2020 Thesis Award: 9 recent PhD graduates honored by UGA

Université Grenoble Alpes has chosen nine Doctors who graduated in 2019 and whose thesis work was judged to be of exceptional quality. Eight academic thesis prizes and one innovation thesis prize were awarded on 19 May 2020.

On 19 May 2020, the juries for the academic thesis prizes and the innovation thesis prize had the difficult task of picking the winners from candidates who had previously been selected by the 13 doctoral schools of the Université Grenoble Alpes.

Recognition of our PhD students’ scientific excellence

Université Grenoble Alpes has honored nine Doctors who graduated in 2019 and whose thesis work is judged to be of exceptional quality. These awards recognize the excellence of the research carried out by our PhD students in their laboratories.

The prizes fall into 2 categories:

- the academic thesis prizes which were awarded to eight Doctors using criteria of excellence specific to each discipline and represented by the 13 doctoral schools on site;
- the innovation thesis prize, awarded to a thesis of exceptional quality, both in terms of its results and the candidate's approach to promotion and dissemination. This prize has been in existence since 2018, with this year's jury opening up to companies and territories.

The 8 winners of the Academic Thesis Awards

**Louis AUTIN: Voices of the Crowd in Tacitus: Literary and Historical Perspectives on the Collective Communication in the Early Roman Empire**

Drawing on both classical literature and ancient history, this thesis examines the way in which information circulated among non-elite groups at the beginning of the Roman Empire (urban plebeians, armies, etc.) and the way in which the crowds voiced their opinion of the imperial elites. At the same time, the study examines the depiction of these communication practices in the literature of...
the period, and more particularly the role that Tacitus, the principal historian of the period, attributed to clamour and rumour in the organization of his narrative.

Doctoral school: ED LLSH - Languages, Literature and Humanities
Host laboratory: Arts and practices of text, image, screen and stage (Litt&Arts - CNRS / UGA)
Thesis supervisors: Isabelle COGITORE and Christiane KUNST (joint supervision with the University of Osnabrück - Germany)

Alberto BIETTI: Foundations of deep convolutional models through kernel methods
The thesis studies the mathematical properties of deep convolutional neural networks, through the formalism of kernel methods, which provide a more easily understandable mathematical framework.

Doctoral school: ED MSTII - Mathematics, Information Science and Technology, Computer Science
Host laboratory: Jean Kuntzmann Laboratory (LJK - CNRS / Grenoble INP-UGA / Inria / UGA)
Thesis Supervisor: Julien MAIRAL

Charles KHOURI: Pharmacology of the microcirculation: Raynaud’s phenomenon, trophic diseases and pulmonary arterial hypertension
The thesis was carried out in the field of blood microcirculation, focusing more specifically on the impact of drugs in three pathologies, Raynaud's phenomenon, trophic skin disorders and pulmonary arterial hypertension.

Doctoral school: ED ISCE - Engineering for Health, Cognition and the Environment
Host laboratory: Hypoxia and Cardiovascular and Respiratory Physiopathology (HP2 - Inserm / UGA)
Thesis Supervisor: Jean-luc CRACOWSKI

Clémence LEHEC: An experimental geography of art at the borders. To film the Palestinian refugee camp graffiti in Dheisheh
The thesis author presents this work comprising text (illustrated with photographs and above all, graffiti) and a documentary co-directed with a Palestinian filmmaker, Tamara Abu Laban entitled "The Walls of Dheisheh (36 min)".

Doctoral school: ED SHPT - Human, Political and Territorial Science
Host laboratory: Pacte, social sciences laboratory (Pacte - CNRS / UGA / Political Sciences Grenoble-UGA)
Thesis supervisors: Anne-Laure AMILHAT SZARY and Frédéric GIRAUT (joint supervisor with the University of Geneva – Switzerland)

Paul NOËL: Dynamical spin injection and spin to charge current conversion in oxide-based Rashba interfaces and topological insulators
The thesis focuses on a detailed study of spin/charge conversion in several systems, including oxide interfaces and topological insulators. This thesis was carried out on an innovative subject at the crossroads of fundamental physics and new technologies for storing information in magnetic memories and requires a thorough command of the most advanced techniques of magnetism but also those of nanofabrication for the preparation of samples.

