C. LAUGIER, R. SIEGWART, C. PRADALIER (Guest Editors), *Int. Jour. of Field Robotics (IJFR)*. Special issue on "Field and Service Robotics", Publication scheduled for Spring 2008.
- [3] C. LAUGIER, U. NUMES (Guest Editors), *IEEE Trans. on Intelligent Transportation Systems (IEEE-ITS)*. Special issue on "Autonomous Intelligent Vehicle : Perception and Navigation", Publication scheduled for September 2008.
- [4] P. BESSIERE, C. LAUGIER AND R. SIEGWART (Guest Editors), *Springer Tracts in Advanced Robotics (STAR)*, "Bayesian Approaches to Cognitive Systems", Springer-Verlag, Publication scheduled for January 2008.
- [5] D. WANG AND C. LAUGIER (Guest Editors), *Int. Jour. of Vehicle Autonomous Systems (IJVAS)*. Special issue on "Advances in Autonomous Vehicle Technologies", Publication scheduled for December 2007.
- [6] C. LAUGIER AND R. CHATILA (Guest Editors), *Springer Tracts in Advanced Robotics (STAR)*, "Autonomous navigation in dynamic environments", Springer-Verlag, July 2007.
- [7] C. LAUGIER AND R. SIEGWART (Guest Editors), *Journal of Advanced Robotics*. Special issue on Intelligent Robots and Systems, Vol. 17, No. 7, August 2003.
- [8] C. LAUGIER (Guest Editor), *Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems*, Inria, 1997.
- [9] J. DE SHUTTER, A. BLAKE, C. LAUGIER (Guest Editors), *Int. Jour. of Robotics Research (IJRR)*. Special issue on "Integration among planning, sensing and control", 14 (5), Sage Press, October 1995.
- [10] C. LAUGIER, J.-P. LAUMOND, C. SAMSON (Guest Editors), *Revue d'Intelligence Artificielle : numéro spécial Planification et contrôle du mouvement en robotique*, 7(4), Hermes, 1993.
- [11] C. LAUGIER (Guest Editor), *Geometric reasoning for perception and action*, Lecture notes in computer science. Springer, 1993.
- [12] T. FRAICHARD, C. LAUGIER (Guest Editors), *Proc. of the European Prometheus Workshop on Intelligent Co-Pilot*, Grenoble (FR), 1991.
- [13] C. LAUGIER, *Raisonnement géométrique et méthodes de décision en robotique. Application à la programmation automatique des robots*, Thèse d'état, Inst. Nat. Polytechnique de Grenoble, Grenoble (F), December 1987. 230 pages.
- [14] C. LAUGIER, *Un système d'interprétation graphique de données. Application à l'illustration dynamique de programmes*, Thèse de doctorat, USTMG, Grenoble, France, octobre 1976.

### Books Contributions

- [15] C. LAUGIER, S. PETTI, D. VASQUEZ, M. YGUEL, TH. FRAICHARD, O. AYCARD, « Steps Towards Safe Navigation in Open and Dynamic Environments ». In : "Autonomous navigation in dynamic environments", C. Laugier and R. Chatila (Eds.), *Springer Tracts in Advanced Robotics (STAR)*, Springer-Verlag, July 2007.
- [16] C. LAUGIER, C. MENDOZA SERRANO, K. SUNDARAJ, « Faithfull Haptic Feedback in Medical Simulators ». In : *Experimental Robotics VIII*, Bruno Siciliano and Paolo Dario (Eds.), *Springer Tracts in Advanced Robotics (STAR)*, Vol. 5, Springer-Verlag, Spring 2003.
- [17] C. LAUGIER, C. MENDOZA SERRANO, K. SUNDARAJ, « Towards a Realistic Medical Simulator Using Virtual Environments and Force Feedback ». In : *Robotics Research X*, Raymond Jarvis and Alexander Zelinsky (Eds.), *Springer Tracts in Advanced Robotics (STAR)*, Vol. 6, Springer-Verlag, Spring 2003.
- [18] C. LAUGIER, TH. FRAICHARD, « Chapter : Decisional Architectures for Motion Autonomy », In : *Intelligent Vehicle Technologies*, L. Vlacic, F. Harashima, and M. Parent (Eds.), Butterworth-Heinemann, 2001.
- [19] A. DEGUET, A. JOUKHADAR, C. LAUGIER, « Models and Algorithms for the Collision of Rigid and Deformable Bodies », In : *Robotics. The Algorithmic Perspective*, P. K. Agarwal, L. E. Kavraki, et M. T. Mason (Eds.), AKPeters, 1998, p. 327–338.
- [20] I. E. PAROMTCHIK, P. GARNIER, C. LAUGIER, « Autonomous Maneuvers of a Nonholonomic Vehicle », in : *Intelligent Autonomous Systems*, Ufa State Aviation Technical University (RU), 1998, p. 38–45,
- [21] I. E. PAROMTCHIK, P. GARNIER, C. LAUGIER, « Autonomous Maneuvers of a Nonholonomic Vehicle », in : *Experimental Robotics V*, A. Casals and A. T. Almeida (Eds.), *Lecture Notes in Control and Information Science*, Springer-Verlag, 1998, p. 277–288.

- [22] A. JOUKHADAR, C. LAUGIER, « Dynamic Simulation : Model, Basic algorithms, and Optimization », *in* : *Algorithms For Robotic Motion and Manipulation*, J.-P. Laumond and M. Overmars (Eds.), A.K. Peters Publisher, 1997, p. 419–434.
- [23] I. E. PAROMTCHIK, C. LAUGIER, « Parking a nonholonomic autonomous vehicle », *in* : *Advances in Robotics : the European Robotics Network (ERNET) Perspective*, C. Bonivento, C. Melchiorri, and T. H. (Eds.), World Scientific Publishing Co., 1996, p. 153–162,
- [24] B. TRIGGS, C. LAUGIER, « Automatic Task Planning for Robot Vision », *in* : *Robotics Research VII*, G. Giralt and G. Hirzinger (Eds.), Springer-Verlag, 1996, p. 428–439.
- [25] T. FRAICHARD, C. LAUGIER, « Kinodynamic Planning in a Structured and Time-Varying Workspace », *in* : *Geometric Reasoning for Perception and Action*, C. Laugier (Eds.), *Lecture Notes in Computer Science*, 708, Springer-Verlag, 1993, p. 19–37.
- [26] C. LAUGIER, A. LUCIANI, S. JIMENEZ, « Physical modeling and dynamic simulation of planet vehicles. Application to the motion prediction », Chapter : Planetary mobile vehicles, *Série Colloque*, Centre Nat. d’Etudes Spatiales, September 1992.
- [27] C. MILÉSI-BELLIER, C. LAUGIER, E. MAZER, J. TROCCAZ, « A practical system for planning safe trajectories for manipulator robots », Chapter : Planning and Programming, *in* : *Mechatronics and Robotics I*, I. Press, Esprit CIM-Europe, July 1991, p. 153–163.
- [28] C. LAUGIER, *Techniques de la Robotique - Perception et Planification*, Chapitre : Traitement des incertitudes en programmation automatique des robots, Jean-Daniel Boissonnat, Bernard Faverjon, Jean-Pierre Merlet (Eds.), HERMES, 1989, 46 pages.
- [29] C. LAUGIER, « Planning robot motions in the SHARP system », *in* : *CAD-Based Programming for Sensory Robots*, B. Ravani (Eds.), *NATO ASI Série F*, 50, Springer-Verlag, 1988, p. 151–188.
- [30] C. LAUGIER, « A program for automatic grasping of objects with a robot arm », *in* : *Int. Trends in Manufacturing Technology : Robot Grippers*, D. Pham et W. Heginbotham (Eds.), IFS Publications Ltd, Springer-Verlag, UK, 1986, p. 43–53.
- [31] J. LATOMBE, C. LAUGIER, J. LEFEBVRE, E. MAZER, J. MIRIBEL, « The LM robot programming system », *in* : *Proc. of the Int. Symp. on Robotics Research*, H. Hanafusa et H. Inoue (Eds.), MIT Press, 1985.
- [32] C. LAUGIER, J. PERTIN, « Automatic Grasping : a case study in accessibility analysis », *in* : *Advances Software in Robotics*, A. Danthine et M. Gérardin (Eds.), Noth Holland, 1984, p. 201–204.
- [33] C. LAUGIER, B. DUFAY, « Geometric Reasoning in automatic grasping and contact analysis », *in* : *Advances in CAD-CAM*, T. Ellis et O. Semenkov (Eds.), North Holland, 1983, p. 473–482.

## Journal Papers

- [34] D. VASQUEZ, TH. FRAICHARD, C. LAUGIER, « Intentional motion on-line learning and prediction ». *Journal of Machine Vision and Applications (MVA)*, to appear end of 2007.
- [35] D. VASQUEZ, TH. FRAICHARD, C. LAUGIER, « Long-term prediction of future motion through visual observation and learning ». *Journal of Autonomous Robots (JAR)*, revised version under review.
- [36] D. VASQUEZ, TH. FRAICHARD, C. LAUGIER, « Incremental learning of statistical motion patterns with Growing Hidden Markov Models ». *IEEE Trans. on Intelligent Transport Systems (IEEE-ITS)*, submitted on invitation, under review.
- [37] B. REBSAMEN, E. BURDET, C. GUAN, H. ZHANG, C.L. TEO, Q. ZENG, C. LAUGIER, M. ANG, « Controlling a Wheelchair in a Building using Thought ». *IEEE Intelligent Systems*, April 2007.
- [38] C. LAUGIER, D. VASQUEZ, M. YGUEL, TH. FRAICHARD, O. AYCARD, « Geometric and Bayesian models for safe navigation in dynamic environments ». *International Journal of Intelligent Service Robotics (ISR)*, February 2007.
- [39] C. TAY, K. MEKHNACHA, C. CHEN, M. YGUEL, C. LAUGIER, « An efficient formulation of the Bayesian Occupancy Filter for Target Tracking in Dynamic Environments ». *International Journal of Vehicle Autonomous System (IJVAS). Special issue on “Intelligent Vehicles”*, Volume to appear, Winter 2007.
- [40] M. YGUEL, O. AYCARD, C. LAUGIER, « Efficient GPU-based Construction of Occupancy Grids using several Range Finders ». *International Journal of Vehicle Autonomous System (IJVAS). Special issue on “Intelligent Vehicles” Autonomous Vehicle (IJAV)*, Volume to appear, Winter 2007.
- [41] C. COUE, C. PRADALIER, C. LAUGIER, TH. FRAICHARD, P. BESSIERE, « Bayesian Occupancy Filtering for Multi-Target Tracking : an Automotive Application ». *International Journal of Robotics Research (IJRR)*, Vol. 25, Nb. 1, Page 19-30, January 2006.
- [42] F. LARGE, C. LAUGIER, Z. SHILLER, « Navigation Among Moving Obstacles Using NLVO : Principles and Applications to Intelligent Vehicles », *Autonomous Robot Journal*, Vol.19, Number 2, Page 159-171, September 2005.
- [43] D. DAULIGNAC, C. LAUGIER, J. TROCCAZ, S. VIERA, « Towards a realistic echographic simulator », *Journal of Medical Image Analysis*, Available on-line since 27 May 2005.

