# CURRICULUM VITAE

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## Current position

**CNRS Research engineer**
Feb/2020 - now                 CNRS/Laboratoire de Physique de Clermont Auvergne (LPCA)
                               Université Clermont-Auvergne (UCA), Clermont Ferrand - France

## Research experience

**Post-Doctoral researcher**
Jan/2016 - Jan/2020            Laboratoire de Physique de Clermont (LPC)
                               Université Clermont-Auvergne (UCA), Clermont Ferrand - France
Jan/2014 - Dec/2015            Max Planck Institute for Astrophysics (MPA), Germany
Sep/2011 - Dec/2013            University of São Paulo (USP), Brazil
Sep/2010 - Aug/2011            Kavli - IPMU
                               The Institute for the Physics and Mathematics of the Universe, Japan

## Education

Sep/2023                       **HDR** (Habilitation a Diriger des Recherches), UCA, Clermont Ferrand, France
Mar/2006 - Mar/2010            **PhD** in Physics (Cosmology), UFRJ, Rio de Janeiro, Brazil
            Sep/2008 - Aug/2009 - **Exchange PhD student** at UCL, London, UK
Mar/2004 - Feb/2006            **Master** in Sciences (Physics), UFRJ, Rio de Janeiro, Brazil
Mar/1999 - Dec/2003            **Bachelor in Physics**, Universidade Estadual de Campinas - Brazil

## Management experience

**LPC obligations**
Mar/2018 - now                 Organizer and lecturer : ML@Cezeaux
Mar/2018 - now                 Organizer : LPC Institute seminar

**LSST Dark Energy Science Collaboration duties**
Apr/2019 - now                 Project lead : RESSPECT
                               REcommendation System for SPECTropscopic follow-up
                               an official collaboration between LSST-DESC and the Cosmostatistics Initiative
Oct/2018 - Oct/2022            LSST-DESC Collaboration Council member
Dec/2016 - Jan/2019            Photometric LSST Astronomical Time-series Classification Challenge

**Founding member and science coordinator**
Apr/2018 - now             Fink - community broker for LSST

**Founding member and French logistic manager**
Jun/2018 - now             The SNAD collaboration - incorporating expert knowledge in smart anomaly detection for astronomical big data

**Founding member, logistic manager and leader of Python projects**
Apr/2014 - now             The Cosmostatistics Initiative (COIN)

**Participation in Organizing Committees for International events**
*main organizer*

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| 13-18/May/2024 | *Seventh SNAD Collaboration meeting, Brazil |
| 06-10/May/2024 | *Fink-Brazil Workshop, Brazil |
| 22-26/Jan/2024 | *AISSAI Anomaly Detection workshop, France |
| 09-16/Sep/2023 | *Seventh COIN Residence Program, Portugal |
| 03-07/Jul/2023 | AISSAI Hackathon, France |
| 02-09/Jul/2023 | *Sixth SNAD collaboration meeting, Turkey |
| 03-05/May/2023 | OzFink Workshop, Australia |
| 19-26/Nov/2022 | *First Fink Hackathon, Switzerland |
| 04-11/Sep/2022 | COIN-Focus # 2 - SPICY*, France |
| 03-10/Jul/2022 | *Fifth SNAD collaboration meeting, France |
| 19-20/May/2022 | First Fink Collaboration meeting, France |
| 17-24/Oct/2021 | *Fourth SNAD collaboration meeting, France |
| 07-19/Jun/2021 | Statistical Challenges of Modern Astronomy VII, USA |
| 27-28/Oct/2020 | LSSTC enabling science 2020 broker workshop, *online* |
| 06-10/Jul/2020 | Third SNAD collaboration meeting, *online* |
| 16-20/Mar/2020 | *COIN-Focus #3 - RESSPECT, *online* |
| 28/Jan/2020 | Fink Workshop, France |
| 23-30/Nov/2019 | *COIN-Focus #2 - Toliman, Italy |
| 24-31/Aug/2019 | *Sixth COIN Residence Program, France |
| 26-29/Jul/2019 | ESO Workshop on Artificial Intelligence in Astronomy, Germany |
| 11-12/Jul/2019 | *Optimizing training samples for SN photometric classification, France |
| 08-10/Jul/2019 | *COIN-Focus # 1 - RESSPECT, France |
| 11-18/May/2019 | *Second SNAD collaboration meeting, France |
| 01-08/Oct/2018 | Journées Informatique de l'IN2P3-IRFU, France |
| 15-22/Sep/2018 | Fifth COIN Residence Program*, Greece |
| 04-08/Jun/2018 | First SNAD Collaboration meeting, Russia |
| 20-22/May/2018 | Astronomical Data Analysis Summer School IX, Spain |
| 20-27/Aug/2017 | *Fourth COIN Residence Program, France |
| 06-30/Jun/2017 | European Week of Astronomy and Space Science 2017 |
| | Symposium 14, Czech Republic |
| | Astroinformatics : From Big Data to Understanding the Universe at Large |

