





PERSONAL INFORMATION

Daniela Doroftei



-  Av. De La Renaissance 30, 1000 Brussels, Belgium
-  ++32-2-4414106       ++32-472 85 76 31
-  daniela.doroftei@rma.ac.be
-  [http://mecatron.rma.ac.be/People/Daniela\\_Doroftei.html](http://mecatron.rma.ac.be/People/Daniela_Doroftei.html)

Sex F | Date of birth 21/04/1979 | Nationality Belgian + Romanian

WORK EXPERIENCE

2019 – present

**Group Leader**

Royal Military Academy, Brussels, Belgium

- Group leader for the “aerial robotics” branch of the “Robotics & Autonomous Systems” research unit of the Belgian Royal Military Academy
- Responsible for project management of international and national research projects of the group

**Business or sector:** Defence, Secure Societies, Robotics, Drones, Unmanned Aerial Vehicles

2012 – present

**Project technical coordinator**

Royal Military Academy, Brussels, Belgium

- Responsible for the technical coordination of national and international research projects of the group
- Responsible for the organisation of project conferences and workshops

**Business or sector:** Defence, Secure Societies, Robotics, Drones, Unmanned Aerial Vehicles

2005 – present

**Research Engineer**

Royal Military Academy, Brussels, Belgium

- Research on human factors for drone operations
- User requirements engineering
- Development of quantitative robot validation methodologies
- Development of human-robot interfaces
- Development of hybrid behaviour-based control approaches, allowing human-in-the-loop semi-autonomous robot behaviours
- Development of decentralised multi-robot control strategies for robotic teams

**Business or sector:** Defence, Secure Societies, Robotics

2002 – 2003

**Researcher**

Université Libre de Bruxelles (ULB), Brussels, Belgium

- Numeric design and structural modelling of new membranes for active structures

**Business or sector:** University

PROJECTS

Timing	Project Acronym	Scope & tasks	Funding Scheme	Role
2020 - 2023	ASSETs+	Education & Training provider for unmanned vehicles in the domain of Secure Societies and defence	EU Erasmus+ - Sector Skills Alliances - Defence technologies	Project Participant
2019 - 2021	SOLOMON ( <a href="http://www.solomon-padr.eu/">http://www.solomon-padr.eu/</a> )	Contributor to an analysis of strategy-oriented analysis of the market forces in EU defence for air, space and cyber armament systems.	EU - H2020 Preparatory Action for Defence Research	Project Participant
2019 - 2023	ALPHONSE	Responsible for the study of human factors for drone operations and the development of a simulation environment for rendering drone operations more safe.	Belgian Royal Higher Institute for Defence	Project Coordinator
2016 - 2018	SafeShore ( <a href="http://www.safeshore.eu">http://www.safeshore.eu</a> )	Co-responsible for technical coordination of an EU project that developed a novel drone detection system for maritime border and external security. Responsible for the development of quantitative system validation methodologies.	EU – H2020 - Secure Societies – Border and External Security	Project Coordinator Contact
2012 – 2016	ICARUS ( <a href="http://www.fp7-icarus.eu">http://www.fp7-icarus.eu</a> )	Co-responsible for technical coordination of an EU project that developed a set of integrated unmanned tools for crisis management, supporting disaster resilient societies. Work Package leader for the establishment of the user requirements Responsible for relations with end users and user acceptance. Responsible for the development of quantitative system validation methodologies.	EU – FP7 – Secure Societies – Security - Disaster Resilient Societies	Project Coordinator Contact WP Leader End-User Liaison Officer
2007 – 2010	View-Finder	Contributor to the development of artificial intelligence tools for unmanned ground vehicles used in disaster response, supporting disaster resilient societies.	EU – FP6 – IST	Project Participant
2007 - 2010	Networked Multi-Robot System	Contributor to the development of artificial intelligence tools for the heterogeneous collaboration of unmanned ground vehicles for security and defence applications	European Defence Agency	Project Participant
2005 – 2011	MOBINISS	Contributor to the development of artificial intelligence tools for unmanned ground vehicles with as applications the fight against crime and terrorism and defence.	Belgian Royal Higher Institute for Defence	Project Participant
2002 – 2003	Advanced Mechatronic Systems	Contributor to the development of artificial intelligence tools for unmanned ground vehicles	Belgian Science Policy	Project Participant

REVIEWING & EXPERTISE SERVICE

Timing	Organisation	Role
2019	EU – H2020 – Secure Societies - Disaster Resilient Societies	External expert / reviewer for the assessment of project proposals

