PERSONAL INFORMATION   Geert De Cubber

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💬 Skype ID geert.de.cubber

Sex Male | Date of birth 13/02/1979 | Nationality Belgian

WORK EXPERIENCE

2019 - present

Team Leader & Research Manager

Royal Military Academy, Brussels, Belgium

- Team leader of the "Robotics & Autonomous Systems" research unit of the Belgian Royal Military Academy
- Responsible for project management of international and national research projects

Business or sector Defence, Secure Societies, Robotics

2010 – present

Senior researcher & Project Manager

Royal Military Academy, Brussels, Belgium

- Responsible for research on unmanned ground, air and marine vehicles for applications like border and external security, fight against crime and terrorism, disaster-resilient societies and defence
- Responsible for research on artificial intelligence for applications like border and external security, fight against crime and terrorism, disaster-resilient societies and defence

Business or sector Defence, Secure Societies, Robotics

2007 – 2010

Junior researcher

Royal Military Academy, Brussels, Belgium

- Responsible for research on unmanned ground vehicles for applications like the fight against crime and terrorism, disaster-resilient societies, civil protection and defence
- Responsible for research on artificial intelligence for applications like the fight against crime and terrorism, disaster-resilient societies, civil protection and defence

Business or sector Defence, Secure Societies, Robotics

2003 – 2007

Assistant

Vrije Universiteit Brussel, Brussels, Belgium

- Tutor for the practical sessions to the Electronics course at the VUB-department of Electronics and Informatics
- Tutor for the course on bus systems at the VUB-department of Electronics and Informatics

Business or sector University

2001 – 2007

Researcher

Vrije Universiteit Brussel, Brussels, Belgium

- Main research focus on 3D reconstruction of outdoor areas using monocular vision.
- Research on tele-presence, target tracking, illumination invariance and colour constancy, Kalman filtering, artificial intelligence, soft computing

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 (http://www.solomon-padr.eu/)	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 - 2021	SSAVE	Contributor to the development of artificial intelligence tools for the heterogeneous collaboration of unmanned maritime assets in the fight against crime and terrorism and for maritime border and external security	VLAIO (Flanders Innovation & Entrepreneurship Agency)	Project Participant
2019 - 2022	MARSUR	Responsible for the development of algorithms enabling operations with multiple heterogeneous unmanned maritime assets for border and external security operations and the fight against crime and terrorism	Belgian Royal Higher Institute for Defence	Project Coordinator
2016 - 2018	SafeShore (http://www.safeshore.eu)	Responsible for project management & scientific coordination of an EU project that developed a novel drone detection system for maritime border and external security. Contributor to the development of artificial intelligence algorithms for drone detection.	EU – H2020 - Secure Societies – Border and External Security	Project Coordinator
2012 – 2016	ICARUS (http://www.fp7-icarus.eu)	Responsible for project management, scientific coordination and technical coordination of an EU project that developed a set of integrated unmanned tools for crisis management, supporting disaster resilient societies. Contributor to the development of artificial intelligence tools for rendering unmanned search and rescue robots more autonomous.	EU – FP7 – Secure Societies – Security - Disaster Resilient Societies	Project Coordinator
2012 – 2015	TIRAMISU (http://www.fp7-tiramisu.eu/)	Contributor to the development of artificial intelligence tools for humanitarian demining	EU – FP7 – Secure Societies – Security	Project Participant
2007 – 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
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
2001 – 2005	ClearFast	Contributor to the development of artificial intelligence tools for humanitarian demining	EU – FP5 – IST	Project Participant
2001 – 2006	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
2020 - present	EU - H2020 – Research Executive Agency	External expert for the ethical screening and checking of project proposals and projects
2019 - 2020	EU – H2020 - ICT	External expert for the continuous monitoring of the AirBorne project
2019	EU – H2020 – Secure Societies - Disaster Resilient Societies	External expert / reviewer for the assessment of project proposals
2018	EU – DG GROW	External expert for the continuous monitoring of a JRC study that identifies bottlenecks and supply issues linked to raw and processed materials
2018	Agence Nationale de la Recherche (French National Research Agency)	External expert / reviewer for the assessment of project proposals
2017 - present	University of Catania / Vrije Universiteit Brussel Military Academy of Tunisia / Belgian Royal Military Academy Polytechnic University of Bucharest	PhD. Jury member for 6 PhD. students
2017	Kuwait Foundation for the Advancement of Science (KFAS)	External expert / reviewer for the assessment of project proposals
2017	Natural Sciences and Engineering Research Council of Canada (NSERC)	External expert / reviewer for the assessment of project proposals
2016	EU – EDA – Pilot for the Preparatory Action for Defence Research	External expert / reviewer for the assessment of project proposals
2015 - present	Brussels Institute for research and innovation (INNOVIRIS)	External expert / reviewer for the assessment of project proposals
2015	EU - H2020 - ICT	External expert / reviewer for the assessment of project proposals
2012 - present	European Robotics & Training Board	Jury member for the Georges Giralt award granted to the best European PhD. thesis in the field of robotics
2010 – present	International Journals: Robotics & Autonomous Systems, Advanced Robotic Systems, Automation in Construction, Bulletin of the Institute of Mathematical Machines, Computer Vision and Image Understanding, Electrical Engineering and Computer Science, IET Computer Vision, Industrial Robot, Journal of Field Robotics, Künstliche Intelligenz, Multimedia Tools and Applications, Robotica, Robotics and Automation Magazine, Robotics and Autonomous Systems, Sensors, Transactions on Automation Science and Engineering, Transactions on Image Processing, Applied Sciences, Robotics, Electronics Letters, Radar, Sonar & Navigation, MTS Journal, Computers and Electrical Engineering, Electronics Letters, Microprocessors and Microsystems, Transactions on Automation Science, Journal of Advanced Robotic Systems, Journal of Intelligent & Robotic Systems	Reviewer for the assessment of scientific publications
2010 - present	International Conferences: ICRA, IROS, Humanitarian Demining Workshop, Human-Friendly Robotics, Human-Machine Systems, Cyborgs and Enhancing Devices, ICVS, Imaging Systems and Techniques, Intelligent Autonomous Unmanned Search and Rescue Tools, Joint Conference on Artificial Intelligence, Remote Engineering and Virtual Instrumentation, Robotics and Automation for Humanitarian Applications, Robotics for Risky Interventions and Environmental Surveillance-Maintenance, Robots and Sensors integration in future rescue INformation system, Safety, Security, and Rescue Robots, Towards Autonomous Robotic Systems, UAVision, ICMLA, ICVS, MICRADS, ISMCR	Reviewer for the assessment of scientific publications