- [44] C. PRADALIER, J. HERMOSILLO, C. KOIKE, P. BESSIÈRE, C. LAUGIER, « The Cycab : a Car-Like Robot Navigating Autonomously and Safely Among Pedestrians », *Robotics and Autonomous Systems Journal (RAS)*, Vol. 50, Number 1, Page 51-68, 2005.
- [45] J. HERMOSILLO, C. PRADALIER, S. SEKHAVAT, C. LAUGIER, « Autonomous Navigation of a Bi-steerable Car : Experimental issues », *Machine Intelligence and Robotic Control Journal (MIROC)*, 2004.
- [46] K. SUNDARAJ, C. LAUGIER, F. BOUX-DE-CASSON, « Towards a Complete Inter-operative CT-Free Navigation System for Arthroscopy Anterior Cruciate Ligament Reconstruction », *Int. Journal of Human Friendly Welfare Robotic Systems*, Vol. 5, 2004.
- [47] C. MENDOZA, C. LAUGIER, « Explicit Non-Linear Finite Elements for Rendering Haptic Cutting in Medical Simulators », *Submitted to Journal of Advanced Robotics*, September 2003.
- [48] M. CHERIF, M. VIDAL, AND C. LAUGIER, « A roadmap-based algorithm for planning handling operations in changing industrial plants ». *Int. Journ. of Robotics and Automation*, 2001. Dec. 1999.
- [49] A. DEGUET, A. JOUKHADAR, C. LAUGIER, « A validation of the penalty model for collisions », *Advanced Robotics* 13, 7, 1999, p. 691-702.
- [50] C. LAUGIER, T. FRAICHARD, P. GARNIER, I. E. PAROMTCHIK, A. SCHEUER, « Sensor-based control architecture for a car-like vehicle », *Autonomous Robots* 6, 2, April 1999, p. 165-185.
- [51] F. DE LA ROSA, C. LAUGIER, J. NÁJERA, « Robust Path Planning in the Plane », *IEEE Trans. Robotics and Automation* 12, 2, April 1996, p. 347-352.
- [52] C. BARD, C. LAUGIER, C. MILÉSI-BELLIER, J. TROCCAZ, B. TRIGGS, G. VERCELLI, « Achieving dextrous grasping by integrating planning and vision based sensing », *Int. Journal of Robotics Research* 14, 5, October 1995, p. 445-464.
- [53] M. HASSOUN, C. LAUGIER, « An architecture for motion planning and motion control of a car-like vehicle », *Mathl. Comp. Modelling* 22, 4-7, 1995, p. 329-341.
- [54] F. DE LA ROSA, C. LAUGIER, J. NÁJERA, « Planning Motion Strategies in the Contact Space under Geometric Uncertainty Constraints », *Revue d'Intelligence Artificielle* 8, 3, 1994, p. 279-312.
- [55] C. LAUGIER, A. JIMENEZ, A. LUCIANI, « Simulating Physical Interactions Between an Articulated Mobile Vehicle and a Terrain », in : *Robotics and Autonomous Systems*, 2, 11, Elsevier, 1994, ch. Special Issue on Telerobotics.
- [56] C. LAUGIER, P. THEVENEAU, P. PUGET, « Dealing with geometric uncertainty constraints when planning robot actions », *Revue d'Intelligence Artificielle* 5, 4, 1991.
- [57] C. LAUGIER, « Geometric reasoning in motion planning », *Int. Journal of Robotics Research*, 1991, Retiré de la publication IJRR par l'auteur. Publié comme rapport de Recherche INRIA no.932, Nov. 1988, 40 pages.
- [58] C. LAUGIER, « Les apports respectifs des langages symboliques et de la CAO en programmation des robots », *Robotica* 6, 1988, p. 243-253.
- [59] C. LAUGIER, J. LATOMBE, « Les systèmes de programmation de robots », *Revue Française de Mécanique* 4, 1987, p. 223-235.

## Conference Papers

- [60] D. VASQUEZ, C. LAUGIER, TH. FRAICHARD, « Incremental learning of statistical motion patterns with Growing Hidden Markov Models ». In *Proc. of the International Symposium of Robotics Research (ISRR'07)*, Hiroshima (Japan), November 2007.
- [61] C. TAY, C. LAUGIER, « Modelling Smooth Paths using Gaussian Processes ». In *Proc. of the Int. Conf. on Field and Service Robotics (FSR'07)*, Chamonix (France), July 2007.
- [62] D. VASQUEZ, T. BELLARDI, C. LAUGIER, « Fast object extraction from images and occupancy grids using Self Organizing Networks ». In *Proc. of the IEEE/RSJ IROS'07 Workshop on "Safe navigation in open and dynamic environments"*, San Diego (USA), October 2007.
- [63] M. YGUEL, C. LAUGIER, O. AYCARD, « A complete framework for a fast SLAM algorithm based on hierarchical occupancy grids ». In *Proc. of the IEEE/RSJ IROS'07 Workshop on "Safe navigation in open and dynamic environments"*, San Diego (USA), October 2007.
- [64] B. REBSAMEN, E. BURDET, C. GUAN, H. ZANG, Q. ZENG, M. ANG, C. LAUGIER, « Hybrid P300 and Mu-Beta Brain Computer Interface to operate a Brain Controlled Wheelchair ». In *Proc. of the IEEE/RSJ IROS'07 Workshop on "Safe navigation in open and dynamic environments"*, San Diego (USA), October 2007.
- [65] C. FULGENZI, A. SPALANZANI, C. LAUGIER, « Dynamic obstacle avoidance in uncertain environments by combining PVOs and Occupancy Grids ». In *Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA'07)*, Roma (Italy), April 2007.
- [66] C. FULGENZI, A. SPALANZANI, C. LAUGIER, « Combining Probability Velocity Obstacles and Occupancy Grids for Safe Navigation in Dynamic Environments ». In *Proc. of the IEEE ICRA'07 workshop on "Autonomous Navigation in Dynamic Environments"*, Roma (Italy), April 2007.

