Elias **Fernández Domingos**

PhD

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Google Scholar: 373 citations; h-index 11; https://scholar.google.es/citations?user=Zb43U4IAAAAJ&hl=en
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1. Education

2020 — **PhD (Doctor of Science)**
Vrije Universiteit Brussel (VUB) & Universidade de Vigo, Spain
Joint PhD in Sciences (VUB) and Information and Communication Technologies (Universidade de Vigo). Thesis: *Coordinating Human and Agent Behaviour in Collective Risk Scenarios*. Awarded the "cum laude" mention (Spanish doctoral evaluation system).

2015 — **MSc / Engineering degree (5 years, pre-Bologna)**
University of Vigo, Spain
Telecommunications Engineering degree (double specialisation in Telematics Engineering and Electronics). Equivalence: first 3 years correspond to a Bachelor's degree, last 2 to a Master's degree (post-Bologna). Master's thesis: development of a conversational bot for the Moodle platform (maximum grade – MH 100%).

2. Academic positions

Oct 2024 – Present — **Senior Postdoctoral Researcher (FWO)**
Artificial Intelligence Laboratory, Department of Computer Science, Vrije Universiteit Brussel (VUB), Brussels, Belgium

Oct 2021 – Sep 2024 — **Postdoctoral Researcher (FNRS Chargé de Recherches)**
Machine Learning Group, Department of Computer Science, Université Libre de Bruxelles (ULB), Brussels, Belgium

Sep 2021 – Sep 2022 — **Substitute Lecturer (Maître d'enseignement)**
Learning Dynamics / Computational Game Theory, Department of Computer Science, ULB, Brussels, Belgium

Apr 2021 – Sep 2021 — **Postdoctoral Researcher**
TRAIL project, ULB, Brussels, Belgium

Jan 2021 – Mar 2021 — **Postdoctoral Researcher**
Artificial Intelligence Laboratory, VUB, Brussels, Belgium

2017 – 2020 — **FWO SB PhD Research Fellow**
Artificial Intelligence Laboratory, VUB, Brussels, Belgium

2016 – 2017 — **PhD Researcher**
project Towards an understanding of the interplay between other-regarding preferences and group formation in strategic environments*, Artificial Intelligence Laboratory, VUB, Brussels, Belgium*

2014 – 2015 — **Erasmus internship**
AGH University of Science and Technology, Kraków, Poland (Department of Computer Science)

3. Teaching

3.1 University teaching

Learning Dynamics / Computational Game Theory (INFO-F-409; joint ULB/VUB course)

Multi-agent systems from game-theoretic and reinforcement learning perspectives; assessed via assignments and a group project (paper reproduction, student paper, presentation).
Roles: Teaching Assistant (2016–2020); Substitute Co-organiser and lecturer (Sep 2021–Sep 2022, replacing Prof. Tom Lenaerts during sabbatical); Invited Lecturer (since 2022–2023).
Preparing and grading assignments and exams, supervising students, coordinating course activities, and delivering lectures (game theory and evolutionary game theory).

Theory of Computation (4021170FNR, VUB)

Mathematical foundations of computer science (Turing machines, decidability, computational complexity).
Roles: Teaching Assistant (2019–2020).
Exercise classes, preparing the exercise section of the exam, and grading.

3.2 Non-university teaching

- **Summer of DANS Summer School (Ghent, 2022):** Lecture on Games on Networks. — https://csi.ugent.be/events/summerofdans/index.html
- **ECAI 2023 (Kraków, Poland):** Tutorial "Evolutionary Game Theory and AI". — https://edai-workshop.github.io/2023/
- **ESSAI Summer School (Athens, 2024):** 5-day course on Multi-Agent Systems and Evolution. — https://essai2024.di.uoa.gr/ESSAI-courses.html
- **IC2S2 2025 (Norrköping, Sweden):** Tutorial "Reinforcement Learning and Evolutionary Game Theory Are Two Sides of the Same Coin". — https://efernandez.eu/ic2s2_tutorial_2025/
- **ALife 2025 (Kyoto, Japan):** Tutorial "An Introduction to Evolutionary Game Theory and Social Intelligence". — https://efernandez.eu/alife_tutorial_2025/