EDUCATION AND TRAINING

2002 – 2003

**Master study (DEA) in Applied Science**

Université Libre de Bruxelles (ULB) in Brussels, Belgium

- Master thesis: Development of an elastic membrane for active vibration dampening

March 2001 - May 2001

**Erasmus scholarship**

Université Libre de Bruxelles (ULB) in Brussels, Belgium

1997 -2002

**Master in mechanical engineering**

Gheorghe Asachi University in Iasi, Romania

- Master thesis: Simulation of a PUMA manipulator

PERSONAL SKILLS

Mother tongue(s)

Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C2	C2	C2	C2	C1
Dutch	C1	C1	B2	B2	B1
English	C1	C1	C1	C1	C1
Italian	A2	A2	A1	A1	A1
Russian	A1	A2	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

Communication skills

- good communication skills towards different actors gained through my experience as organiser of events

Organisational / managerial skills

- excellent time-keeping skills as responsible on this subject in the coordination team
- good time-management skills gained as end-responsible for the timely delivery of multiple project deliverables
- excellent event-organisation skills as main contact point for multiple international conferences
- good knowledge of administrative processes as liaison officer for handling administrative matters
- good knowledge on the elaboration of user and system requirements and system validation, as responsible on these subjects in the ICARUS and SafeShore projects

Computer skills

- good command of Microsoft Office™ tools (word processor, spread sheet, presentation software)
- knowledge of programming tools through past experiences in research projects

Driving licence

- B

## PUBLICATIONS

- Publication Metrics      h-index: 12 (Q1 2020, Google Scholar: [https://scholar.google.be/citations?user=EUZro\\_cAAAAJ&](https://scholar.google.be/citations?user=EUZro_cAAAAJ&))  
 Number of citations: 391  
 Total number of publications: 45
- Books
1. G. De Cubber, D. Doroftei (Ed), "Search and Rescue Robotics: From Theory to Practice", DOI: 10.5772/intechopen.68449, 262 pages, Publisher: InTech,, Available from: <https://www.intechopen.com/books/search-and-rescue-robotics-from-theory-to-practice/introduction-to-the-use-of-robotic-tools-for-search-and-rescue> , August 23, 2017
- Book Chapters
1. Baudoin, Yvan; Doroftei, Daniela; de Cubber, Geert; Habumuremyi, Jean - Claude; Balta, Haris; Doroftei, Ioan; ,Unmanned Ground and Aerial Robots Supporting Mine Action Activities,Mine Action-The Research Experience of the Royal Military Academy of Belgium, 2017, InTech
  2. De Cubber, Geert; Doroftei, Daniela; Rudin, Konrad; Berns, Karsten; Matos, Anibal; Serrano, Daniel; Sanchez, Jose; Govindaraj, Shashank; Bedkowski, Janusz; Roda, Rui; ,Introduction to the Use of Robotic Tools for Search and Rescue,Search and Rescue Robotics-From Theory to Practice,,,,2017,InTech
  3. Doroftei, Daniela; De Cubber, Geert; Wagemans, Rene; Matos, Anibal; Silva, Eduardo; Lobo, Victor; Cardoso, Guerreiro; Chintamani, Keshav; Govindaraj, Shashank; Gancet, Jeremi; ,User-Centered Design,Search and Rescue Robotics-From Theory to Practice, 2017,InTech
  4. De Cubber, Geert; Doroftei, Daniela; Balta, Haris; Matos, Anibal; Silva, Eduardo; Serrano, Daniel; Govindaraj, Shashank; Roda, Rui; Lobo, Victor; Marques, Mário; ,Operational Validation of Search and Rescue Robots,Search and Rescue Robotics-From Theory to Practice,,,,2017,InTech
  5. De Cubber, Geert; Doroftei, Daniela; ,Human Victim Detection and Stereo-based Terrain Traversability Analysis for Behavior-Based robot navigation,Using Robots in Hazardous Environments,1,,476-498,2011,Elsevier
- Journal Papers
1. Daniela Doroftei, Geert De Cubber, Using a qualitative and quantitative validation methodology to evaluate a drone detection system, ACTA IMEKO Journal, Vol 8, No 4 (2019)
  2. Y. Baudoin, D. Doroftei, Geert de Cubber, Jean-Claude Habumuremyi, Haris Balta, Ioan Doroftei, Unmanned Ground and Aerial Robots Supporting Mine Action Activities, Journal of Physics, Vol 1065, Issue 17, IOP Publishing, October 2018
  3. G. De Cubber, S. A. Berrabah, D. Doroftei, Y. Baudoin, and H. Sahli, "Combining Dense structure from Motion and Visual SLAM in a Behavior-based Robot Control Architecture," International journal of Advanced Robotics Systems, vol. 7, iss. 1, 2010.
  4. D. Doroftei and E. Colon, "Decentralized Multi-Robot Coordination in an Urban Environment," European Journal of Mechanical and Environmental Engineering, vol. 1, 2010.
  5. D. Doroftei, E. Colon, Y. Baudoin, and H. Sahli, "Development of a behaviour-based control and software architecture for a visually guided mine detection robot," European Journal of Automated Systems, vol. 43, iss. 3, pp. 295-314, 2009.
  6. D. Doroftei, E. Colon, and G. De Cubber, "A behaviour-based control and software architecture for the visually guided Robudem outdoor mobile robot," Journal of Automation, Mobile Robotics & Intelligent Systems, vol. 2, iss. 4, pp. 19-24, 2008.