- [67] M. YGUEL, C. TAY, C. BRAILLON, C. LAUGIER, « *Dense Mapping for Range Sensors : Efficient Algorithms and Sparse Representations* ». In Proc. of the Int. Conf. on Robotics Science and Systems (RSS'07), Atlanta (USA), June 2007.
- [68] M. YGUEL, C. TAY, C. BRAILLON, C. LAUGIER, « *Dense Mapping using Range Sensor data and wavelets* ». In Proc. of the Int. Conf. on Field and Service Robotics (FSR'07), Chamonix (France), July 2007.
- [69] B. REBSAMEN, E. BURDET, C. GUAN, H. ZANG, Q. ZENG, M. ANG, C. LAUGIER, « *A Brain-Controlled Wheelchair Based on P300 and Path Guidance* ». In Proc. of the IEEE Int. Conference on Biomedical Robotics and Biomechatronics (BioRob), Pisa (Italy), 2006.
- [70] J. BURLET, O. AYCARD, A. SPALANZANI, C. LAUGIER, « *Adaptive Interactive Multiple Models applied on Pedetrian Tracking in Car Parks* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS'06), Beijing (China), October 2006.
- [71] M. YGUEL, O. AYCARD, C. LAUGIER, « *Efficient GPU-based Construction of Occupancy Grids using several Laser Range Finders* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS'06), Beijing (China), October 2006.
- [72] C. BRAILLON, K. USHER, C. PRADALIER, J. CROWLEY, C. LAUGIER, « *Real-time Stereo and Optical Flow Fusion* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS'06), Beijing (China), October 2006.
- [73] C. CHEN, C. TAY, K. MEKHNACHA, C. LAUGIER, « *Dynamic environment modeling with gridmap : a multiple-object tracking application* ». In Proc. of the Int. Conf. on Control, Automation, Robotics and Vision (ICARCV'06), Singapore, December 2006.
- [74] D. VASQUEZ, F. ROMANELLI, TH. FRAICHARD, C. LAUGIER, « *Fast Object Extraction from Bayesian Occupancy Grids using Self Organizing Networks* ». In Proc. of the Int. Conf. on Control, Automation, Robotics and Vision (ICARCV'06), Singapore, December 2006.
- [75] C. BRAILLON, K. USHER, C. PRADALIER, J. CROWLEY, C. LAUGIER, « *Fusion of Stereo and Optical Flow data using Occupancy Grids* ». In Proc. of the IEEE Int. Conf. on Intelligent Transportation Systems (ITSC'06), Toronto (Canada), September 2006.
- [76] J. BURLET, O. AYCARD, A. SPALANZANI, C. LAUGIER, « *Pedestrian Tracking in Car Parks : an Adaptive Interacting Multiple Model based Filtering Method* ». In Proc. of the IEEE Int. Conf. on Intelligent Transportation Systems (ITSC'06), Toronto (Canada), September 2006.
- [77] M. YGUEL, O. AYCARD, D. RAULO, C. LAUGIER, « *Grid based Fusion of Offboard Cameras* ». In Proc. of the IEEE Int. Symp. on Intelligent Vehicles (IV'06), Tokyo (Japan), June 2006.
- [78] O. AYCARD, A. SPALANZANI, M. YGUEL, J. BURLET, TH. FRAICHARD, C. LAUGIER, D. RAULO, « *Puvame - New French Approach for Vulnerable Road Users Safety* ». In Proc. of the IEEE Int. Symp. on Intelligent Vehicles (IV'06), Tokyo (Japan), June 2006.
- [79] C. BRAILLON, C. PRADALIER, J. CROWLEY, C. LAUGIER, « *Real-time Moving Obstacle Detection using Optical Flow Models* ». In Proc. of the IEEE Int. Symp. on Intelligent Vehicles (IV'06), Tokyo (Japan), June 2006.
- [80] C. BRAILLON, K. USHER, C. PRADALIER, J. CROWLEY, C. LAUGIER, « *Occupancy Grids from Stereo and Optical Flow data* ». In Proc. of the Int. Symp. on Experimental Robotics (ISER'06), Rio de Janeiro (Brasil), July 2006.
- [81] A. NEGRE, C. BRAILLON, J. CROWLEY, C. LAUGIER, « *Real-time Time-to-Collision from Variation of Intrinsic Scale* ». In Proc. of the Int. Symp. on Experimental Robotics (ISER'06), Rio de Janeiro (Brasil), July 2006.
- [82] D. VASQUEZ, TH. FRAICHARD, O. AYCARD, C. LAUGIER, « *Intentional Motion On-Line Learning and Prediction* ». In Proc. of the Int. Conf. on Field and Service Robotics (FSR'05), Port Douglas (Australia), July 2005. Papier selected for a special issue of the International Journal of Robotics Research.
- [83] C. TAY, C. PRADALIER, C. LAUGIER, « *On-Line Reconstruction of Vehicles in a Car Park* ». In Proc. of the Int. Conf. on Field and Service Robotics (FSR'05), Port Douglas (Australia), July 2005.
- [84] M. YGUEL, O. AYCARD, C. LAUGIER, « *Wavelet Occupancy Grids : a Method for Compact Map Building* ». In Proc. of the Int. Conf. on Field and Service Robotics (FSR'05), Port Douglas (Australia), July 2005.
- [85] C. TAY, C. PRADALIER, C. LAUGIER, « *Vehicle Detection and Car Park Mapping using Laser Scanner* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS'05), Edmonton (Canada), August 2005.
- [86] C. LAUGIER, S. PETTI, D. VASQUEZ, M. YGUEL, TH. FRAICHARD, O. AYCARD, « *Steps Towards Safe Navigation in Open and Dynamic Environments* ». In Proc. of the IEEE ICRA 2005 Workshop on Autonomous Navigation in Dynamic Environments, Bracelona (Spain), April 2005.
- [87] D. VASQUEZ, F. LARGE, T. FRAICHARD, C. LAUGIER, « *Moving Obstacles Motion Prediction for Autonomous Navigation* ». In Proc. of the IEEE Int. Conf. on Automation, Robotics, Control, and Vision (IARCV), Kuming, China, Dec. 2004.
- [88] M. KAIS, S. MORIN, A. DE LA FORTELLE, C. LAUGIER, « *Geometric Model to Drive Vision Systems with Error Propagation* ». In Proc. of the IEEE Int. Conf. on Automation, Robotics, Control, and Vision (IARCV), Kuming, China, Dec. 2004.

- [89] M. KAIS, S. DAUVILLIER, A. DE LA FORTELLE, I. MASAKI, C. LAUGIER, « *Towards Outdoor Localization using GIS, Vision System and Stochastic Error Propagation* ». In Proc. of the International Conference on Autonomous Robots and Agents (ICARA), Palmerston North (New Zealand), Dec. 2004.
- [90] C. PRADALIER, P. BESSIERE, C. LAUGIER, « *Driving on a known sensori-motor trajectory with a car-like robot* ». In Proc. of the IEEE Int. Conf. on Robotics and Automation (ISER'04), Singapore, June 2004.
- [91] C. PRADALIER, J. HERMOSILLO, C. KOIKE, C. BRAILLON, P. BESSIERE, C. LAUGIER, « *An Autonomous Car-Like Robot Navigating Safely among Pedestrians* ». In Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA'03), New Orleans, LA (US), April 2004.
- [92] K. SUNDARAJ, C. LAUGIER, F. BOUX-DE-CASSON, « *Towards a complete Intra-Operative CT-Free Navigation System for Arthroscopy Anterior Cruciate Ligament Reconstruction* ». In Proc. of the Int. Symposium on Medical Simulation, Cambridge, MA (US), June 2004.
- [93] D. VASQUEZ, F. LARGE, T. FRAICHARD, C. LAUGIER, « *High-Speed Autonomous Navigation with Motion Prediction for Unknown Moving Obstacles* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS), Sendai (JP), October 2004.
- [94] F. LARGE, D. VASQUEZ, T. FRAICHARD, C. LAUGIER, « *High-Speed among Unknown Moving Obstacles* ». In Proc. of the IEEE Intelligent Vehicles Symposium (IV), Parma (Italy), June 2004.
- [95] K. SUNDARAJ, C. LAUGIER, F. BOUX-DE-CASSON, « *Intra-Operative CT-Free Examination System for Anterior Cruciate Ligament Reconstruction* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS 2003), Las Vegas (USA), October 2003.
- [96] C. PRADALIER, J. HERMOSILLO, C. KOIKE, C. BRAILLON, P. BESSIERE, C. LAUGIER, « *Safe and Autonomous Navigation for a Car-Like Robot among Pedestrian* ». In Workshop of the International Advanced Robotics Programme (IARP'03), Madrid (Spain), October 2003.
- [97] C. MENDOZA SERRANO, C. LAUGIER, O. GALIZZI, F. FAURE, « *Dynamic simulation and 3D intercation* ». In Proc. of 4<sup>ème</sup> Journées Nationales de Recherche en Robotique (JNRR'02), Clermont-Ferrand (F), October 2003.
- [98] C. MENDOZA SERRANO, C. LAUGIER, « *Cutting using Haptics and non-linear Finite Element Models* ». In Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA'03), Taipei (Taiwan), Sept. 2003.
- [99] J. HERMOSILLO, C. PRADALIER, S. SEKHAVAT, C. LAUGIER, « *Towards Motion Autonomy of a Bi-steerable Car : Experimental Issues from Map-Building to Trajectory Execution* ». In Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA'03), Taipei (Taiwan), Sept. 2003.
- [100] C. COUE, C. PRADALIER, C. LAUGIER, « *Bayesian Programming for Multi-Target Tracking : an Automotive Application* ». In Proc. of the Int. Conf. on Field and Service Robotics (FSR'03), Lake Yamanaka (Japan), July 2003.
- [101] J. HERMOSILLO, C. PRADALIER, S. SEKHAVAT, C. LAUGIER, « *Experimental Issues from Map Building to Trajectory Execution for a Bi-steerable Car* ». In Proc. of the Int. Conf. on Advanced Robotics (ICAR'03), Coimbra (Portugal), July 2003.
- [102] C. MENDOZA SERRANO, C. LAUGIER, « *Tissue Cutting using Finite Elements and Force Feedback* ». In Proc. of the Int. Symp. on Surgery Simulation and Soft Tissue Modelling, Juan-Les-Pins (F), June 2003.
- [103] C. LAUGIER, C. MENDOZA SERRANO, K. SUNDARAJ, « *Faithfull Haptic Feedback in Medical Simulators* ». In Proc. of the Int. Symp. on Experimental Robotics (ISER'02), Ischia (I), July 2002.
- [104] K. SUNDARAJ, C. LAUGIER, « *Physically Realistic Simulation of Large Deformations using LEM for Interactive Applications* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS 2002), Lausanne (Switzerland), Oct. 2002.
- [105] F. LARGE, S. SEKHAVAT, Z. SHILLER, C. LAUGIER, « *Towards Real-Time Global Motion Planning in a Dynamic Environment using NLVO concept* ». In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS 2002), Lausanne (Switzerland), Oct. 2002.
- [106] C. MENDOZA SERRANO, K. SUNDARAJ, C. LAUGIER, « *Issues in Deformable Virtual Objects Simulation with Force Feedback* ». In Workshop of the International Advanced Robotics Programme (IARP'02), Rome (I), Oct. 2002.
- [107] K. SUNDARAJ, C. MENDOZA, C. LAUGIER, « *A fast Method to Simulate Virtual Deformable Objects with Force Feedback* ». In Proc. of the IEEE Int. Conf. on Automation, Robotics, Control, and Vision (ICARCV 2002), Singapore, Dec. 2002.
- [108] F. LARGE, S. SEKHAVAT, Z. SHILLER, C. LAUGIER, « *Using Non-Linear Velocity Obstacles to Plan Motions in a Dynamic Environments* ». In Proc. of the IEEE Int. Conf. on Automation, Robotics, Control, and Vision (ICARCV 2002), Singapore, Dec. 2002.
- [109] P. PEK, O. LEBELTEL, C. LAUGIER, « *Parking a Car using Bayesian Programming* ». In Proc. of the IEEE Int. Conf. on Automation, Robotics, Control, and Vision (ICARCV 2002), Singapore, Dec. 2002.
- [110] C. MENDOZA SERRANO, C. LAUGIER, AND F BOUX DE CASSON, « *Virtual reality cutting phenomena using force feedback for surgery simulations* ». In Proc. of the Int. Conf. on Interactive Medical Image Visualization and Analysis, Utrecht (NL), Oct. 2001.