3.3 Teaching material

- Learning Dynamics: prepared slides for the lecture "(Practical) Evolutionary Game Theory"; developed Python notebook repository https://github.com/Socrats/egt-tutorial.
- Theory of Computation: prepared four sets of slides for exercise classes.
- ESSAI 2024: prepared notebooks for the course "Multi-Agent Systems and Evolution".
- IC2S2 tutorial: prepared notebooks runnable in Google Colab: https://github.com/Socrats/ic2s2-tutorial.
- AGH internship: developed repositories introducing loosely coupled programming with Apache Spring: https://github.com/Socrats/SpringLab, https://github.com/Socrats/SpringLab-PizzeriaSim, https://github.com/Socrats/SpringLab-incompletePizzeriaSimulator.

3.4 Supervision and mentoring

Bachelor's theses supervised

- Jonathan Bokungu ULB, 2016–2017 — The importance of mechanisms for evolution: a review (Promoter: Prof. Tom Lenaerts)
- Kamen Zhekov ULB, 2016–2017 — Recurrent neural networks to model decision-making in the Prisoner's Dilemma (Promoter: Prof. Tom Lenaerts)

Master's theses supervised

- Kaïs Albichari ULB, 2017–2018 — Improving cooperation through emotion modelling: an evolutionary approach (Promoter: Prof. Tom Lenaerts)
- José Miguel Ramos INESC-ID / IST, University of Lisbon, Portugal — Learning to Cooperate under Democracy and Risky Public Goods (Promoter: Prof. Francisco C. Santos)
- Jens Cardon VUB, 2018–2019 — Emotional multi-agent reinforcement learning in a collective risk dilemma (Promoter: Prof. Ann Nowé)
- Cédric Hanssens ULB, 2023–2025 — Modelling affordances using evolutionary game theory (Promoter: Prof. Tom Lenaerts)
- Simon Morais da Cunha Junior ULB, 2020–2021 — Distilling reinforcement learning in sequential normal-form games (Promoter: Prof. Tom Lenaerts; Prof. Ann Nowé)
- Lourenço Teodoro Group on AI for People and Society, INESC-ID / IST, University of Lisbon, Portugal — Decentralized regulation in the race for AI supremacy (Promoter: Prof. Francisco C. Santos; Prof. The-Anh Han)

Internship supervision

- Andrew Karam OHME: Internship project with artist Adrien Lucca, bridging art and science; explored paint colour changes under white-light frequency and optimisation of paint selection for dynamic colour shifts.

PhD co-supervision

- Inês Terrucha completed 2024 — Joint PhD (VUB & Ghent University): Coordination through artificial delegates: a study of commitment and adaptation in resource-sharing situations (Promoters: Prof. Tom Lenaerts; Prof. Pieter Simoens)
- Eladio Montero Porras completed 2024 — VUB: Hybrid MAS for collective action (Promoters: Prof. Tom Lenaerts; Prof. Ann Nowé)
- Axel Abels completed 2024 — ULB: Resolving biases in collective decision-making systems (Promoters: Prof. Tom Lenaerts; Prof. Ann Nowé)
- Yannick Molinghen ongoing — ULB: Influence of communication in cooperative multi-agent reinforcement learning (Promoters: Prof. Tom Lenaerts)
- Marco Saponara ongoing — ULB: Improving Human–AI coordination through Theory of Mind (Promoters: Prof. Tom Lenaerts)

Jury member — Master's theses

- Mathias de Fré Ghent University, 2021 — The impact of memory in reinforcement learning for games of timing
- Mathias Cami Ghent University, 2021 — Bayesian inverse reinforcement learning for strategy extraction in the iterated Prisoner's Dilemma
- Tomás Vieira Instituto Superior Técnico, University of Lisbon, 2021 — The effect of malicious gossiping in cooperation dynamics over social networks
- Madalena Branco Varanda da Silva Galrinho Instituto Superior Técnico, University of Lisbon, 2021 — Climate Action in a World of Complex Ties
- Pierre Dafrene ULB, 2022 — Optimisation of the architecture of convolutional neural networks
- Achraf Laamiri ULB, 2022 — Optimisation of deep neural networks via reinforcement learning

Jury member — PhD thesis proposals

- Henrique Fonseca Instituto Superior Técnico, Universidade de Lisboa, 2024 — The role of human social intelligence in supporting reputation-based cooperation

4. Software

- **EGTtools**: Creator of an open-source library containing evolutionary game-theoretical models and computational methods, implemented in C++ with Python bindings. `https://github.com/Socrats/EGTTools`

5. Publications and scientific activities

5.1 Peer-reviewed journal articles

2026 Perret, C.; Han, T.-A.; **Fernández Domingos, E.**; Cimpeanu, T.; Powers, S. T. Disentangling trust from cooperation: evolution of trust as reduced monitoring in social dilemmas. Chaos, Solitons & Fractals, 208, 118130.