## Conference Papers

1. D. Doroftei, G. De Cubber, Qualitative and quantitative validation of drone detection systems, International Symposium on Measurement and Control in Robotics ISMCR2018, September 2018, Mons, Belgium
2. H. Balta, G. De Cubber, Y. Baudoin, D. Doroftei, "UAS deployment and data processing during the Balkans flooding with the support to Mine Action" ,Proceedings of the 8th International Advanced Robotics Programme (IARP) Workshop on Robotics for Risky Environment (RISE), pp 28-29, Lisbon, Portugal, 2015.
3. D. Doroftei, A. Matos, V. Lobo, R. Wagemans, G. De Cubber, Geert , "Operational Validation of robots for risky environments",8th IARP Workshop on Robotics for Risky Environments,1,1, Lisbon, Portugal, 2015,
4. D. Doroftei, A. Matos, and G. De Cubber, "Designing Search and Rescue Robots towards Realistic User Requirements," in Proc. Advanced Concepts on Mechanical Engineering (ACME), 2014.
5. G. De Cubber, D. Doroftei, Y. Baudoin, D. Serrano, K. Berns, C. Armbrust, K. Chintamani, R. Sabino, S. Ourevitch, and T. Flamma, "Search and Rescue robots developed by the European ICARUS project," in Proc. 7th IARP International Workshop on Robotics for Risky Environment - Extreme Robotics, 2013.
6. H. Balta, G. De Cubber, D. Doroftei, Y. Baudoin, and H. Sahli, "Terrain Traversability Analysis for off-road robots using Time-Of-Flight 3D Sensing," in Proc. 7th IARP International Workshop on Robotics for Risky Environment - Extreme Robotics, 2013.
7. G. De Cubber, D. Doroftei, D. Serrano, K. Chintamani, R. Sabino, and S. Ourevitch, "The EU-ICARUS project: developing assistive robotic tools for search and rescue operations," in Proc. IEEE International Symposium on Safety, Security, and Rescue Robotics, 2013.
8. H. Balta, G. De Cubber, and D. Doroftei, "Increasing Situational Awareness through Outdoor Robot Terrain Traversability Analysis based on Time- Of-Flight Camera," 2013.
9. G. De Cubber, D. Doroftei, Y. Baudoin, D. Serrano, K. Chintamani, R. Sabino, and S. Ourevitch, "ICARUS: Providing Unmanned Search and Rescue Tools," in Proc. 6th IARP Workshop on Risky Interventions and Environmental Surveillance (RISE), 2012.
10. A. Conduraru, I. Conduraru, E. Puscalau, G. De Cubber, D. Doroftei, and H. Balta, "Development of an autonomous rough-terrain robot," in Proc. IROS2012 Workshop on Robotics for Environmental Monitoring (WREM), 2012.
11. G. De Cubber, D. Doroftei, Y. Baudoin, D. Serrano, K. Chintamani, R. Sabino, and S. Ourevitch, "ICARUS: An EU-FP7 project Providing Unmanned Search and Rescue Tools," in Proc. IROS2012 Workshop on Robots and Sensors integration in future rescue INformation system (ROSIN'12), 2012.
12. D. Doroftei, G. De Cubber, and K. Chintamani, "Towards collaborative human and robotic rescue workers," in Proc. 5th International Workshop on Human-Friendly Robotics (HFR2012), 2012.
13. G. De Cubber, D. Doroftei, Y. Baudoin, D. Serrano, K. Chintamani, R. Sabino, and S. Ourevitch, "Operational RPAS scenarios envisaged for search & rescue by the EU FP7 ICARUS project," in Proc. Remotely Piloted Aircraft Systems for Civil Operations (RPAS2012), 2012.
14. G. De Cubber, D. Doroftei, H. Sahli, and Y. Baudoin, "Outdoor Terrain Traversability Analysis for Robot Navigation using a Time-Of-Flight Camera," in Proc. RGB-D Workshop on 3D Perception in Robotics, 2011.
15. D. Doroftei and E. Colon, "Decentralized multi-robot coordination for a risky surveillance application." in Proc. IARP HUDEM 2011, 2011.
16. G. De Cubber and D. Doroftei, "Multimodal terrain analysis for an all-terrain crisis Management Robot," in Proc. IARP HUDEM 2011, 2011.
17. G. De Cubber, D. Doroftei, K. Verbiest, and S. A. Berrabah, "Autonomous camp surveillance with the ROBUDEM robot: challenges and results," in Proc. IARP Workshop