- [111] C. MENDOZA SERRANO AND C. LAUGIER, « *Realistic haptic rendering for highly deformable virtual objects* ». In Proc. of the Int. Conf. on Virtual Reality, Yokohama (JP), March 2001.
- [112] K. SUNDARAJ, C. LAUGIER, AND I. COSTA FERREIRA, « *An approach to LEM modeling : Construction, collision detection and dynamic simulation* ». In Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Hawaii, HI (US), Oct. 2001.
- [113] D. D'AULIGNAC, R. BALANIUK, C. LAUGIER, « *A Haptic Interface for a Virtual Exam of the Human Thigh* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 3, p. 2452–2457, San Francisco, CA (US), April 2000.
- [114] F. LARGE, S. SEKHAVAT, C. LAUGIER, E. GAUTHIER, « *Towards Robust Sensor-Based Maneuvers for a Car-Like Vehicle* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 4, p. 3765–3770, San Francisco, CA (US), April 2000.
- [115] F. BOUX DE CASSON, C. LAUGIER, « *Simulating 2D Tearing Phenomena for Interactive Medical Surgery Simulators* », in : Proc. of Computer Animation, Philadelphia, PA (US), May 2000.
- [116] F. LARGE, J. HERMOSILLO, S. SEKHAVAT, C. LAUGIER, « *Using Artificial Neural Networks to Improve Sensor-Based Maneuvers for a Car-Like Vehicle* », in : Proc. of the Int. Conf. on Intelligent Autonomous Systems, p. 1033–1040, Venezia (IT), July 2000.
- [117] D. GUO, T. FRAICHARD, M. XIE, C. LAUGIER, « *Color Modeling by Spherical Influence Field in Sensing Driving Environment* », in : Proc. of IEEE Intelligent Vehicle Symposium, p. 249–254, Dearborn, MI (US), Oct. 2000.
- [118] J.-M. AHUACTZIN, D. RAULO, C. LAUGIER, « *A Multi Purpose Object Oriented Path Planner* », in : Proc. of the Int. Symp. on Robotics and Automation, Monterrey (MX), Nov. 2000.
- [119] R. BALANIUK, C. LAUGIER, « *Haptic interfaces in generic virtual reality systems* », in : Proc. of the IEEE-RSJ Int. Workshop on Intelligent Robots and Systems, Takamatsu (JP), Nov. 2000.
- [120] D. RAULO, J.-M. AHUACTZIN, C. LAUGIER, « *Controlling Virtual Autonomous Entities in Dynamic Environments Using an Appropriate Sense-Plan-Control Paradigm* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Takamatsu (JP), Nov. 2000.
- [121] J. LU, S. SEKHAVAT, M. XIE, C. LAUGIER, « *Sliding Mode Control for Nonholonomic Mobile Robot* », in : Proc. of the Int. Conf. on Control, Automation, Robotics and Vision, p. 465–470, Singapore (SG), Dec. 2000.
- [122] K. SUNDARAJ, C. LAUGIER, « *Fast contact localisation of moving deformable polyhedras* », in : Proc. of the Int. Conf. on Control, Automation, Robotics and Vision, Singapore (SG), Dec. 2000.
- [123] M. CHERIF, J. IBANEZ-GUZMAN, C. LAUGIER, T. GOH, « *Motion planning for an all-terrain autonomous vehicle* », in : Proc. of the Int. Conf. on Field and Service Robotics, p. 104–109, Pittsburgh, PA (US), August 1999.
- [124] C. LAUGIER, M. PARENT, « *Automated vehicles for future urban transport systems* », in : Proc. of the Int. Conf. on Field and Service Robotics, p. 191–196, Pittsburgh, PA (US), August 1999.
- [125] F. BOUX DE CASSON, C. LAUGIER, « *Modelling the dynamics of a human liver for a minimally invasive simulator* », in : Proc. of the Int. Conf. on Medical Image Computer-Assisted Intervention, Cambridge (GB), Sept. 1999.
- [126] D. D'AULIGNAC, M. C. CAVUSOGLU, C. LAUGIER, « *Modelling the dynamics of a human thigh for a realistic echographic simulator with force feedback* », in : Proc. of the Int. Conf. on Medical Image Computer-Assisted Intervention, Cambridge (BG), Sept. 1999.
- [127] A. DEGUET, A. JOUKHADAR, C. LAUGIER, « *Modèles et algorithmes pour la simulation dynamique de corps rigides et déformables* », in : Journées Nationales de la Recherche en Robotique, p. 95–108, Montpellier (FR), Sept. 1999.
- [128] C. LAUGIER, I. E. PAROMTCHIK, M. PARENT, « *Developing Autonomous Maneuvering capabilities for Future Cars* », in : Proc. of the Int. Conf. on Intelligent Transportation Systems, p. 68–73, Tokyo (JP), Oct. 1999.
- [129] D. D'AULIGNAC, C. LAUGIER, M. C. CAVUSOGLU, « *Towards a realistic echographic simulator with force feedback* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, 2, p. 727–732, Kyongju (KR), Oct. 1999.
- [130] J. LU, S. SEKHAVAT, C. LAUGIER, « *Fuzzy variable-structure control for Nonholonomic vehicle path tracking* », in : Proc. of the Int. Conf. on Intelligent Transportation Systems, p. 465–470, Tokyo (JP), Oct. 1999.
- [131] A. JOUKHADAR, A. SCHEUER, C. LAUGIER, « *Fast Contact Detection between Moving Deformable Polyhedra* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, 3, p. 1810–1815, Kyongju (KR), Oct. 1999.
- [132] S. V. GUSEV, I. A. MAKAROV, I. E. PAROMTCHIK, V. A. YAKUBOVICH, C. LAUGIER, « *Adaptive motion control of a nonholonomic vehicle* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 4, p. 3285–3290, Leuven (BE), May 1998.
- [133] A. JOUKHADAR, A. DEGUET, C. LAUGIER, « *A Collision Model for Rigid and Deformable Bodies* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 2, p. 982–988, Leuven (BE), May 1998.
- [134] I. E. PAROMTCHIK, P. GARNIER, C. LAUGIER, « *Motion Control for Autonomous Maneuvers of a Nonholonomic Vehicle* », in : Proc. of the Int. Symp. on Advanced Vehicle Control, p. 485–491, Nagoya (JP), Sept. 1998.

- [135] A. SCHEUER, C. LAUGIER, « *Planning Sub-Optimal and Continuous-Curvature Paths for Car-Like Robots* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, 1, p. 25–31, Victoria, BC (CA), Oct. 1998.
- [136] A. DEGUET, A. JOUKHADAR, C. LAUGIER, « *A Collision Model for Deformable Bodies* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Victoria, BC (CA), Oct. 1998.
- [137] C. LAUGIER, T. FRAICHARD, I. E. PAROMTCHIK, P. GARNIER, « *Sensor-Based Control Architecture for a Car-Like Vehicle* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, 1, p. 216–222, Victoria, BC (CA), Oct. 1998.
- [138] I. E. PAROMTCHIK, C. LAUGIER, S. V. GUSEV, S. SEKHAVAT, « *Motion Control for Autonomous Car Maneuvering* », in : Proc. of the Int. Conf. on Control, Automation, Robotics and Vision, 1, p. 136–140, Singapore (SG), Dec. 1998.
- [139] I. E. PAROMTCHIK, C. LAUGIER, « *The Advanced Safety Vehicle programme* », in : Actes du colloque sur les véhicules électriques, Grenoble (FR), Feb. 1997.
- [140] A. JOUKHADAR, F. GARAT, C. LAUGIER, « *Parameter Identification for Dynamic Simulation* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 3, p. 1928–1933, Albuquerque, NM (US), April 1997.
- [141] A. KHEDDAR, C. TZAFESTAS, P. COIFFET, T. KOTOKU, S. KAWABATA, K. IWAMOTO, K. TANIE, I. MAZON, C. LAUGIER, R. CHELLALI, « *Parallel multi-robots long-distance cooperation* », in : Proc. of the IEEE Int. Conf. on Advanced Robotics, Monterey, CA (US), June 1997.
- [142] I. PAROMTCHIK, P. GARNIER, C. LAUGIER, « *Autonomous Maneuvers of a Nonholonomic Vehicle* », in : Proc. of the Int. Symp. on Experimental Robotics, Barcelona (ES), June 1997.
- [143] A. JOUKHADAR, A. DEGUET, C. LAUGIER, « *Towards Realistic Dynamic Simulation : Deformations and Collisions Models* », in : Proc. of the Workshop on Dynamic Simulation : Methods and Applications, p. 21–31, Grenoble (FR), Sept. 1997. Workshop held in association with the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems.
- [144] A. JOUKHADAR, F. GARAT, C. LAUGIER, « *Constraint-based Identification of a Dynamic Model* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Grenoble (FR), Sept. 1997.
- [145] P. GARNIER, T. FRAICHARD, C. LAUGIER, I. PAROMTCHIK, A. SCHEUER, « *Motion Autonomy Through Sensor-Guided Manœuvres* », in : Proc. of the Intelligent Cars and Automated Highway Systems Workshop, p. 20–30, Grenoble (FR), Sept. 1997. Workshop held in association with the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems.
- [146] C. LAUGIER, « *Modèles déformables et Interaction entre objets virtuels* », in : Actes du séminaire “Environnements Virtuels Distribués”, Secrétariat d’Etat à l’Industrie, Lyon (FR), Dec. 1997.
- [147] C. LAUGIER, P. GARNIER, T. FRAICHARD, I. PAROMTCHIK, A. SCHEUER, « *Motion Planning and Sensor-Guided Manœvre Generation for an Autonomous Vehicle* », in : Proc. of the Int. Conf. on Field and Service Robotics, p. 56–65, Canberra (AU), Dec. 1997.
- [148] I. E. PAROMTCHIK, C. LAUGIER, « *Motion Generation and Control for Parking an Autonomous Vehicle* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, p. 3117–3122, Minneapolis, MN (US), April 1996.
- [149] D. REZNIK, C. LAUGIER, « *Dynamic Simulation and Virtual Control of a Deformable Fingertip* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 2, p. 669–674, Minneapolis, MN (US), April 1996.
- [150] C. NOVALES, D. PALLARD, C. LAUGIER, « *Controlling the Motions of an Autonomous Vehicle using a Local Navigator* », in : Proc. of the Int. Symp. on Robotics and Manufacturing, Montpellier (FR), May 1996.
- [151] J. NÁJERA, C. LAUGIER, W. WITWROW, J. DE SCHUTTER, « *Integrating assembly planning with compliant control* », in : Proc. of the Int. Symp. on Robotics and Manufacturing, Montpellier (FR), May 1996.
- [152] A. JOUKHADAR, A. WABBI, C. LAUGIER, « *Fast Contact Localisation Between Deformable Polyhedra in Motion* », in : Proc. of the IEEE Computer Animation Conf., p. 126–135, Geneva (CH), June 1996.
- [153] A. JOUKHADAR, C. LAUGIER, « *Dynamic Simulation : Model, Basic Algorithms, and optimization* », in : Proc. of the Workshop on the Algorithmic Foundations of Robotics, Toulouse (FR), July 1996.
- [154] I. E. PAROMTCHIK, C. LAUGIER, « *Autonomous Parallel Parking of a Nonholonomic Vehicle* », in : Proc. of the IEEE Int. Symp. on Intelligent Vehicles, p. 13–18, Tokyo (JP), Sept. 1996.
- [155] A. MCLEAN, C. LAUGIER, « *Update and Repair of a Roadmap after Model Error Discovery* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, 2, p. 917–924, Osaka (JP), Nov. 1996.
- [156] A. JOUKHADAR, C. LAUGIER, « *Adaptive time step for fast converging dynamic simulation system* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, 2, p. 418–424, Osaka (JP), Nov. 1996.
- [157] H. BRUYNINCKX, W. WITWROW, J. DE SCHUTTER, J. NÁJERA, C. LAUGIER, « *Integration of assembly planning and compliant control : an evaluation* », in : Proc. of the European Workshop on Hazardous Robotics, p. 17–26, Barcelona (ES), Nov. 1996.
- [158] C. LAUGIER, I. E. PAROMTCHIK, P. GARNIER, T. FRAICHARD, « *Motion Control of an Autonomous Vehicle Through Sensor-Guided Manœuvres* », in : Proc. of the Int. Conf. on Control, Automation, Robotics and Vision, Singapore (SG), Dec. 1996.