2026 Alalawi, Z.; Bova, P.; Cimpeanu, T.; Di Stefano, A.; Duong, M. H.; **Fernández Domingos, E.**; Han, T.-A.; Krellner, M.; Ogbo, N. B.; Powers, S. T.; Zimmaro, F. Trust AI regulation? Discerning users are vital to build trust and effective AI regulation. Applied Mathematics and Computation, 508, 129627.

2025 Montero-Porras, E.; Suchon, R.; Lenaerts, T.; **Fernández Domingos, E.** From self-interest to collective action: the role of defaults in governing common resources. PLOS ONE, 20(9), e0331348.

2025 Saponara, M.; **Fernández Domingos, E.**; Pacheco, J. M.; Lenaerts, T. Evolution favours positively biased reasoning in sequential interactions with high future gains. Journal of the Royal Society Interface, 22(229).

2025 Terrucha, I.; **Fernández Domingos, E.**; Suchon, R.; Santos, F. C.; Simoens, P.; Lenaerts, T. Humans program artificial delegates to accurately solve collective-risk dilemmas but lack precision. Proceedings of the National Academy of Sciences, 122(25), e2319942121.

2025 Jadoul, Y.; Hersh, T. A.; **Fernández Domingos, E.**; Gamba, M.; Favaro, L.; Ravignani, A. An evolutionary model of rhythmic accelerando in animal vocal signalling. PLOS Computational Biology, 21(4), e1013011.

2025 Garrido, C. M.; Santos, F. C.; **Fernández Domingos, E.**; Nunes, A. M.; Pacheco, J. M. A new electoral bottom-up model of institutional governance. Scientific Reports, 15(1), 3865.

2024 Terrucha, I.; **Fernández Domingos, E.**; Santos, F. C.; Simoens, P.; Lenaerts, T. The art of compensation: how hybrid teams solve collective-risk dilemmas. PLOS ONE, 19(2), e0297213.

2024 Terrucha, I.; **Fernández Domingos, E.**; Simoens, P.; Lenaerts, T. Committing to the wrong artificial delegate in a collective-risk dilemma is better than directly committing mistakes. Scientific Reports, 14(1), 10460.

2023 **Fernández Domingos, E.**; Santos, F. C.; Lenaerts, T. EGTtools: evolutionary game dynamics in Python. iScience, 26(4).

2022 Montero-Porras, E.; Grujić, J.; **Fernández Domingos, E.**; Lenaerts, T. Inferring strategies from observations in long iterated Prisoner's Dilemma experiments. Scientific Reports, 12(1), 7589.

2022 **Fernández Domingos, E.**; Suchon, R.; Terrucha, I.; Grujić, J.; Burguillo, J. C.; Santos, F. C.; Lenaerts, T. Delegation to artificial agents fosters prosocial behaviours in the collective risk dilemma. Scientific Reports, 12(1), 8492.

2021 **Fernández Domingos, E.**; Grujić, J.; Burguillo, J. C.; Santos, F. C.; Lenaerts, T. Modelling behavioural experiments on uncertainty and cooperation with population-based reinforcement learning. Simulation Modelling Practice and Theory, 109, 102299.

2020 **Fernández Domingos, E.**; Grujić, J.; Burguillo, J. C.; Kirchsteiger, G.; Santos, F. C.; Lenaerts, T. Timing uncertainty in collective risk dilemmas encourages group reciprocation and polarisation. iScience, 23, 101752.

2017 **Fernández Domingos, E.**; Loureiro, M.; Álvarez-López, T.; Burguillo, J. C.; Covelo, J.; Peleteiro, A.; Byrski, A. Emerging cooperation in N-person iterated Prisoner's Dilemma over dynamic complex networks. Computing and Informatics, 36(3).

