

# **Cedric Perret**

## **PHD student**

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### **Education and training**

- 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***  
Advanced evolutionary biology, Modeling in evolutionary biology, Advanced Biostatistics, Ecology, Population genetics, Evolutionary genomics, 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**

- 2016-2019 **Ph.D. "Equality, hierarchy, oligarchy: Model-driven investigation of the evolutionary origins of social organization", *Edinburgh Napier University, UK***  
Under the supervision of [Simon T. Powers](#) and [Emma Hart](#)  
Expected hand-in date 01/08/2019
- 2016 **Modeling and simulation of the evolution of natural resistance against cancer in wildlife species**  
*Institute of Research for Development, University of Montpellier, France*  
Internship under the supervision of [Frederic Thomas](#) and [Benjamin Roche](#)
- 2015 **Development of a computer tool for experimentations in cultural evolution**  
*Institute of Evolutionary Sciences of Montpellier, University of Montpellier, France*  
Internship under the supervision of [Jean-Baptiste André](#) and [Nicolas Claidière](#)
- 2015 **Co-evolution of the signalization of quality and mate choice in Human**  
*Institute of Evolutionary Sciences of Montpellier, University of Montpellier, France*  
Internship under the supervision of [Bernard Godelle](#)
- 2013 **Field study of genes implied in immunity responses of hosts infected by parasite *Borrelia sp***  
*Institute of Evolutionary Biology and Environmental Studies, Zurich, Switzerland*  
Internship under the supervision of [Melissa Lemoine](#)

### **Peer-reviewed publications:**

#### **First author:**

- 2018 C. Perret, S.T. Powers, J. Pitt and E. Hart (2018) Can justice be fair when it is blind? How social network structures promote or prevent the evolution of despotism. *ALIFE 2018: The 2018 Conference on Artificial Life*. MA: MIT Press
- 2017 C. Perret, S.T. Powers and E. Hart (2017) Emergence of hierarchy from the evolution of individual influence in an agent-based model. *Proceedings of the European Conference on Artificial Life 2017*. Cambridge, MA: MIT Press
- Submitted C.Perret, S.T. Powers and E.Hart. Disorganized equality or efficient despotism: How group size drives the evolution of hierarchy in human societies
- In preparation C.Perret, B. Roche, C. Gidoin, B. Ujvari and F. Thomas. Interplay between ecological and evolutionary dynamics can shape cancer resistance patterns and community structure of wildlife species

## Co-author:

- 2018 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 (2018). **Trusting Intelligent Machines: Deepening trust within socio-technical systems**. *IEEE Technology and Society Magazine*.
- In preparation Z. Neu, C. Perret, A. Santoro, G. St-Onge. **Talking loud or talking often: How the interplay between network structure and agent influence affects the time to reach consensus in collective decision-making**

## Other outputs:

- 2019 C. Gunaratne, S. Jankowski, C. Perret, J. Tuominen, M. Wadl. **A theoretical investigation of transgenerational effects of population-scale disaster on prevalence of schizophrenia**. *Santa Fe project report*

## Research dissemination:

### International conferences:

- 2018 **[Invited speaker]** Evolution 2018: Joint Congress on Evolutionary Biology. *Montpellier, France*
- 2017 **[Oral Presentation]** ECAL 2017: European Conference on Artificial Life. *Lyon, France*
- 2017 **[Participation]** ESEB 2017: Congress of the European Society for Evolutionary Biology. *Groningen, Netherlands*
- 2016 **[Participation]** PPSN 2016: 14th International Conference on Parallel Problem Solving from Nature. *Edinburgh, UK*

### Local conferences:

- 2018 **[Oral Presentation]** School of computing Research Conference, *Edinburgh Napier, UK*
- 2017 **[Poster Presentation]** SISCA PhD Conference, *Dundee, UK*
- 2017 **[Poster Presentation]** Edinburgh Napier University Research Conference, *Edinburgh Napier, UK*

### Seminars presentations:

- 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)*
- 2016, 2018 School of Computing seminars, School of Computing, *Edinburgh Napier University (UK)*

## Academic/professional activities:

### Organised international workshops and conferences:

- 2019 **[Lead coordinator]** ALIFE workshop Evolution of Human Behavior: Using Theory to Address Societal Challenges  
*ALIFE conference, Newcastle*. <https://ehbalife.github.io/>
- 2019 **[Lead coordinator]** Workshop on the Evolution and Dynamics of Institutions  
*Edinburgh Napier University, Edinburgh*.
- 2017 **[Coordinator]** Workshop on Trust in Intelligent Machines  
*Edinburgh Napier University, Edinburgh*. <https://tim2018.wordpress.com/>
- 2016 **[Member of local organisator committee]** 14th International Conference on Parallel Problem Solving from Nature  
*Edinburgh Napier University, Edinburgh*

### Organised seminar series:

- 2017-2018 **[Coordinator]** School of Computing Seminar Series  
*Edinburgh Napier University, Edinburgh*
- Organisation, scheduling and seminars facilitation
- 2017 **[Coordinator]** PhD Masterclasses  
*Edinburgh Napier University, Edinburgh*
- Organisation of a one-day workshop with invited speakers
  - Organisation of a seminar series to offer PhD students the opportunity to share their skills

## **Public engagement:**

2018 [Lead coordinator] SciVid Project

*Edinburgh Napier University, Edinburgh*

- Organisation of a one-day workshop on science scriptwriting
- Two month supervision of intern for the creation of an animated video on one of my published research

2017, 2018 [Exhibitor] Explorathon

*Edinburgh*

- Presentation of the field of artificial evolution during two open public events

## **Teaching:**

2017, 2018 Two classes in the module “Multi-Agent Systems”

*Edinburgh Napier University*

## **Grants**

2018 [Lead Applicant] Researcher Development Fund for «Workshop on the Evolution and Dynamics of institutions »

**£1500** funded by the Research Innovation Office, *Edinburgh Napier University*

2018 [Lead Applicant] « Participation 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 [Lead Applicant] public engagement funds for « Animated videos to support wider scientific communication »

**£2500** funded by *Edinburgh Napier University*

2017 [Co-applicant] Researcher Development Fund for « School of Computing Masterclasses »

**£800** funded by the Research Innovation Office, *Edinburgh Napier University*

2017 [Co-applicant] Researcher Development Fund for « Workshop on Trust in Intelligent Machines»

**£1500** funded by Research Innovation Office, *Edinburgh Napier University*

## **Honors and Awards:**

2018 **Best presentation Awards (2<sup>nd</sup> year PhD)** at the 2018 Edinburgh Napier School Conference

2017 **Best poster Awards** at the 2017 Edinburgh Napier University Conference

## **Core skills**

### **Programming language skills:**

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

### **Computers skills:**

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

### **Language skills:**

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

European driving license

## **Referee**

**Simon Powers**, Lecturer

*Edinburgh Napier University, Edinburgh*

email: [S.Powers@napier.ac.uk](mailto:S.Powers@napier.ac.uk)

**Jeremy Pitt**, Professor

*Imperial College of London, London*

email: [j.pitt@imperial.ac.uk](mailto:j.pitt@imperial.ac.uk)

**Emma Hart**, Professor

*Edinburgh Napier University, Edinburgh*

email: [E.Hart@napier.ac.uk](mailto:E.Hart@napier.ac.uk)