- [159] F. DE LA ROSA, J. NÁJERA, C. LAUGIER, « *Dealing with Uncertainty Constraints in Motion Planning* », in : Proc. of the Int. Conf. on Intelligent Autonomous Systems, U. Rembold, R. Dillmann, L. O. Hertzberger, T. Kanade (éditeurs), IOS Press-OHM Ohmsha, p. 497–504, Karlsruhe (DE), March 1995.
- [160] M. CHERIF, C. LAUGIER, « *On Physically-Based Modelling and Off-Road Vehicle Motion Planning* », in : Proc. of the Int. Conf. on Intelligent Autonomous Systems, U. Rembold, R. Dillmann, L. O. Hertzberger, T. Kanade (éditeurs), IOS Press-OHM Ohmsha, p. 482–489, Karlsruhe (DE), March 1995.
- [161] M. CHERIF, C. LAUGIER, « *Motion Planning of Autonomous Off-Road Vehicles Under Physical Interaction Constraints* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, Nagoya (JP), May 1995.
- [162] A. JOUKHADAR, C. LAUGIER, « *Dynamic modeling and its robotics applications* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, Nagoya (JP), May 1995.
- [163] B. TRIGGS, C. LAUGIER, « *Automatic Camera Placement for Robot Vision Tasks* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, p. 1732–1737, Nagoya (JP), May 1995.
- [164] P. GARNIER, C. NOVALES, C. LAUGIER, « *An Hybrid Motion Controller for a Real Car-Like Robot Evolving in a Multi-Vehicle Environment* », in : Proc. of the IEEE Int. Symp. on Intelligent Vehicles, p. 326–331, Detroit, MI (US), Sept. 1995.
- [165] J. NÁJERA, F. DE LA ROSA, C. LAUGIER, « *Planning Robot Motion Strategies under Geometric Uncertainty Constraints* », in : Proc. of the Int. Symp. on Industrial Robots., p. 171–176, Singapore (SG), Oct. 1995.
- [166] B. TRIGGS, C. LAUGIER, « *Automatic Task Planning for Robot Vision* », in : Proc. of the Int. Symp. on Robotics Research, G. Giralt, G. Hirzinger (éditeurs), Munchen (DE), Oct. 1995.
- [167] A. JOUKHADAR, C. LAUGIER, « *Fast Dynamic Simulation of Rigid and Deformable Objects* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Pittsburgh, PA (US), Oct. 1995.
- [168] M. HASSOUN, C. LAUGIER, N. LE FORT, D. MEIZEL, « *An assistance system for diagnosis and monitoring of driving manoeuvres* », in : IMACS Int. Symp. on Signal Processing, Robotics and Neural Networks, Lille (FR), April 1994.
- [169] C. LAUGIER, E. MAZER, « *Recherche et Développement en Robotique non Manufacturière* », in : Congrès de l'Association des Ingénieurs de l'INPG (Houille Blanche), Grenoble (FR), April 1994.
- [170] M. CHERIF, C. LAUGIER, C. MILÉSI-BELLIER, B. FAVERJON, « *Planning the Motions of an All-Terrain Vehicle by Using Geometric and Physical Models* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, p. 2050–2056, San Diego, CA (US), May 1994.
- [171] A. JOUKHADAR, C. BARD, C. LAUGIER, « *Planning Dextrous Operations using Physical Models.* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, San Diego, CA (US), May 1994.
- [172] C. LAUGIER, « *Integrating Fine Motion Planning with Compliant Motion Control* », in : Technology Transfer Workshop on Industrial Vision Autonomous Robots Medical Imaging, Leuven (B), June 1994.
- [173] F. DE LA ROSA, J. NÁJERA, C. LAUGIER, « *Planning Robot Motion Strategies under Geometric Uncertainty Constraints* », in : Proc. of the Int. Symp. on Intelligent Robotic Systems, p. 37–44, Grenoble (FR), July 1994.
- [174] O. AL-CHAMI, C. LAUGIER, « *Stratégie Perceptive pour Positionner une Caméra* », in : Proc. AFCET Reconnaissance des Formes et Intelligence Artificielle, 1, p. 617–622, 1994.
- [175] J. NÁJERA, F. DE LA ROSA, C. LAUGIER, « *Planning Robot Motion Strategies under Geometric Uncertainty Constraints* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, p. 462–469, Munchen (DE), Sept. 1994.
- [176] C. BARD, C. LAUGIER, C. MILÉSI-BELLIER, « *An integrated approach to achieve dextrous grasping from task level specification* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Munchen (DE), Sept. 1994.
- [177] M. CHERIF, C. LAUGIER, « *Dealing with Vehicle/Terrain Interactions when Planning the Motions of a Rover* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Munchen (DE), Sept. 1994.
- [178] A. JOUKHADAR, C. BARD, C. LAUGIER, « *Combining geometric and physical models, the case of a dextrous hand.* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Munchen (DE), Sept. 1994.
- [179] O. ABOU KHALED, N. LE FORT, M. HASSOUN, C. LAUGIER, « *Real-time decision system for the ProlabII demonstrator* », in : Proc. of the IEEE Int. Symp. on Intelligent Vehicles, Paris (FR), Oct. 1994.
- [180] D. CASANOVA, C. LAUGIER, « *Modeling physical objects for the dynamic simulation of robotic tasks* », in : Japan-France congress on MECHATRONICS, Tamakatsu, (JP), Nov. 1994.
- [181] A. JOUKHADAR, C. LAUGIER, « *Robot $\Phi$  : A physical modeling system for robotic applications.* », in : Japan-France congress on MECHATRONICS, Tamakatsu, (JP), Nov. 1994.
- [182] D. CASANOVA, C. LAUGIER, « *Generating environments for a physical simulation of robotic tasks* », in : Int. Conf. ORIA, Marseille (FR), Dec. 1994.
- [183] A. JOUKHADAR, C. LAUGIER, « *Dynamic modeling of rigid and deformable objects for robotic task : Motions, deformations, and collisions.* », in : Int. Conf. ORIA, Marseille (FR), Dec. 1994.