5.2 Peer-reviewed conference and workshop proceedings

2025 da Fonseca, H. C.; Fernandes, A.; Song, Z.; Cimpeanu, T.; Balabanova, N.; Bashir, A.; Buscemi, A.; Di Stefano, A.; Duong, M. H.; **Fernández Domingos, E.**; et al. Can media act as a soft regulator of safe AI development? A game-theoretical analysis. Artificial Life Conference Proceedings 37, p. 90.

2025 **Fernández Domingos, E.**; Han, T.-A. Inertia and fear of lagging behind motivates unsafe technology development in an AI race experiment. ASFEE 2025.

2023 Saponara, M.; **Fernández Domingos, E.**; Lenaerts, T. Cognitive noise in backward induction explains human behaviour within the centipede game. EDAI Workshop (ECAI).

2023 Montero-Porras, E.; Suchon, R.; Lenaerts, T.; **Fernández Domingos, E.** How do people act in social dilemmas? Analysing behaviour and personal preferences from experimental data. EDAI Workshop (ECAI).

2023 Terrucha, I.; **Fernández Domingos, E.**; Simoens, P.; Lenaerts, T. To avoid collective disasters, it is better to commit to a flawed AI than to commit the errors ourselves. EDAI Workshop (ECAI).

2022 Terrucha, I.; **Fernández Domingos, E.**; Suchon, R.; Santos, F. C.; Simoens, P.; Lenaerts, T. Delegation to autonomous agents: a key to overcome past failure and focus on the collective target ahead. IC2S2 2022.

2022 Terrucha, I.; **Fernández Domingos, E.**; Santos, F. C.; Simoens, P.; Lenaerts, T. The art of compensation: how hybrid teams solve collective-risk dilemmas. ALA Workshop (AAMAS).

2021 **Fernández Domingos, E.**; Terrucha, I.; Suchon, R.; Grujić, J.; Burguillo, J. C.; Santos, F. C.; Lenaerts, T. Delegation to autonomous agents promotes cooperation in collective-risk dilemmas. AAAI 2021 Workshop on AI for Behaviour Change.

2021 **Fernández Domingos, E.**; Grujić, J.; Burguillo, J. C.; Santos, F. C.; Lenaerts, T. Modelling behavioural experiments on uncertainty and cooperation with population-based reinforcement learning. NERCCS 2021, p. 81. (Extended abstract)

2020 **Fernández Domingos, E.**; Terrucha, I.; Suchon, R.; Grujić, J.; Burguillo, J. C.; Santos, F. C.; Lenaerts, T. Cooperation and delegation in hybrid human–agent systems. NeurIPS 2020 Workshop on Cooperative AI.

2020 **Fernández Domingos, E.**; Grujić, J.; Burguillo, J. C.; Kirchsteiger, G.; Santos, F. C.; Lenaerts, T. Timing uncertainty encourages polarisation and reciprocation in collective-risk dilemmas. CSS 2020. (Abstract)

2019 **Fernández Domingos, E.**; Grujić, J.; Burguillo, J. C.; Kirchsteiger, G.; Santos, F. C.; Lenaerts, T. Human reciprocation and polarisation in managing uncertain public goods. ALIFE 2019 Workshop on Computational Approaches to Social Dynamics. (Abstract)

2019 **Fernández Domingos, E.**; Santos, F. C.; Lenaerts, T. Learning dynamics in uncertain collective endeavours. ALIFE 2019 Workshop on Evolution of Human Behaviour. (Abstract)

2017 **Fernández Domingos, E.**; Burguillo, J. C.; Lenaerts, T. Reactive versus anticipative decision making in a novel gift-giving game. AAAI 2017, p. 4399–4405.

2017 **Fernández Domingos, E.**; Burguillo, J. C.; Nowé, A.; Lenaerts, T. Coordinating human and agent behaviour in collective-risk scenarios (elevator pitch). AAAI 2017, p. 4919–4920.

