

Cedric Perret

Postdoctoral Research Associate in social evolution

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Education and training

- 2016-2019 **Ph.D. "The evolutionary iron law of oligarchy"**, *Edinburgh Napier University, UK*
Under the supervision of [Simon T. Powers](#) and [Emma Hart](#)
Examiners: [Thomas Currie](#) (Exeter University, UK) and [Andy Gardner](#) (University of St Andrews, UK).
- 2018 **Santa Fe Complex Systems Summer School**, *Santa Fe Institute, USA*
Information theory, Non-linear dynamics, Network theory, Machine learning, Human evolution
- 2016 **MSc in Evolutionary Biology and Ecology**, *University of Montpellier, France*
Modeling in evolutionary biology, Advanced Biostatistics, Ecology, Population genetics, Quantitative genetics
- 2013 **MSc (1st year) in Ecology and Environment**, *State University of New Paltz, USA*
Biostatistics, Seminar in evolutionary studies, Biogeography
- 2012 **BA in Biology and Ecology**, *University of Franche-comte, Besancon, France*
Ecology, Formal and Population genetics, Biostatistics, Animals and plants Biology

Research Experience

- 2023 – Present **Postdoctoral research associate**, *University of Lausanne, Switzerland*
Under the supervision of [Laurent Lehmann](#) and [Luís Santos-Pinto](#)
- 2020 – 2023 **Postdoctoral research associate**, *Exeter University, UK*
Under the supervision of [Thomas Currie](#)
- 2020/01 - 07 **Postdoctoral research associate**, *Teeside University, UK*
Under the supervision of [The Anh Han](#)
- 2016 **Internship on modeling the evolution of resistance against cancer in wildlife species**
Institute of Research for Development, University of Montpellier, France
Under the supervision of [Frederic Thomas](#) and [Benjamin Roche](#)
- 2015 **Internship on the development of a computer tool for experimentations in cultural evolution**
Institute of Evolutionary Sciences of Montpellier, University of Montpellier, France
Under the supervision of [Jean-Baptiste André](#) and [Nicolas Claidière](#)

Core skills

Programming language skills:

- Proficient in Julia, Python, R, Mathematica, Java
- Efficient in Bash, Markdown

Computers skills:

- Proficient in LaTeX, Mendeley, Github, Microsoft office programs
- Efficient in web design (Wordpress, github.io)

Language skills:

- **French:** C2 (native language)
- **English:** C1 (TOEFL 2016 : 583/677)
- **Spanish:** B1

European driving license

Peer-reviewed publications:

First author:

- 2023 **Modelling the role of migration and geographical distribution of resources on the evolution of inequality in socio-political systems**
[C.Perret](#), T. E. Currie
Philosophical Transactions of the Royal Society B – [Link](#)

- 2022 **An investigation of the role of leadership in consensus decision-making**
C. Perret, S.T. Powers
Journal of theoretical biology – [Link](#)
- 2021 **The evolution of moral rules in a model of indirect reciprocity with private assessment**
C. Perret, M. Krellner and T.A. Han
Nature Scientific reports – [Link](#)
- 2020 **From disorganized equality to efficient hierarchy: how group size drives the evolution of hierarchy in human societies**
C. Perret, E. Hart and S.T. Powers
Proceedings of the Royal Society B: Biological Sciences – [Link](#)
- 2020 **Predation shapes the impact of cancer on population dynamics and the evolution of cancer resistance**
C. Perret, C. Gidoin, B. Ujvari, F. Thomas and B. Roche
Evolutionary Applications – [Link](#)
- 2019 **Being a leader or being the leader: The evolution of institutionalised hierarchy.**
C. Perret, E. Hart and S.T. Powers
ALIFE 2019: The 2019 Conference on Artificial Life. MIT Press – [Link](#)
- 2018 **Can justice be fair when it is blind? How social network structures promote or prevent the evolution of despotism.**
C. Perret, S.T. Powers, J. Pitt and E. Hart
ALIFE 2018: The 2018 Conference on Artificial Life. MIT Press – [Link](#)
- 2017 **Emergence of hierarchy from the evolution of individual influence in an agent-based model**
C. Perret, S.T. Powers and E. Hart
Proceedings of the European Conference on Artificial Life 2017. MIT Press – [Link](#)

Co-author:

- 2023 **Playing the political game: the coevolution of institutions with group size and political inequality**
S.T. Powers, C. Perret and T.E. Currie
- 2023 **Social diversity reduces the complexity and cost of fostering fairness**
T. Cimpéanu, A. Di Stefano, C. Perret and T.A. Han
Chaos, Solitons and Fractals
- 2021 **The cultural evolution and ecology of institutions**
T.E. Currie, M. Campenni, A. Flitton, T. Njagi, E. Ontiri, C. Perret and L. Walker
Philosophical Transactions of the Royal Society: B
- 2021 **Cost-efficient interventions for promoting fairness in the ultimatum game**
T. Cimpéanu, C. Perret and T.A. Han
Knowledge-Based Systems
- 2021 **When to (or not to) trust intelligent machines: Insights from an evolutionary game theory analysis of trust in repeated games**
T.A. Han, C. Perret and S.T. Powers
Cognitive Systems Research
- 2018 **Trusting Intelligent Machines: Deepening trust within socio-technical systems**
P. Andras, L. Esterle, M. Guckert, T.A. Han, P.R. Lewis, K. Milanovic, T. Payne, C. Perret, J. Pitt, S.T. Powers, N. Urquhart and S. Wells
IEEE Technology and Society Magazine

Other outputs:

- 2020 **Ph.D. Thesis: The Iron Law of Oligarchy**
C. Perret – [Link](#)
- 2021 **Promoting Fair Proposers, Fair Responders or Both? Cost-Efficient Interference in the Spatial Ultimatum Game**
T. Cimpéanu, T.A. Han, C. Perret
Extended abstract - *International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2021)*
- 2019 **A theoretical investigation of transgenerational effects of population-scale disaster on prevalence of schizophrenia.**
C. Gunaratne, S. Jankowski, C. Perret, J. Tuominen, M. Wadl

- 2019 *Santa Fe project report*
Using an opinion formation model to investigate the effect of leaders on collective decision-making
C.Perret, S.T. Powers, E.Hart
Extended abstract - Workshop on Agent-Based Modelling in Human Behaviour (ABMHuB 2019)

Research dissemination:

International conferences:

Oral presentation at:

- FRESH 2023: French network for the evolutionary study of humans conference, *Paris, France* – [Website](#)
- EHBEA 2023: European Human Behaviour and Evolution Association conference, *London* – [Website](#)
- CES 2022: Cultural Evolution Society conference, *Aarhus, Denmark* – [Website](#)
- CCS 2021: Complex Systems Society conference, *Lyon, France* – [Website](#)
- CES 2021: Cultural evolution Society conference, *Online* – [Website](#)
- ALIFE 2019: The Conference on Artificial Life, *Newcastle, UK* – [Website](#)
- Evolution 2018: Joint Congress on Evolutionary Biology, *Montpellier, France*
- ECAL 2017: European Conference on Artificial Life, *Lyon, France*

Poster presentation at:

- Evolution 2018: Joint Congress on Evolutionary Biology, *Montpellier, France*

Participation to:

- ESEB 2017: Congress of the European Society for Evolutionary Biology, *Groningen, Netherlands*
- PPSN 2016: 14th International Conference on Parallel Problem Solving from Nature, *Edinburgh, UK*

Local conferences:

Oral presentation at:

- 2019 Scottish Informatics and Computer Science Alliance (SICSA) pre evolutionary computing day, *Stirling, UK*
- 2019 School of Computing Research Conference, *Edinburgh Napier, UK*
- 2018 School of Computing Research Conference, *Edinburgh Napier, UK*
- 2016 MEE: Models in Ecology and Evolution Seminar, *Montpellier, France*

Poster presentation at:

- 2017 Scottish Informatics and Computer Science Alliance (SICSA) PhD Conference, *Dundee, UK*
- 2017 Edinburgh Napier University Research Conference, *Edinburgh Napier, UK*

Participation to:

- 2019 Scottish Informatics and Computer Science Alliance (SICSA) PhD Conference, *Stirling, UK*

Workshops:

- TIM 2020: Workshop on Trust in Intelligent Machines, *Online*
- ABMHUB 2019: Workshop on Agent-Based Modelling in Human Behaviour, *ALIFE 2019, Newcastle, UK* - [Website](#)
- EHB 2019: Workshop on Evolution of Human Behaviour: Using theory to address societal challenges, at *ALIFE 2019, Newcastle, UK* - [Website](#)
- TIM 2019: Workshop on Trust in Intelligent Machines, *University of Gießen, Germany*
- EDI 2019: Workshop on the Evolution and Dynamics of Institutions, *Edinburgh Napier University, UK*
- TIM 2018: Workshop on Trust in Intelligent machines, *Edinburgh Napier University, UK* - [Website](#)

Seminar presentations:

- 2022 **Departmental seminar**, Centre for Ecology and Conservation, Exeter University, UK
- 2021 **Departmental seminar**, School of Computing, *Edinburgh Napier University, UK*
- 2020 **School of Computing seminar**, School of Computing, *Teeside University, UK*
- 2019 **School of Biology seminar**, Department of Ecology and Evolution, *University of Lausanne, Swiss*
- 2018 **Pr.Lehmann's team seminar**, Department of Ecology and Evolution, *University of Lausanne, Swiss*
- 2018 **Pr.Gardner's team seminar**, School of Biology, *University of St Andrews, UK*
- 2018 **Dr.Gross's team seminar**, Collective dynamics group, *University of Bristol, UK*

Academic event organisation:

Organisation of international workshops and conferences:

Main organiser of:

- FRESH 2024: Annual Conference of the French network for the evolutionary study of humans
- EHB 2019: Workshop Evolution of Human Behaviour: Using Theory to Address Societal Challenges, at *ALIFE 2019 conference, Newcastle*. [Website](#)
- EDI 2019: Workshop on the Evolution and Dynamics of Institutions, *Edinburgh Napier University*.

Co-organiser of:

- TIM 2018: Workshop on Trust in Intelligent Machines, *Edinburgh Napier University*. [Website](#)

Member of local organiser committee of:

- PPSN 2016: 14th International Conference on Parallel Problem Solving from Nature, *Edinburg, UK*.

Organisation of seminar series:

Co-organiser of:

- 2017-2018 • School of Computing Seminar Series, *Edinburgh Napier University*
- 2017 • PhD Masterclasses (one workshop and a seminar series), *Edinburgh Napier University*

Grants

Lead applicant to:

- 2019 • PhD impact improvement Funds
 - **Three months of PhD stipend** funded by Edinburgh Napier University
- 2018 • Researcher Development Funds for «Workshop on the Evolution and Dynamics of institutions »
 - **£1500** funded by the Research Innovation Office, *Edinburgh Napier University*
- 2018 • Funds to participate to Santa Fe Complex System Summer School
 - **£1000** funded by Small Project & Mobility Grants, *Edinburgh Napier University*
 - **£500** funded by SISCA summer school bursary, *Scottish Informatics & Computer Science Alliance*
- 2018 • Public engagement funds for « SciVid: Animated videos to support wider scientific communication»
 - **£2500** funded by *Edinburgh Napier University*

Co-applicant to:

- 2017 • Researcher Development Funds for « School of Computing Masterclasses »
 - **£800** funded by the Research Innovation Office, *Edinburgh Napier University*
- 2017 • Researcher Development Funds for « Workshop on Trust in Intelligent Machines»
 - **£1500** funded by Research Innovation Office, *Edinburgh Napier University*
- 2016 • PhD studentship
 - **Payment of full-time tuition fees and stipend for 3 academic years**, *Edinburgh Napier University*

Grants reviewing:

- 2019 Member of review panel for the attribution of Researcher Development funds, *Edinburgh Napier University*

Honours and Awards:

- 2019 **Best presentation Awards (3rd year PhD)** at the 2019 Edinburgh Napier School Conference
- 2018 **Best presentation Awards (2nd year PhD)** at the 2018 Edinburgh Napier School Conference
- 2017 **Best poster Awards** at the 2017 Edinburgh Napier University Conference

Professional activities:

Public engagement:

- 2018 SciVid Project: Animated videos to support wider scientific communication, *Edinburgh Napier University*
 - Lead organiser of the project
 - Organisation of a one-day workshop on science scriptwriting
 - Two months supervision of intern for the creation of an animated video on one of my published research
- 2017, 2018 Explorathon, *Edinburgh*

- Presentation of the field of artificial evolution during two open public events
- 2017 Cyber academy workshop, *Edinburgh Napier University*

- Introduction of Colinton Primary school to robotics and programming

Teaching:

- 2023 Assistant in the module “Behaviour, Evolution and Economics”, *University of Lausanne*
- 2017, 2018 Two classes in the module “Multi-Agent Systems”, *Edinburgh Napier University*
- 2018 Two months student supervision for the SciVid Project, *Edinburgh Napier University*

Peer-reviews:

- 2018-Now 17 Peer-reviews for journals including Proceedings of the Royal Society B, Evolutionary Human Sciences, Scientific reports, Plos One, PeerJ and Journal of Mathematical Psychology

Others:

- 2019 Editor assistant for the Evolutionary Computation Journal, *Edinburgh Napier University*

Referees

Simon T. Powers, Lecturer
PhD supervisor,
Edinburgh Napier University, Edinburgh
Email: S.Powers@napier.ac.uk

Thomas Currie, Professor
Postdoc supervisor,
University of Exeter, Exeter
Email: T.Currie@exeter.ac.uk

Laurent Lehmann, Professor
Postdoc supervisor,
University of Lausanne, Lausanne
Email: laurent.lehmann@unil.ch