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| 21-28/Aug/2016 | *Third COIN Residence Program, Hungary |
| 22-24/May/2016 | Astronomical Data Analysis Summer School VIII, Greece |
| 18-25/Oct/2015 | *Second COIN Residence Program, UK |
| 17-24/Aug/2014 | *First COIN Summer Residence Program, Portugal |

## Mentoring experience

### Participation in Phd Thesis Jury

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|---|---|
| 27/Nov/2023 | Benjamin Remy, Universite Paris-Saclay, France |
| | Thesis title : *Generative modeling for weak lensing inverse problems* |
| | Supervisor : Jean-Luc Starck and François Lanusse |
| 17/Oct/2023 | Anass Bairouk, Universite de Montpellier, France |
| | Thesis title : *Astronomical Image Time-series Classification Using Deep Learning* |
| | Supervisor : Marc Chaumont |
| 16/Oct/2020 | Maxime Paillassa, Universite de Bordeaux, France |
| | Thesis title : *Robust astronomical source detection using convolutional neural networks* |
| | Supervisor : Herve Bouy |

### Participation in Master Thesis Jury

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|---|---|
| 19/Apr/2016 | Renuka Pampana, Dep. of Computer Science - U. of Houston, USA |
| | Thesis title : *A new approach to domain adaptation applied to supernova photometric classification* |
| | Supervisor : Prof. Ricardo Vilalta |

### PhD students

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|---|---|
| Oct/2021 - Sep/2024 | Etienne Russeil, LPCA - France |
| | Thesis title : *Feature engineering and machine learning for $21^{st}$ century astronomy* |

### Co-supervision of PhD students

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|---|---|
| Jun/2016 - Dec/2018 | Alexandre Ciulli, LPC - France |
| | Thesis title : *Cosmology and Type Ia Supernovae : influence of peculiar velocities and anisotropies* |
| | Supervisor : Prof. Philippe Gris |
| Jun/2012 - Jun/2015 | Michele Sasdelli, MPA - Germany |
| | Thesis title : *A new metric space for type Ia supernova spectra* |
| | Supervisor : Prof. Wolfgang Hillebrandt |
| May/2011 - Aug/2013 | Sandra Benitez-Herrera, MPA - Germany |
| | Thesis title : *Cosmological Parameter Estimation from type Ia supernovae* |
| | Supervisor : Prof. Wolfgang Hillebrandt |

## Selected list of invited talks/lectures

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| 05-09/Jun/2023 | Michigan Cosmology Summer School, MSU - USA<br>*3h tutorial on Machine Learning* |
| 10/Mar/2023 | Invited to a special discussion session at the Royal Astronomical Society on :<br>*Harvesting spectroscopic and time series data with machine learning*<br>*and artificial intelligence*, London - UK |
| 21/Sep/2022 | Nature Reviews Physics : Machine learning in astrophysics and cosmology<br>The Alan Turing Institute, online |
| 05-10/Dez/2021 | 14th TRR33 Winter School on Cosmology, Passo del Tonale - Italy<br>*4h tutorial on Statistics in Cosmology* |
| 04/Mar/2020 | Bayesian Deep Learning for Cosmology and Gravitational Waves, Paris - France |
| 25/Apr/2019 | Enabling Multi-Messenger Astrophysics in the Big Data Era, Baltimore - USA |
| 21/Mar/2019 | Institut Pascal, Paris - France |
| 20/May/2018 | Astronomical Data Analysis Summer School, Valencia - Spain<br>*4.5 hours tutorial on Machine Learning* |
| 10-16/Dez/2017 | 11th TRR33 Winter School on Cosmology, Passo del Tonale - Italy<br>*4h tutorial on Statistics in Cosmology* |