2017 **Fernández Domingos, E.**; Burguillo, J. C.; Lenaerts, T. Reactive versus anticipative decision making in a novel gift-giving game. BNAIC 2017, p. 342–343. (Abstract)

2015 Kaziród, K.; Korczyński, W.; **Fernández Domingos, E.**; Byrski, A.; Kisiel-Dorohinicki, M.; Topa, P.; Tyszka, J.; Komosinski, M. Agent-oriented foraminifera habitat simulation. Procedia Computer Science 51, p. 1062–1071.

5.3 Preprints and working papers

2026 **Fernández Domingos, E.**; Han, T.-A. Falling behind drives unsafe development in an idealised AI race experiment. arXiv:2607.26034. (Full working paper; an extended abstract appeared as "Inertia and fear of lagging behind motivates unsafe technology development in an AI race experiment," ASFEE 2025)

2026 Abels, A.; **Fernández Domingos, E.**; Shah, A.; Lenaerts, T. Improving cross-cultural survey simulation with calibrated value personas. arXiv:2605.16193.

2025 Buscemi, A.; Proverbio, D.; Bova, P.; Balabanova, N.; Bashir, A.; Cimpeanu, T.; da Fonseca, H. C.; Duong, M. H.; **Fernández Domingos, E.**; et al. Do LLMs trust AI regulation? Emerging behaviour of game-theoretic LLM agents. arXiv:2504.08640.

2025 Balabanova, N.; Bashir, A.; Bova, P.; Buscemi, A.; Cimpeanu, T.; da Fonseca, H. C.; Di Stefano, A.; Duong, M. H.; **Fernández Domingos, E.**; et al. Media and responsible AI governance: a game-theoretic and LLM analysis. arXiv:2503.09858.

2024 Abels, A.; **Fernández Domingos, E.**; Lenaerts, T. Mitigating biases in collective decision-making: enhancing performance in the face of fake news.

6. Research visits and international stays

3 – 7 Aug 2026 **Human Understanding of Machines and Algorithms (HUAM), University of Duisburg-Essen (Germany)**
with Prof. Nils Köbis

2 – 20 Mar 2026 **University of Lisbon (Portugal)**
with Prof. Jorge Pacheco

26 – 27 Feb 2026 **ELLIS Alicante (Spain)**

2 Jun – 11 Jul 2025 **Anthropo-Lab, Université Catholique de Lille (France)**
with Rémi Suchon and Vincent Lenglin
Experimental project on collective risk.

Apr 2025 **Shizuoka University (Japan)**
with Prof. Genki Ichinose
Finalised the first set of experiments on the joint project.

Mar 2025 **3-day workshop, Teesside University (UK)**
with Prof. The-Anh Han

Jan 2025 **University of Lisbon (Portugal)**
with Prof. Jorge Pacheco
Continued work on computationally efficient EGT models.

Nov 2024 **Max Planck Institute for Evolutionary Biology, Plön (Germany)**
with Prof. Christian Hilbe
Short research visit.

Nov 2024 **Anthropo-Lab, Lille (France)**
with Dr Rémi Suchon and Dr Vincent Lenglin
Short research visit for project discussions.

Aug – Sep 2024 **University of Lisbon (Portugal)**
with Prof. Jorge Pacheco
Work on computationally efficient EGT models and the study later published as "A new electoral bottom-up model of institutional governance" (Scientific Reports, 2025).

Jun 2024 **AI Bootcamp, SIOE 2024 conference**

Invited talk on "Delegation to AI Agents".

Mar 2024 **Teesside University (UK)**
with Prof. The-Anh Han
Discussions on AI race results.

Feb 2024	**University of Shizuoka (Japan)** *with Prof. Genki Ichinose* Initiated bilateral project on AI agents and behaviour change in social dilemmas.
May 2023	**University of Zaragoza (Spain)** *with Prof. Yamir Moreno* Designed a new set of experiments building on Prof. Moreno's prior work on common-pool resources, investigating forecasting tools as a decision-support system.
Feb – Mar 2023	**INESC-ID & Instituto Superior Técnico (University of Lisbon)** *with Prof. Francisco C. Santos and Prof. Sofia Teixeira* Work on delegation to AI in the 2-player iterated Prisoner's Dilemma and a finite-population co-evolution model (manuscript in preparation).
Feb – Mar 2022	**INESC-ID & Instituto Superior Técnico (University of Lisbon)** *with Prof. Francisco C. Santos* Work on EGTtools overview paper and design of experiments on information disclosure and delegation to AI.
Feb – May 2020	**University of Vigo (Spain)** *with Prof. Juan Carlos Burguillo* Finalised reinforcement learning model for the collective risk dilemma and contributed to PhD thesis.
Mar 2019	**INESC-ID & Instituto Superior Técnico (University of Lisbon)** *with Prof. Francisco C. Santos* Developed an evolutionary game-theoretic model supporting the iScience paper on timing uncertainty.