- [184] T. FRAICHARD, C. LAUGIER, « *Path-Velocity Decomposition Revisited and Applied to Dynamic Trajectory Planning* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 1, p. 40–45, Atlanta, GA (US), May 1993.
- [185] M. HASSOUN, C. LAUGIER, D. RAMAMONJISOA, N. LEFORT, « *Towards Safe Driving in Traffic Situation by Using an Electronic Co-Pilot* », in : Proc. of the IEEE Int. Symp. on Intelligent Vehicles, Tokyo (JP), July 1993.
- [186] C. MILÉSI-BELLIER, C. LAUGIER, B. FAVERJON, « *A Kinematic Simulator for Motion Planning of a Mobile Robot on a Terrain* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Yokohama (JP), July 1993.
- [187] M. CHERIF, C. LAUGIER, « *Using Physical Models to Plan Safe and Executable Motions for a Rover Moving on a Terrain* », in : Int. Workshop on Intelligent Robotic Systems, p. 57–66, Zakopane (PL), July 1993.
- [188] M. HASSOUN, C. LAUGIER, « *Towards a Real-Time Architecture To Control An Autonomous Vehicle In Multi-Vehicle Environment* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Yokohama (JP), July 1993.
- [189] F. DE LA ROSA, C. LAUGIER, J. NÁJERA, « *Exploring the Contact Space to Plan Robot Motions under Geometric Uncertainty Constraints* », in : Int. Workshop on Intelligent Robotic Systems, p. 71–80, Zakopane (PL), July 1993.
- [190] C. LAUGIER, S. JIMENEZ, A. LUCIANI, « *Predicting of a Planetary Vehicle Using Physical Modeling* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Yokohama (JP), July 1993.
- [191] T. FRAICHARD, C. LAUGIER, « *Dynamic Trajectory Planning, Path-Velocity Decomposition and Adjacent Paths* », in : Proc. of the Int. Joint Conf. on Artificial Intelligence, 2, p. 1592–1597, Chambéry (FR), Sept. 1993.
- [192] M. CHERIF, C. LAUGIER, C. MILÉSI-BELLIER, B. FAVERJON, « *Combining Physical and Geometric Models to Plan Safe and Executable Motions for a Rover Moving on a Terrain* », in : Proc. of the Int. Symp. on Experimental Robotics, p. 22–30, Kyoto (JP), Oct. 1993.
- [193] T. FRAICHARD, C. LAUGIER, « *Kinodynamic planning in a structured and time-varying 2D workspace* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 2, p. 1500–1505, Nice (FR), May 1992.
- [194] M. HASSOUN, C. LAUGIER, « *Reactive motion planning for an intelligent vehicle* », in : Proc. of the IEEE Int. Symp. on Intelligent Vehicles, Detroit, MI (US), June 1992.
- [195] S. JIMENEZ, C. LAUGIER, A. LUCIANI, « *Teleprogramming the motions of a planetary robot using physical models and dynamic simulation tools* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Raleigh, NC (US), July 1992.
- [196] T. FRAICHARD, C. LAUGIER, « *Kinodynamic planning with moving obstacles : the case of a structured workspace* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, 3, p. 1524–1531, Raleigh, NC (US), July 1992.
- [197] M. HASSOUN, Y. DEMAZEAU, C. LAUGIER, « *Motion control for a car-like robot : potential field and multi-agent approaches* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Raleigh, NC (US), July 1992.
- [198] J. NÁJERA, C. LAUGIER, P. FARROUCH, « *Planification de mouvements fins et raisonnement géométrique dans l'espace des contacts* », in : Premières Rencontres Nationales de Jeunes Chercheurs, Rennes (FR), Sept. 1992.
- [199] T. FRAICHARD, C. LAUGIER, « *On line reactive planning for a non holonomic mobile in a dynamic world* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, 1, p. 432–437, Sacramento, CA (US), April 1991.
- [200] C. BELLIER, C. LAUGIER, E. MAZER, J. TROCCAZ, « *A practical system for planning safe trajectories for manipulator robots* », in : Proc. of the Int. Symp. on Experimental Robotics, Toulouse (FR), June 1991.
- [201] T. FRAICHARD, M. HASSOUN, C. LAUGIER, « *Reactive motion planning in a dynamic world* », in : Proc. of the IEEE Int. Conf. on Advanced Robotics, p. 1028–1032, Pisa (IT), June 1991.
- [202] C. MILÉSI-BELLIER, C. LAUGIER, E. MAZER, J. TROCCAZ, « *Planning/executing six d.o.f. robot motions in complex environments* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Osaka (JP), Nov. 1991.
- [203] S. JIMENEZ, C. LAUGIER, A. LUCIANI, « *Physical modeling as an help for planning the motions of a land vehicle* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Osaka (JP), Nov. 1991.
- [204] C. LAUGIER, S. JIMENEZ, A. LUCIANI, « *Physical modeling as an help for planning the motion of a land vehicle* », in : Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems, Osaka (JP), Nov. 1991.
- [205] T. FRAICHARD, C. LAUGIER, « *Driving on the highway* », in : Proc. of the European Prometheus Workshop on Intelligent Co-Pilot, p. 149–165, Grenoble (FR), Dec. 1991.
- [206] M. HASSOUN, C. LAUGIER, « *Reactive motion planning for a car* », in : Proc. of the European Prometheus Workshop, p. 213–225, Grenoble (FR), Dec. 1991.
- [207] S. JIMENEZ, C. LAUGIER, A. LUCIANI, « *Simulating physical interactions between an articulated mobile vehicle and a terrain* », in : Int. Conf. ORIA4th International Symposium on Offshore, Robotics and Artificial Intelligence, Marseille (FR), Dec. 1991.

- [208] C. LAUGIER, A. IJEL, J. TROCCAZ, « *Combining vision based information and partial geometric models in automatic grasping* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, *Cincinnati, OH (US), May 1990*.
- [209] T. FRAICHARD, C. LAUGIER, G. LIÉVIN, « *Robot motion planning : the case of non-holonomic mobiles in a dynamic world* », in : Proc. of the IEEE-RSJ Int. Workshop on Intelligent Robots and Systems, 2, p. 757–764, *Tsuchiura (JP), July 1990*.
- [210] C. LAUGIER, « *Planning robot actions under position and shape uncertainty* », in : NASA Conference on Space Telerobotics, *Pasadena, Feb. 1989*.
- [211] C. LAUGIER, « *Planning fine motion strategies by reasoning in the contact space* », in : Proc. of the IEEE Int. Conf. on Robotics and Automation, *Scottsdale, AZ (US), May 1989*.
- [212] C. LAUGIER, A. IJEL, J. TROCCAZ, « *Planning and executing sensory based grasping operations in a partially known environment* », in : Proc. of the Int. Symp. on Experimental Robotics, *Montreal, QC (CA), June 1989*.
- [213] T. FRAICHARD, C. LAUGIER, « *Planning movements for several coordinated vehicles* », in : Proc. of the IEEE-RSJ Int. Workshop on Intelligent Robots and Systems, p. 466–472, *Tsukuba (JP), Sept. 1989*.
- [214] C. LAUGIER, A. IJEL, J. TROCCAZ, « *Combining vision based information and partial geometric models in automatic grasping* », in : First Workshop on Multi-sensor fusion and Environment modelling, *Toulouse (FR), Oct. 1989*.
- [215] C. LAUGIER, P. THEVENEAU, « *Planning sensor-based motions for part-mating using geometric reasoning techniques* », in : Proc. of the European Conf. on Artificial Intelligence, *Brighton (GB), July 1986*.
- [216] C. LAUGIER, « *Traitement des incertitudes en programmation automatique des robots* », in : Journées Robotique, *Sophia Antipolis (FR), June 1987*.
- [217] C. LAUGIER, « *Les Apports respectifs des langages symboliques et de la CAO en programmation des robots* », in : Robotique et CFAO, *La Grande Motte, Feb. 1985*.
- [218] C. LAUGIER, F. GERMAIN, « *An adaptive collision-free trajectory planner* », in : Proc. of the IEEE Int. Conf. on Advanced Robotics, *Tokyo (JP), Sept. 1985*.
- [219] C. LAUGIER, J. PERTIN, « *Graphic simulation as a tool for debugging robot control programs* », in : First Int. Symposium on Design and Synthesis, *Tokyo (JP), January 1984*.
- [220] C. LAUGIER, J. TROCCAZ, « *Couplage d'un système de simulation de robot avec un terminal de synthèses d'images* », in : Première Colloque Image, CESTA, *Biarritz (F), May 1984*.
- [221] C. LAUGIER, « *Robot programming using a high-level language and CAD facilities* », in : Robotics Europe Conference, *Brussels (B), June 1984*.
- [222] C. LAUGIER, B. DUFAY, « *Geometrical reasoning in automatic grasping and contact analysis* », in : PROLAMAT, *Leningrad (USSR), May 1982*.
- [223] C. LAUGIER, « *Détermination automatique de prises d'objets à partir d'indices morphologiques locaux* », in : Proc. AFCET Reconnaissance des Formes et Intelligence Artificielle, *Nancy (F), Sept 1981*.
- [224] C. LAUGIER, « *A program for automatic grasping of objects with a robot arm* », in : Proc. of the Int. Symp. on Industrial Robots., *Tokyo (JP), Oct 1981*.
- [225] C. LAUGIER. – « *Les concepts liés à la caractérisation d'un dessin imparfait en CAO* ». – In : Actes du congrès de Reconnaissance des Formes et Intelligence Artificielle, AFCET-IRIA. – *Toulouse, Sept 1979*.
- [226] C. LAUGIER. – « *An approach to characterize ill-defined drawings in CAD* ». – In : EUROGRAPHICS 79. – *Bologna, Italy, Oct 1979*.
- [227] C. LAUGIER. – « *Illustration dynamique de programmes à l'aide d'une console de visualisation* ». – In : Panorama de la nouveauté informatique, Congrès AFCET-IRIA. – *Nov 1976*.

## Invited Papers & Keynote Papers

- [228] C. LAUGIER, « *Will Future Robots Really Share our “Living Space” ?* ». *Singapore Robotic Games 2004 (SRG'04)*, Singapore, May 2004. Plenary Talk (without an original written paper).
- [229] C. LAUGIER, « *Towards “Automated Roads” : Some projects and New technologies* ». In *IEEE Int. Conf. on Intelligent Transportation Systems (ITSC 2002)*, Singapore, Sept 2002. Keynote paper.
- [230] C. LAUGIER, S. SEKHAVAT, L. LARGE, J. HERMOSILLO, AND Z. SHILLER, « *Some steps towards autonomous cars* ». In *Proc. of the IFAC Symp. on Intelligent Autonomous Vehicles*, pages 10–18, Sapporo (JP), Sept 2001. Keynote paper.
- [231] C. LAUGIER, C. MENDOZA SERRANO, AND K. SUNDARAJ, « *Towards a realistic medical simulator using virtual environments and haptic interaction* ». In *Proc. of the Int. Symp. on Robotics Research*, Lome (AU), Nov 2001. Invited paper.
- [232] C. LAUGIER, M. PARENT, « *Towards Motion Autonomy for Future vehicles* », in : *Robotics Research*, J. M. Hollerbach et D. E. Koditschek (éditeurs), Springer, 2000. Invited paper.