EDUCATION AND TRAINING

2010   ### PhD. in Engineering
Vrije Universiteit Brussel and the Royal Military Academy (Belgium)

- PhD. thesis title: Variational methods for dense depth reconstruction from monocular and binocular video sequences

2001   ### Master in Engineering
Vrije Universiteit Brussel (Belgium)

- Master thesis title: Integration of Sensors on a Mobile Robot

PERSONAL SKILLS

Mother tongue(s)   Dutch

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C1	C1	B2	B2	B2
Selor Certificate Article 12.					
English	C2	C2	C2	C2	C2
Romanian	B1	B1	B1	B1	A1
German	B1	B1	A2	A1	A1

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

Communication skills
- Excellent scientific communication skills gained through the oral presentation of research results at multiple conferences
- Excellent communication skills towards the general public gained through experiences in the dissemination of (EU) project results towards the public and end-users

Organisational / managerial skills
- Excellent project management, leadership and team-leading skills acquired as responsible for a project team of up to 125 people
- Excellent organizational and time-management skills gained as end-responsible for the timely delivery of over 100 project deliverables (across multiple projects)
- Excellent understanding of accounting practices and financial administration for EU-research projects gained as responsible for the financial reporting of the Icarus and SafeShore projects.
- Good event organization skills gained through the organization of multiple international conferences and workshops.
- Excellent networking skills as proven through the elaboration and coordination of multiple projects with dozens of international partners with complementary capabilities.

Computer skills
- Excellent command of office tools (word processor, spread sheet, presentation software)
- Good command of programming tools (Matlab, Visual Studio, C++, C#)
- Knowledge on web development as responsible for the management of the research group website (http://mecatron.rma.ac.be/)

Flying license
- Certified RPAS operator for the MD4-1000 Unmanned Aerial Vehicle.

Driving licence
- B

ACADEMIC PROFILE

Publication Metrics

h-index: 16 (Q1 2020, Google Scholar: https://scholar.google.be/citations?user=wYXEEZ0AAAAJ)

Number of citations: 696

Total number of publications: 100

Monographs: 1

> G. De Cubber, "Variational methods for dense depth reconstruction from monocular and binocular video sequences," PhD Thesis, VUB-Press, 2010.)

Edited Books: 1

> G. De Cubber, Daniela 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: 7

Journal Papers: 16

Conference papers: 75

Academic Supervision

2014 – 2019	*Ichraf Lahouli, "On-board image processing for abnormal event detection by UAS"*, in co-promotorship with the University of Tunis
2012 - 2017	*Haris Balta*, "Terrain mapping by collaborative ground and aerial vehicles for search and rescue and demining applications", in co-promotorship with the Universita degli Studi di Napoli Federico I

Master Thesis Supervision

Supervision of over 40 master thesis students from all over Europe, in the framework of Erasmus and bilateral agreements

Courses

2013	*3D Computer Vision*, Guest Course for Masters at the Académie Militaire Tunisie
2012	*EU Robotics initiatives*, IEEE Robotics and Automation Society (IEEE-RAS) Safety, Security and Rescue Robotics (SSRR) Summer School
2011	*Robotics*, Guest Course for Masters at the Académie Militaire Tunisie
2010	*Vision Lab*, IEEE-RAS/IFRR School of Robotics Science on Social and Cognitive Robotics, Iasi, Romania, July 2010
2010	*Computer Vision*, Guest Course for Masters at the Académie Militaire Tunisie
2005 - 2007	*Bus Systems*, Electronics and Informatics Department, Vrije Universiteit Brussel
2003 – 2007	*Electronics practical sessions*, Electronics and Informatics Department, Vrije Universiteit Brussel