7. Academic service

- BrIAS Junior Fellow (2025): contributed to organising weekly BrIAS seminars, symposia, and workshops.
- Organiser, EDAI (Evolutionary Dynamics in Social, Cooperative and Hybrid AI) workshops (ECAI editions).

8. Additional information

8.1 Peer review (journals)

- Advances in Complex Systems
- Cognitive Systems Research
- Humanities & Social Sciences Communications
- International Journal of Computational Intelligence Systems
- International Journal of Human–Computer Interaction
- International Journal of Intelligent Systems
- Journal of Artificial Intelligence
- Journal of Autonomous Agents and Multi-Agent Systems
- Journal of Cognitive Systems
- Journal of Computational Physics
- Journal of Economic Psychology
- Journal of Physics: Complexity
- Journal of Theoretical Biology
- Nature Computational Science
- Nature Human Behaviour
- Neural Computing and Applications
- PLOS ONE
- Proceedings of the National Academy of Sciences (PNAS)
- Proceedings of the Royal Society A
- Proceedings of the Royal Society B
- Royal Society Open Science
- Scientific Reports
- Simulation Modelling Practice and Theory
- Swarm Intelligence
- The European Physical Journal B

8.2 Program committees

- **AAMAS (Autonomous Agents and Multi-Agent Systems):** PC member
- **ALA@AAMAS (Adaptive and Learning Agents Workshop):** PC member
- **AI4BC@AAAI (AI for Behaviour Change 2022):** Sub-reviewer
- **ECAI (European Conference on Artificial Intelligence):** PC member
- **EDAI (Evolutionary Dynamics in Social, Cooperative and Hybrid AI):** Organiser
- **IJCAI (International Joint Conference on Artificial Intelligence):** PC member

8.3 Memberships

- Association for the Advancement of Artificial Intelligence (AAAI)
- Benelux Association for Artificial Intelligence (BNVKI)

- AI for the Common Good Institute (FARI)
- International Society for Artificial Life (ISAL)
- Complex Systems Society (CSS)

9. Networking and collaborations

- Prof. Wolfram Barfuss — Tübingen AI Centre, University of Tübingen (Germany).
- Prof. Juan C. Burguillo — Department of Telematics Engineering, Universidade de Vigo (Spain).
- Prof. Fernando P. Santos — Informatics Institute, University of Amsterdam (Netherlands).
- Prof. Francisco C. Santos — Instituto Superior Técnico (IST), University of Lisbon (Portugal).
- Prof. Christian Hilbe — Max Planck Institute for Evolutionary Biology, Plön (Germany).
- Prof. The-Anh Han — Department of Computing & Games, Centre for Digital Innovation, Teesside University (UK).
- Prof. Genki Ichinose — Department of Mathematical and Systems Engineering, Shizuoka University (Japan).
- Prof. Jorge Pacheco — GAIPS, University of Lisbon (Portugal).
- Prof. Tom Lenaerts — Machine Learning Group, Université Libre de Bruxelles (Belgium).
- Prof. Yamir Moreno — Institute for Biocomputation and Physics of Complex Systems, University of Zaragoza (Spain).
- Prof. Rémi Suchon — Anthropo-Lab, Université Catholique de Lille (France).
- Prof. Sofia Teixeira — LASIGE, University of Lisbon (Portugal).

10. International achievements and projects

AI and Cooperation in Public Goods Games: As part of a bilateral project between F.N.R.S. and JSPS (Japan) titled *Exploration of universal properties of AI agents that produce human behaviour change in social dilemma situations*, in collaboration with Prof. Genki Ichinose (Shizuoka University, Japan), we are exploring cultural variations in human-AI interactions.