- [233] C. LAUGIER, D. D'AULIGNAC, F. BOUX DE CASSON, « Modeling Human Tissues for Medical Simulators », *in* : *Proc. of the IEEE-RSJ Int. Conf. on Intelligent Robots and Systems*, Takamatsu (JP), Nov. 2000. Invited paper.
- [234] C. LAUGIER, « Motion autonomy and advanced man-machine interface technologies », *in* : *Int. Conf. on Control, Automation, Robotics and Vision*, Singapore (SG), Dec. 2000. Invited tutorial.
- [235] C. LAUGIER, « Information Technology in Autonomous Vehicles », *in* : *Proc. of the Int. Conf. on Information Technology*, Damascus (SY), April 1999. Invited paper.
- [236] C. LAUGIER, M. PARENT, « Towards Motion Autonomy for Future vehicles », *in* : *Proc. of the Int. Symp. on Robotics Research*, Snowbird (US), Oct 1999. Invited paper.
- [237] C. LAUGIER, M. PARENT, « Towards a new Urban Transport System involving Automated Vehicles », *in* : *Actes de la conf. sur les Véhicules Electriques*, p. 146–150, Grenoble (FR), Nov 1999. Invited paper.
- [238] C. LAUGIER, P. GARNIER, T. FRAICHARD, I. PAROMTCHIK, A. SCHEUER, « Motion Planning and Sensor-Guided Manœuvre Generation for an Autonomous Vehicle », *in* : *Field and Service Robotics*, A. Zelinsky (éditeur), Springer, 1998, p. 60–67. Invited paper.
- [239] C. LAUGIER, « Towards autonomous vehicles for future intelligent transportation systems », *in* : *Atti del Sesto Convegno della Associazione Italiana per l'Intelligenza Artificiale*, p. 251–258, Padova (IT), Sept 1998. Invited paper.
- [240] C. LAUGIER, C. BARD, M. CHERIF, A. JOUKHADAR, « Solving complex motion planning problems by combining geometric and physical models : the case of a rover and of a dextrous hand. », *in* : *Algorithmic Foundation of Robotics*, K. Goldberg, D. Halperin, J. Latombe, et R. Wilson (éditeurs), Eds, USA, 1995. Invited paper.
- [241] R. HORAUD, C. LAUGIER, C. BARD, B. TRIGGS, « Integrating Planning, vision and visual servoing for automatic grasping », *in* : *Technology Transfer Workshop on Industrial Vision Autonomous Robots Medical Imaging*, Leuven (B), June 1994. Invited paper.
- [242] C. LAUGIER, « Solving complex task-level programming problems in robotics using physical modelling », *in* : *Automation'94*, Taipei (TAI), July 1994. Invited paper.
- [243] J. COUTAZ, J. CROWLEY, C. LAUGIER, « Apport de l'intelligence artificielle à la communication Homme-Machine », *in* : *Actes des 4èmes Journées Nationales du PRC-IA*, Oct 1992. Invited paper.
- [244] C. LAUGIER, « Autonomous robots in non-manufacturing applications », *in* : *Canada-France Workshop on Intelligent Robotics : The Dawn of Intelligent Robots*, Ottawa (CA), May 1992. Conférence invitée sans édition d'actes.
- [245] R. ALAMI, R. CHATILA, M. GHALLAB, C. LAUGIER, J. LAUMENT, « Robotique et intelligence artificielle », *in* : *Actes des 3èmes Journées Nationales du PRC-IA*, B. Bouchon-Meunier, Hermès, p. 411–473, 1990. Invited paper.
- [246] C. LAUGIER, « Planning robot motions in the SHARP system », *in* : *NATO Advanced Research Workshop on CAD-Based Programming for Sensory Robots*, Il Ciocco (IT), July 1988. Invited paper.
- [247] C. LAUGIER, J. LATOMBE, « Systèmes de programmation pour la robotique », *in* : *MICAD*, Paris (F), Feb 1985. Invited paper.
- [248] C. LAUGIER, J. TROCCAZ, « SHARP : A system for automatic programming of manipulation robots », *in* : *3rd Int. Symp. on Robotics Research*, O. Faugeras et G. Giralt (éditeurs), MIT Press, Paris (F), 1986, p. 125–132. Invited paper.
- [249] C. LAUGIER, J. POUPLARD, « Systèmes de programmation des robots : Solutions industrielles et Problèmes militaires », *in* : *Journées Science et Défense "Vers la robotique théâtre d'opération"*, Toulouse (F), May 1985. Invited paper.

## Technical Reports

- [250] M. YGUEL, C. TAY, K. MEKHNACHA, C. LAUGIER, « Velocity Estimation on the Bayesian Occupancy Filter for Multi-Target Tracking », *INRIA Research Report*, January 2006.
- [251] M. CHERIF, M. VIDAL, C. LAUGIER, « A Roadmap-based Algorithm for Planning Handling Operations in Changing Industrial Plants », *Research Report n° 3629*, Inst. Nat. de Recherche en Informatique et en Automatique, Feb 1999.
- [252] C. LAUGIER, V. A. YAKUBOVICH, « Universal Regulators for the Motion Control of Nonholonomic Vehicles », *Rapport scientifique du projet n° 97-01*, Institut franco-russe A.M. Liapunov, Univ. de Moscou (RU), June 1999.
- [253] C. LAUGIER, T. FRAICHARD, P. GARNIER, I. E. PAROMTCHIK, A. SCHEUER, « Sensor-based control architecture for a car-like vehicle », *Research Report n° 3552*, Inst. Nat. de Recherche en Informatique et en Automatique, Oct 1998.
- [254] UNIVERSITIES OF GENOVA, GRENOBLE, KARLSRUHE, LEUVEN AND OXFORD. – « SECOND : SENSory CONtrolled Dextrous robots ». – *Intermediate report, year 2*, Projet Esprit3-Bra Second 6769, June 1994.
- [255] M. CHERIF, C. LAUGIER, A. LUCIANI, « Projet SHARP : Operation Robotique Spatiale (Téléprésence) », *Research report*, Projet Région Rhône-Alpes, Grenoble (F), Nov 1994, Rapport de fin de contrat.

- [256] M. CHERIF, C. LAUGIER, A. LUCIANI. – « Projet SHARP : Opération Robotique Spatiale (Télé-présence) ». – *Rapport de fin de contrat, projet région rhône-alpes*, Grenoble (F), Nov 1994.
- [257] C. MILÉSI-BELLIER, C. LAUGIER, AL., « SECOND : SENSory CONTrrolled Dextrous robots. Work Task 4.2, Grenoble Demonstration 1, and Work Task 2.1 », *Research report*, Projet Esprit3-Bra Second 6769, June 1993.
- [258] C. MILÉSI-BELLIER, AL. – « SECOND : SENSory CONTrrolled Dextrous robots. Work Task 4.2, Grenoble Demonstration 1, and Work Task 2.1 ». – *Deliverable report*, Projet Esprit3-Bra Second 6769, June 1993.
- [259] C. LAUGIER, O. AL-CHAMI, A. IJEL, P. ADENIS, « Planification et contrôle d'exécution d'opérations de manipulation de pièces mécaniques par un robot mobile/manipulateur dans un contexte de maintenance », *Rapport final*, Contrat DRET, Dec 1993.
- [260] UNIVERSITIES OF GENOVA, GRENOBLE, KARLSRUHE, LEUVEN AND OXFORD. – « FIRST : Fundamentals of Intelligent Reliable Robot Systems ». – *Final report*, ESPRIT-BRA 3274, Feb 1992.
- [261] T. FRAICHARD, M. HASSOUN, C. LAUGIER. – « Projet ProLab II : Etat des réflexions et des spécifications ». – *Rapport*, EUREKA EU-153, Sept 1992.
- [262] O. AL-CHAMI, I. AMMAR, P. ADENIS, C. LAUGIER. – « Planification et contrôle d'exécution d'opération de manipulation de pièces mécaniques par un robot mobile/manipulateur dans un contexte de maintenance : études et réalisation du support de perception mobile ». – *Rapport final sur contrat DRET nN° 90041*, LIFIA, Nov 1992.
- [263] C. LAUGIER, O. AL-CHAMI, A. IJEL, P. ADENIS. – « Planification et contrôle d'exécution d'opération de manipulation de pièces mécaniques par un robot mobile/manipulateur dans un contexte de maintenance ». – *Rapport final*, Contrat DRET, Dec 1992.
- [264] C. LAUGIER, A. LUCIANI, S. JIMENEZ. – « La fonction simulation physique ». – *Rapport de fin de phase 3*, VAP-RISP, January 1991.
- [265] C. LAUGIER, A. LUCIANI, S. JIMENEZ, « La fonction simulation physique », *Research report*, Lab. d'Informatique Fondamentale et d'Intelligence Artificielle, January 1991, Projet VAP-RISP.
- [266] T. FRAICHARD, C. LAUGIER, « Smooth trajectory planning for a car-like vehicle in a structured world », *Research Report n° 1448*, Inst. Nat. de Recherche en Informatique et en Automatique, Unité de Recherche Rhône-Alpes, June 1991.
- [267] O. AL-CHAMI, L. DESHAYES, P. DI GIACOMO, C. LAUGIER, « Planification et contrôle d'exécution d'opération de manipulation de pièces mécaniques par un robot mobile/manipulateur dans un contexte de maintenance : études et réalisation du support de perception mobile », *Research report*, Contrat DRET no 90041, 1991, Rapport semestriel.
- [268] O. AL-CHAMI, L. DESHAYES, P. DI GIACOMO, C. LAUGIER. – « Planification et contrôle d'exécution d'opération de manipulation de pièces mécaniques par un robot mobile/manipulateur dans un contexte de maintenance : études et réalisation du support de perception mobile ». – *Rapport Semestriel No 1 nN° 90041*, DRET, Grenoble, July 1991.
- [269] UNIVERSITIES OF GENOVA, GRENOBLE, KARLSRUHE, LEUVEN AND OXFORD. – « FIRST : Fundamentals of Intelligent Reliable Robot Systems ». – *Reporting period : September 1990 - august 1991*, ESPRIT-BRA 3274, Sept 1991.
- [270] T. FRAICHARD, M. HASSOUN, C. LAUGIER. – « Copilote électronique pour un véhicule automobile : modules planification de trajectoires et contrôle d'exécution ». – *Rapport d'activité*, EUREKA EU-153, Dec 1991.
- [271] C. LAUGIER, E. MAZER, C. BELLIER, « Etude des systèmes mécaniques évolués, rapides et dotés d'intelligence artificielle : programmation automatique des mouvements d'un robot dans une cellule d'assemblage », *Research report*, Lab. d'Informatique Fondamentale et d'Intelligence Artificielle, July 1990, Rapport de synthèse finale sur convention de recherche DRET-LRP no. 87/160.
- [272] C. LAUGIER, E. MAZER, C. BELLIER. – « Etude des systèmes mécaniques évolués and rapides et dotés d'intelligence artificielle : programmation automatique des mouvements d'un robot dans une cellule d'assemblage ». – *Rapport de synthèse finale sur convention de recherche nN° DRET-LRP 87/160*, Contrat DRET, July 1990.
- [273] UNIVERSITIES OF GENOVA, GRENOBLE, KARLSRUHE, LEUVEN AND OXFORD. – « FIRST : Fundamentals of Intelligent Reliable Robot Systems ». – *First year progress report*, ESPRIT-BRA 3274, Sept 1990.
- [274] T. FRAICHARD, M. HASSOUN, C. LAUGIER. – « Copilote électronique pour un véhicule automobile : modules planification de trajectoires et contrôle d'exécution ». – *Rapport d'activité*, EUREKA EU-153, Dec 1990.
- [275] C. LAUGIER, « Geometric reasoning in motion planning », *Research Report n° 932*, Inst. Nat. de Recherche en Informatique et en Automatique, November 1988, 40 pages - Soumis à International Journal of Robotics Research (Juillet 1988).
- [276] C. LAUGIER, « Traitement des incertitudes en programmation automatique des robots », *Research Report n° 933*, Inst. Nat. de Recherche en Informatique et en Automatique, Nov 1988. 46 pages (no. 695-I IMAG).
- [277] C. LAUGIER, J. TROCCAZ, A. IJEL. – « Planification et exécution d'opérations de manipulation en environnement partiellement structuré ». – *Rapport nN° 85-198*, Rapport final sur convention DRET, Nov 1988.
- [278] C. LAUGIER. – « Geometric reasoning in motion planning ». – *Rapport nN° 932*, INRIA, Nov 1988.
- [279] C. LAUGIER. – « Traitement des incertitudes en programmation automatique des robots ». – *Rapport nN° 933*, Rapport de recherche INRIA, Nov 1988.

