



# Anna Melnykova

Born on 28.02.1994 in Kiev (Ukraine)

Laboratoire Jean Kuntzmann  
Bâtiment IMAG, Office 132  
700 Avenue Centrale  
38401 Saint Martin d'Hères  
[anna.melnykova@u-cergy.fr](mailto:anna.melnykova@u-cergy.fr)

## CURRENT STATUS

---

I am a PhD student in University of Cergy-Pontoise. My thesis is devoted to the study of hypoelliptic stochastic diffusions arising as models of neuronal activity. In particular, I am interested in parametric inference for fully- and partly observed stochastic diffusions with a degenerate variance coefficient, approximation schemes and hypothesis testing.

## EDUCATION

---

PhD student at Université de Cergy-Pontoise 2017–2020

*Thesis: Statistics for Neuroscience*

*Supervisors: Eva Löcherbach (Université de Cergy-Pontoise), Adeline Samson (Université Grenoble Alpes)*

Financially supported by LABEX MME-DII.

MSc in Applied mathematics (GPA 14.76/20) 2016–2017

Université Grenoble Alpes

*Thesis: Parametric estimation techniques in hypoelliptic ergodic diffusions*

*Supervisor: Adeline Samson (Université Grenoble Alpes)*

Financially supported by IDEX scholarship

MSc in Mathematics (GPA 4.69/5) 2014–2016

National Technical University of Ukraine "Kyiv Polytechnic Institute"

*Thesis: Asymptotic behaviour of solutions of SDEs*

*Supervisor: Oleg Klesov (NTUU "KPI")*

Exchange semester in University of Ulm, Germany 2015–2016

*Financial Mathematics (Wirtschaftsmathematik)*

Financially supported by Baden-Württemberg Stiftung.

During my stay I was also employed by University of Ulm as a teacher assistant ("*Studentische Hilfskraft*") at the undergraduate course "*Höhere Mathematik I für Physiker*".

BSc in Mathematics (GPA 4.32/5) 2010–2014

National Technical University of Ukraine "Kyiv Polytechnic Institute"

## OTHER ACTIVITIES

---

### Schools:

- Winter School on Deterministic and Stochastic models in Neuroscience 12/2017

Université Paul Sabatier, Toulouse

- Summer School "AACIMP" (Machine Learning track) 08/2015

National Technical University of Ukraine "Kyiv Polytechnic Institute"

---

### Internships:

- **Master Internship in Laboratoire Jean Kuntzmann (Grenoble)**

02-07/2017

**Subject:** Parametric inference for hypoelliptic ergodic diffusions

- **Internship in TAS Insurance Group (Kiev, Ukraine)**

11-12/2014

**Subject:** Actuarial science, risk modelling, compound interest rates

## **PUBLICATIONS**

---

## **LANGUAGE PROFICIENCY**

---

**Mother tongues:** Russian, Ukrainian

**Advanced:** English, German

**Intermediate:** French

**Language certificates:**

- TOEFL IBT – 99/120 (September 2015)
- TestDaF – 5x5x4x5 (April 2015)

## **IT SKILLS**

---

**Programming languages:** R, Python

**Mark-up languages:** Latex

**OS:** Linux, Windows