

PERSONAL INFORMATION

Geert De Cubber



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

WORK EXPERIENCE

2019 - present **Head of Unit & Research Manager**
Royal Military Academy, Brussels, Belgium
• Head of Unit 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 performing and managing research on robotics & artificial intelligence and unmanned ground, air and marine vehicles for applications like border and external security, fight against crime and terrorism, disaster-resilient societies, security and defence

Business or sector Defence, Secure Societies, Robotics

2007 – 2010 **Junior researcher**
Royal Military Academy, Brussels, Belgium
• Responsible for executing research on robotics & artificial intelligence and unmanned ground vehicles for applications like border and external security, fight against crime and terrorism, disaster-resilient societies, security 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 (only EU projects of the last 10 years)

Timing	Project Acronym	Scope & tasks	Funding Scheme	Role
2025 – 2029	ORIGAMI	Project Coordinator of this challenge project to develop a drone swarm resilient to CUAS operations	European Defence Fund	Project Coordinator
2025 - 2028	COURAGEOUS ²	Project Coordinator of this EU initiative to develop a standard test method for CUAS solutions	EU – Internal Security Fund	Project Coordinator
2025 – 2028	STEALTH	Development of multi-layered drone swarms for GNSS-denied environments	European Defence Fund	Project Participant
2025 – 2028	GENIUS	Development of a robotics solutions for military demining	European Defence Fund	Project Participant
2025 – 2028	E=MCM	Development of the next-generation Maritime Mine Countermeasures Toolbox	European Defence Fund	Project Participant
2025 - 2028	iMUGS2	Development of the next-generation EU Unmanned Ground System	European Defence Fund	Project Participant
2021 - 2024	COURAGEOUS (https://courageous-isf.eu)	Project coordinator of an EU project developing standardised test methods for counter-UAV tools	EU – Internal Security Fund	Project Coordinator
2021 - 2025	STARS*EU https://starseu.net/	Co-project coordinator for the DEFIS grant on EU Space Research	DEFIS Service Contract	Co-Project Coordinator
2023 – 2027	AIDEDEX https://aidedex.eu/	Development of a swarming robotics solution for hidden threat detection	European Defence Fund	POC RMA
2023 – 2027	CONVOY	Development of a swarming robotics solution for hidden threat detection	European Defence Fund	Participant
2023 – 2026	CUGS	Development of Combat Unmanned Ground Vehicles	EDA / RHID	Project Participant
2024 – 2028	Multimeter	Development of autonomous Rubber Hull Inflatable Vessel for maritime mine countermeasures	MCMlab	Financial coordinator
2023 – 2026	SAFIR-Ready https://safir-ready.eu/	Integration of medical emergency drones into the civilian airspace management system	SESAR JU	POC RMA
2021 - 2023	AIDED https://aided-padr.eu/	WP-Leader of the PADR-AIDED project on the development of AI tools for military demining robots	EU – Preparatory Action for Defence Research	WP-Leader
2020 - 2023	iMUGS	Swarming Sub-Project Coordinator of the EDIDP iMUGS project on the development of standardised European unmanned ground systems	European Defence Industrial Development Programme (EDIDP)	Sub-Project Coordinator
2020 - 2023	ASSETS+ (http://www.assets-plus.eu/)	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
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. 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

REVIEWING & EXPERTISE SERVICE

Timing	Organisation	Role
2023 - present	EU -EDF	External expert / reviewer for the assessment of proposals
2021 - present	EU – COST Association	External expert / reviewer for the assessment of proposals
2020 - present	EU - H2020 / Horizon Europe	External expert for the ethical screening and checking of project proposals and projects
2019 - present	EU – H2020 / Horizon Europe	External expert for the continuous monitoring of projects
2019 - present	EU – H2020 / Horizon Europe	External expert / reviewer for the assessment of project proposals
2019	CHIST - ERA	External expert / reviewer for the assessment of project proposals
2018 - 2019	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 / Antwerp University	PhD. Jury member
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, Sensors, ...	Reviewer for the assessment of scientific publications
2010 - present	International Conferences: ICRA, IROS, SSRR, TAROS, 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
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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 teams 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 multiple EU 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: 24 (Q2 2024, Google Scholar: <https://scholar.google.be/citations?user=wYXEEZ0AAAAJ>)

Number of citations: ~2000

Total number of publications: ~145

Monographs: 1

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

Edited Books: 2

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

M. Reyhanoglu, G. De Cubber, D. Doroftei (Ed.) "Unmanned Robotic Systems and Applications", DOI: 10.5772/intechopen.77608, Publisher: InTech, Available from: <https://www.intechopen.com/books/unmanned-robotic-systems-and-applications>

Book Chapters: 7

Journal Papers: 28

Conference papers: > 100

Academic Supervision

2025 - present	<i>Joseph Mimassi, "GNSS-free navigation of drones", in co-promotorship with VUB</i>
2023 –present	<i>Kasper Cools, "AI-resistant camouflage", in co-promotorship with VUB</i>
2023 –present	<i>Alexandre La Grappe, "Trajectory planning for autonomous USVs ", in co-promotorship with University of Porto</i>
2024 - present	<i>Mario Malizia, "Mobile manipulation for demining robots", in co-promotorship with KU Leuven</i>
2023 - present	<i>Danial Hawari, "Secure contrainerisation of ROS2", in co-promotorship with UGent</i>
2020 – present	<i>Tien Thanh Nguyen, "Autonomous landing of drones on vessels", in co-promotorship with KU Leuven</i>
2014 – 2019	<i>Ichraf Lahouli, "On-board image processing for abnormal event detection by UAS", in co-promotorship with the University of Tunis</i>
2012 - 2017	<i>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</i>

Master Thesis Supervision

Supervision of over 50 master thesis students from all over Europe, in the framework of Erasmus and bilateral agreements

Courses

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