- [280] C. LAUGIER, « Influence du raisonnement géométrique dans le choix d'une prise d'objet », *Research Report n° 414*, Inst. d'Informatique et de Mathématiques Appliquées de Grenoble, Dec 1983. 81 pages.
- [281] C. LAUGIER, E. MAZER. – « Méthodes pour la programmation automatique des robots ». – *Rapport nN° 445*, Rapport de recherche IMAG, Nov 1984.
- [282] C. LAUGIER, C. EVIEUX, J. PERTIN-TROCCAZ, « Un système de simulation graphique de robots incluant une gestion élémentaire des incidents et des capteurs », *Research Report n° 421*, Inst. d'Informatique et de Mathématiques Appliquées de Grenoble, Grenoble (F), March 1984.
- [283] C. LAUGIER, J. TROCCAZ. – « La programmation graphique en robotique ». – *Rapport nN° 82-219*, Rapports sur contrat ADI, Mars et Décembre 1984.
- [284] C. LAUGIER. – « La programmation des robots : expression textuelle et expression graphique ». – *Rapport nN° 387*, Rapport de recherche IMAG, Juillet 1983.
- [285] C. LAUGIER. – « Le langage LM-GEO et la simulation graphique en robotique ». – *Rapport nN° 82-219*, Rapports sur Contrat ADI, Mars et Décembre 1983.
- [286] C. LAUGIER, J. PERTIN. – « Automatic grasping : a case study in accessibility analysis ». – *Rapport nN° 342*, Rapport de recherche IMAG, Dec 1982.
- [287] C. LAUGIER, « LISP-3D : logiciel graphique pour la manipulation et la visualisation de scènes tridimensionnelles », *Research Report n° 328*, Inst. d'Informatique et de Mathématiques Appliquées de Grenoble, Sept 1982. 38 pages.
- [288] J. LATOMBE, M. DYMETMAN, A. GRUMBACH, C. LAUGIER, A. LUX, E. MAZER, J. MIRIBEL, « Le projet PANDORE : Robotique et Intelligence Artificielle », *Research report*, Inst. d'Informatique et de Mathématiques Appliquées de Grenoble, Dec 1980.
- [289] C. LAUGIER. – « Visualisation d'objets tridimensionnels dans un contexte interactif ». – *Rapport nN° 78-7-0389*, Rapport sur contrat DGRST, Juillet 1979.
- [290] C. LAUGIER, « Choix d'un matériel de traitement d'image adapté aux recherches menées en Robotique à l'IMAG », *Technical report*, Inst. d'Informatique et de Mathématiques Appliquées de Grenoble, Nov 1979.
- [291] C. LAUGIER. – « Etude de quelques problèmes liés à la saisie de données graphiques. Application à la saisie de dessins industriels à l'aide d'une tablette à digitaliser ». – *Rapport nN° 78-129*, Rapport sur contrat IRIA, Dec 1978.
- [292] C. LAUGIER, Y. GARDAN. – « Implantation de GRIGRI sur le centre CAO de MICADO. Constitution d'une bibliothèque de sous-programmes 2D ». – *Rapport nN° 78-129*, Rapport sur contrat IRIA, Dec 1978.
- [293] C. LAUGIER. – « Illustration dynamique de programmes à l'aide d'une console de visualisation : Utilisation dans un contexte pédagogique ». – *Rapport nN° 75-050*, Rapport sur contrat IRIA, Mai 1976.
- [294] C. LAUGIER, F. MARTINEZ. – « Visualisation interactive de graphes - Graphes hiérarchisés et réseaux séries-parallèles ». – *Rapport nN° 74-432*, Rapports sur contrat DRME, Juin 1975.
- [295] C. LAUGIER. – « Illustration dynamique de programmes à l'aide d'une console de visualisation ». – *Rapport nN° 75-050*, Rapport sur contrat IRIA, Novembre 1975.
- [296] C. LAUGIER, A. LEDUC-LEBALLEUR, M. LUCAS, F. MARTINEZ. – « GRIGRI : Logiciel de base pour l'utilisation des consoles de visualisation graphiques ». – *Rapport*, Rapport de recherche IMAG, 1975.

## Non Scientific Journals & Video Proceedings

- [297] C. LAUGIER, C. MENDOZA, « L'immatériel au bout des doigts ». *La recherche, Numéro spécial "Les nouveaux robots"*, Février 2002.
- [298] C. LAUGIER, G. DOBIAS, « Les technologies ITS au Japon ». *Transport/Environnement/Circulation*, (167) :15–24, 2001.
- [299] C. LAUGIER, F. MAUGIÈRE, J.F. BASSERAU, M. STOLTZ, O. GAGNIÈRE, « Le toucher ». *La découverte*, no. 275, Feb 2000.
- [300] C. LAUGIER, J. TROCCAZ, « Comment faire saisir un objet par une main de robot ? », *Courrier du CNRS*, Feb 1993. Numéro spécial sur l'Informatique.
- [301] J. BOISSONNAT, C. LAUGIER, J. LAUMOND, « Planification de mouvements pour un véhicule planétaire », *Bulletin de Liaison de la Recherche en Informatique et Automatique*, 139, October 1992, p. 40–44.
- [302] I. E. PAROMTCHIK, C. LAUGIER, « Automatic Parallel Car Parking », In : Video-Proceedings of the IEEE Int. Conf. on Robotics and Automation., April 1997, Produced by Inria (3 min.).
- [303] I. E. PAROMTCHIK, C. LAUGIER, « Automatic Parallel Parking and Returning to Traffic », In : Video-Proceedings of the IEEE Int. Conf. on Robotics and Automation., May 1998, Produced by Inria (3 min.).

## Softwares & Patents

- [304] C. COUE, C. LAUGIER, P. BESSIERE, TH. FRAICHARD, « Risque 1 : Method and related Devices for Vehicle Driving Assistance ». *Technology currently used in several industrial R&D contracts*. Patent no. 0552735. September 2005.
- [305] M. YGUEL, K. MEKHNACHA, C. LAUGIER, « Risque 2 : Improved Method and Devices for Vehicle Driving Assistance ». *Technology currently used in several industrial R&D contracts*. Patent no. 0552736. September 2005.
- [306] K. SUNDARAJ, C. LAUGIER, « 3D-Light : Library for the Interactive Simulation of 3D Animated Scenes ». *Internal use at INRIA Rhône-Alpes*. Software registered at APP (no. IDDN.FR.001.110026.000.S.P.2005...000.10000). February 2005.
- [307] K. SUNDARAJ, C. LAUGIER, « ColDetect : Collision Detection Library for Rigid and Deformable bodies ». *Internal use at INRIA Rhône-Alpes. Also available on our Web page*. Software registered at APP (no. IDDN.FR.001.280011.000.S.P.2004.000.10000). September 2003.
- [308] C. MENDOZA, K. SUNDARAJ, C. LAUGIER, « VisteoPhysic : Library for the Simulation of Interacting Rigid and Deformable Bodies using FEM and LEM models ». *Internal use at INRIA Rhône-Alpes. Also transfered to the XL-Studio company for an industrial application*. Software registered at APP (no. IDDN.FR.001.210025.000.S.P.2004.000.10000). June 2003.
- [309] K. SUNDARAJ, C. LAUGIER, « VDM : Library for the Simulation of Deformable Biological Tissues ». *Internal use at INRIA Rhône-Alpes. Also used at the Aesculap Company in a prototype system for Knee Arthroscopy*. Software registered at APP (no. IDDN.FR.001.280012.000.S.P.2004.000.10000). September 2003.
- [310] A. JOUKHADAR, A. DEGUET, C. LAUGIER, « AlaDyn3D : Dynamic Simulation Library for Deformable Bodies ». *Internal use at INRIA Rhône-Alpes during several years. Also available on our Web page*. Software registered at APP. 1998.
- [311] A. JOUKHADAR, C. LAUGIER, « ROBOT $\phi$  : Dynamic Simulation Library for Robotics ». *Internal use at INRIA Rhône-Alpes during 2 years. Also used by the GETRIS IMAGES company for an industrial application*. Software registered at APP. 1996.
- [312] C. LAUGIER, « LISP3D : 3D Graphics Library for LISP users ». *Internal use at IMAG Grenoble during several years*. 1979.
- [313] C. LAUGIER, F. MARTINEZ, « GRIGRI : Interactive Graphics Library ». *Internal use at IMAG Grenoble during several years. Also used in the CAD center of the MICADO company*. 1975.