- RISE'2011, 2011.
18. G. De Cubber, D. Doroftei, S. A. Berrabah, and Y. Baudoin, "Using visual perception for controlling an outdoor robot in a crisis management scenario," in Proc. ROBOTICS 2010, 2010.
  19. D. Doroftei and E. Colon, "Multi-robot collaboration and coordination in a high-risk transportation scenario," in Proc. IARP WS HUDEM'2010, 2010.
  20. Y. Baudoin, G. De Cubber, E. Colon, D. Doroftei, and S. A. Berrabah, "Robotics Assistance by Risky Interventions: Needs and Realistic Solutions," in Proc. Workshop on Robotics for Extreme conditions, 2010.
  21. D. Doroftei and E. Colon, "Decentralized Multi-Robot Coordination for Risky Interventions," in Proc. Fourth International Workshop on Robotics for risky interventions and Environmental Surveillance-Maintenance, RISE'2010, 2010.
  22. D. Doroftei, G. De Cubber, E. Colon, and Y. Baudoin, "Behavior Based Control For An Outdoor Crisis Management Robot," in Proc. Third International Workshop on Robotics for risky interventions and Environmental Surveillance-Maintenance, 2009.
  23. G. De Cubber, D. Doroftei, L. Nalpantidis, G. Sirakoulis, and A. Gasteratos, "Stereo-based Terrain Traversability Analysis for Robot Navigation," in Proc. Third International Workshop on Robotics for risky interventions and Environmental Surveillance-Maintenance, 2009.
  24. Y. Baudoin, D. Doroftei, G. De Cubber, S. A. Berrabah, E. Colon, C. Pinzon, A. Maslowski, and J. Bedkowski, "View-Finder: a European project aiming the Robotics assistance to Fire-fighting services and Crisis Management," in Proc. IARP workshop on Service Robotics and Nanorobotics, 2009.
  25. Y. Baudoin, D. Doroftei, G. De Cubber, S. A. Berrabah, C. Pinzon, J. Penders, A. Maslowski, and J. Bedkowski, "VIEW-FINDER : Outdoor Robotics Assistance to Fire-Fighting services," in Proc. International Symposium Clawar'2009, 2009.
  26. Y. Baudoin, D. Doroftei, G. De Cubber, S. A. Berrabah, C. Pinzon, F. Warlet, J. Gancet, E. Motard, M. Ilzkovitz, L. Nalpantidis, and A. Gasteratos, "View-Finder: Robotics Assistance to Fire-Fighting Services and Crisis Management," in Proc. IEEE International Workshop on Safety, Security, and Rescue Robotics, (SSRR 2009), 2009.
  27. G. De Cubber, D. Doroftei, and G. Marton, "Development of a visually Guided Mobile Robot for Environmental Observation as an Aid for Outdoor Crisis Management Operations," in Proc. IARP Workshop on Environmental Maintenance & Protection, 2008.
  28. D. Doroftei and Y. Baudoin, "Development of a semi-autonomous De-mining vehicle," in Proc. 7th IARP WS HUDEM'2008, 2008.
  29. D. Doroftei and J. Bedkowski, "Towards the autonomous navigation of robots for risky interventions," in Proc. RISE 2008, 2008.
  30. D. Doroftei, E. Colon, and G. De Cubber, "A behaviour-based control and software architecture for the visually guided Robudem outdoor mobile robot," in Proc. ISMCR2007, 2007.
  31. D. Doroftei, E. Colon, Y. Baudoin, and H. Sahli, "Development of a semi-autonomous off-road vehicle," in Proc. HuMan'07 (IEEE), 2007, pp. 340-343.
  32. D. Doroftei, E. Colon, and Y. Baudoin, "A modular control architecture for semi-autonomous navigation," in Proc. CLAWAR 2006 conference, 2006, pp. 712-715.
  33. D. Doroftei, E. Colon, and Y. Baudoin, "Development of a control architecture for the ROBUDEM outdoor mobile robot platform," in Proc. IARP Workshop RISE, 2006.