

AnnaMelnykova



Personal info

Born on 28.02.1994 in
Kiev, Ukraine
Nationality: Ukrainian

Contacts

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Languages

English (fluent)
German (advanced)
French (intermediate)
Russian, Ukrainian
(mother tongues)

IT skills






R, Python, MatLab
L^AT_EX, Markdown
Linux

Intro

Currently I am a PhD student in University of Cergy-Pontoise. My thesis is devoted to statistical methods for stochastic diffusions with a degenerate variance coefficient, which are often encountered in modeling of neuronal activity. In particular, I am interested in parametric inference for fully- and partly observed processes, approximation schemes and hypothesis testing.

I also enjoy the numerical part of my work, doing my best to write fast, human-readable and reproducible code. Small collection of my experiments is gathered on my GitHub account.

Education

- 2017–2020 **PhD candidate** in Mathematics Université de Cergy-Pontoise 
Subject: Statistics for Neuroscience
Supervisors: Eva Löcherbach (Université de Cergy-Pontoise), Adeline Samson (Université Grenoble Alpes)
 Financially supported by LABEX MME-DII.
- 2016–2017 **M.Sc.** in Statistics Université Grenoble Alpes 
Thesis: Parametric estimation techniques in hypoelliptic ergodic diffusions
Supervisor: Adeline Samson (Université Grenoble Alpes)
 Financially supported by IDEX scholarship
- 2014–2016 **M.Sc.** in Mathematics National Technical University of Ukraine "Kyiv Polytechnic Institute" 
Thesis: Asymptotic behaviour of solutions of SDEs
Supervisor: Oleg Klesov (NTUU "KPI")
- 2015–2016 **Exchange student** in Wirtschaftsmathematik (Fin. Math.) University of Ulm 
 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".
- 2010–2014 **B.Sc.** in Mathematics National Technical University of Ukraine "Kyiv Polytechnic Institute" 

Schools & Internships

- 07-08/2018 **CEMRACS 2018** (summer school + 5 weeks research session) Luminy, France
 Numerical and mathematical modeling for biological and medical applications: deterministic, probabilistic and statistical descriptions.
- 12/2017 **Winter School on Deterministic and Stochastic models in Neuroscience** UPS, Toulouse, France
 Mean field models, neural field equations, numerical methods or kinetic models of neuronal networks
- 02-07/2017 **Master Thesis Internship** Laboratoire Jean Kuntzmann, Grenoble, France
 Statistics for hypoelliptic ergodic diffusions
Supervisor: Adeline Samson (Université Grenoble Alpes)
- 08/2015 **Summer School "AACIMP" (Machine Learning track)** Kiev, Ukraine
 Basics of computer vision, natural language processing etc.
- 11-12/2014 **Internship in TAS Insurance Group** Kiev, Ukraine
 Actuarial science, risk modelling, compound interest rates

Talks

June 2018	Parametric inference for multidimensional hypoelliptic diffusion DynStoch 2018, Porto, Portugal	International workshop
May 2018	Parametric inference for multidimensional hypoelliptic diffusion 50èmes Journées de Statistique, Paris Saclay	National conference

Publications

1. A. Melnykova "Parametric inference for multidimensional hypoelliptic diffusion with full observations" (preprint, available on ArXiv)

Personal interests

Alpine skiing • Swimming • Hiking • Literature • Northern mythology