Evolutionary Dynamics in Complex Environments: Working with Profs. Jorge Pacheco, Francisco C. Santos, and Wolfram Barfuss, we study how environmental changes influence strategic decision-making under stochastic game-theoretical models.

Efficient EGT Methods for Large Systems: In collaboration with Prof. Jorge Pacheco, we developed new computational methods for studying evolutionary dynamics in large populations with three or more strategies. This work resulted in a publication in Scientific Reports (Garrido, Santos, Fernández Domingos, Nunes, Pacheco 2025).

Technological AI Race and Individual Risk: Collaborating with Prof. The-Anh Han (Teesside University, UK), we examine how perceived risk influences competitive AI development. Our findings were presented at ASFEE 2025 in Nancy, France.

Residual Risk in Collective Risk Dilemmas: In collaboration with Dr. Rémi Suchon and Dr. Vincent Lenglin (Université Catholique de Lille), we designed a high-powered experiment ($>$1000 participants) to examine how residual risk affects willingness to prevent catastrophic events.

Decision Support Systems in Common Pool Resource (CPR) Dilemmas: I lead a collaborative project with Prof. Yamir Moreno (University of Zaragoza) to assess how forecasting tools, as decision support systems, influence human decision-making in CPR dilemmas, and how they can enhance collective decision efficiency and environmental sustainability.

Influence of LLMs on Human Social Norms: In collaboration with PhD student Alexandre Pires, Prof. Fernando P. Santos (University of Amsterdam) and Prof. Ana Paiva, we are designing an experiment to investigate how LLM advice can alter reputation assignment and the formation of social norms in strategic games.

Promoting Pro-social Behaviour in Social Networks: In collaboration with Prof. Paolo Turrini (University of Warwick) we are designing an experiment and model to learn personalised strategies to identify defectors in strategic games on social networks who can be nudged into more cooperative behaviour.

11. Awards

- **Senior Post-doctoral grant** 2024 — Fonds Wetenschappelijk Onderzoek (F.W.O.), 3 years (01/10/2024).
- **Bilateral JSPS–FNRS grant** 2023 — Collaboration project with Japan, “Exploration of universal properties of AI agents that produce human behaviour change in social dilemma situations.”
- **Post-doctoral grant** 2021 — Fonds de la Recherche Scientifique (FNRS), 3 years (01/10/2021).
- **Honourable mention, Best Poster Award** 2021 — NERCCS 2021 conference. Poster: “Modelling behavioural experiments on uncertainty and cooperation with population-based reinforcement learning.”
- **Best Poster Award** 2021 — Center for Applied AI, Chicago Booth University, Workshop on AI for Behavior Change at AAAI-21. Poster: “Delegation to autonomous agents promotes cooperation in collective-risk dilemmas.”

- **PhD awarded with highest distinction** 2020 — Joint PhD in Sciences and Information and Communication Technologies ("cum laude").
- **Doctoral research grant for strategic basic research** 2017 — Research Foundation – Flanders (FWO), 01/01/2017.

12. Selected talks and lectures

- Reactive versus anticipative decision making in a novel gift-giving game. Thirty-First AAAI Conference on Artificial Intelligence (AAAI17) 2017
- Coordinating human and agent behaviours in collective risk scenarios (Elevator Pitch). Thirty-First AAAI Conference on Artificial Intelligence (AAAI17) 2017
- Uncertain time promote polarisation and reciprocation in a public goods game with risky commons. Naxys seminar, University of Namur 2019
- Cooperation and delegation in hybrid human-agent systems. NeurIPS 2020 Workshop on Cooperative AI 2020
- Delegation to autonomous agents promotes cooperation in collective-risk dilemmas. AAAI 2021 Workshop on AI for Behavior Change 2021
- Delegation to autonomous agents promotes cooperation in collective-risk dilemmas. Research Seminars of the Center for Human-Compatible Artificial Intelligence, UC Berkeley 2021
- Delegation to AI in a collective Risk Dilemma. Max Planck Institute for Evolutionary Biology 2024
- Delegation to AI Agents. AI Bootcamp organised by the Cooperative AI Foundation at the SIOE Conference 2024
- Cooperation and Delegation to AI in a Collective Risk Dilemma: from behavioural experiments to modelling and back. Guest lecture, University of Namur 2024