Doctoral school: ED Physics
Host laboratory: SPINTEC - IRIG (CEA / CNRS / UGA / Grenoble INP-UGA)
Thesis supervisor: Jean-Philippe ATTANE (Laurent VILA, co-supervisor)

Léa RENARD: A socio-histoire of the statistical construction of otherness: Colonial, national and migratory classification principles in France and Germany (1880-2010)
The thesis focuses on the methods of statistical categorization of otherness in France and Germany from the end of the 19th century to the beginning of the 21st century. At the crossroads of political science and sociology, the thesis focuses on the socio-historical processes through which statistics record and construct the migration component of populations.

Doctoral school: ED SHPT – Human, political and territorial science
Host laboratory: Pacte, social sciences laboratory (Pacte - CNRS / UGA / Political Sciences Grenoble-UGA)
Thesis supervisors: Martine KALUSZYNSKI and Theresa WOBBE (joint supervision with the University of Potsdam - Germany)

Stéphanie SHERPA: Colonization history and factors promoting the success of invading populations of the Asian tiger mosquito Aedes albopictus in Europe

The thesis focuses on the invasion of the tiger mosquito in Europe, first by reconstructing invasion routes in order to better understand the importance of the methods of introduction (number and origin of introductions) and adaptive processes (pre-adaptation in the native area, post-introduction adaptation in the invaded area) in the successful establishment of introduced populations. The thesis then studies the dynamics of expansion across the landscape. To do this, the thesis analyses the genetic and morphometric characteristics of invasive populations and their sources, and compares the environmental characteristics of the native and introduced areas based on the spatio-temporal detection data of the species.

Doctoral school: ED CSV - Chemistry and Life Sciences
Host laboratory: Alpine Ecology Laboratory (LECA - CNRS / UGA / USMB)
Thesis supervisors: Laurence DESPRES and Michael BLUM

Riccardo TORCHIO: Extending the Unstructured PEEC Method to Magnetic, Transient, and Stochastic Electromagnetic Problems

This thesis aims to extend and improve the capability of an electromagnetic modeling method, known as Generalized Partial Element Equivalent Circuit (PEEC). The use of this method is made necessary by the increasing need for fast and accurate numerical methods, which can help engineers in the design of new electrical engineering components.

Doctoral school: EEATS - Electronics, Electrical Engineering, Automation, Signal Processing
Host laboratory: Grenoble Electrical Engineering Laboratory (G2Elab - CNRS / UGA / Grenoble INP-UGA)
Thesis supervisors: Olivier CHADEBEC (joint supervisor Gérard MEUNIER) and Federico MORO (joint supervisor with the University of Padua - Italy)

Winner of the innovation thesis prize

Victor VIEILLE: Exploration of remote magnetic actuation of small objects: application to lab-on-chip

The thesis explores a multitude of magnetic actuation modes, both remote and real-time, for various applications in the field of lab-on-a-chip. It is a multidisciplinary work calling upon various skills in the fields of design and modeling of magnetic systems and microsystems, instrumentation, and small-scale manufacturing - in particular of micro-magnets. Four solutions have been identified, two of which have been patented. One solution is already being used by the company MaglA Diagnostics (technology used and industrialized in their portable diagnostic test). The second is at the heart of a project that won the Out of Labs competition in September 2019, which is now in the development phase at SATT Linksium.

Doctoral school: ED EEATS - Electronics, Electrical Engineering, Automation, Signal Processing
Host laboratory: Grenoble Electrical Engineering Laboratory (G2Elab - CNRS / UGA / Grenoble INP-UGA)
Thesis supervisors: Orphée CUGAT and Thibaut DEVILLERS

Updated on June 4, 2020
Thesis Defences

Upcoming doctoral dissertation defences