# SARAH DIJOLS

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### POSTDOC POSITIONS AND EMPLOYMENT

From December 2018 Postdoctoral researcher at Yau Center, Beijing. Mentor: Bin Xu.

From September to November 2018 Visiting fellow the University of Calgary.

### **EDUCATION**

From September 2014 to July 2018 PhD Thesis at the University of Aix-Marseille, under the supervision of Volker Heiermann.

2013-2014

Second year of Master, Fundamental Mathematics, Algebra and Geometry, UPMC, with honours

*Master Thesis title* : « L functions and Theta series » under the supervision of Jens Funke and Nicolas Bergeron.

2011-2013

Master Economics and Public Policy, PhD track, Sciences Po Paris and Ecole Polytechnique *Master Thesis title*: « Prices' dynamics: could covariances highlight the financialization of commodities? » under the supervision of Nicolas Coeurdacier. First year Master in Fundamental Mathematics, Strasbourg University and UPMC

2010-2011

Second year of Magistere in Mathematics, Strasbourg University

2009-2010

Visiting student at the University of British Columbia, Vancouver, Canada Bachelor at Sciences Po Paris

Bachelor in Mathematics, Pierre et Marie Curie University with highest honours

2007-2009

Double degree Sciences Po Paris and Pierre et Marie Curie University

2007

French Scientific Baccalaureat with highest honours; Lycee Michelet, Montauban

## RESEARCH

Subjects: Representations of reductive groups, automorphic forms.

Symplectic models for unitary groups, with Dipendra Prasad, TAMS 2018.

*Pre-prints*: The generalized injectivity conjecture

Projection of root systems.

### **TEACHING**

Tutorial L1 (first year) Mathematics at UPMC, « CAP en fac » program, Octobre 2013-Juin 2014

Tutorial, Third year engineering students, Fourier series and Fourier transforms, 27h (2014-2015 et 2015-2016), 36h (2016-2017)

Tutorial First year Analysis 20h (2014-2015)

Tutorial Third year, Algebra and Geometry, 10h (2014-2015), 36h (2015-2016)

Tutorial First year Statistics for Earth and Environmental Sciences, 28h (2016-2017)

Tutorial Third year Analysis, 36h (First term 2017)

Lectures + Tutorial in Geometry, first year, Mathematics Applied to Social Sciences, 30h (First term 2017)

Lectures + Tutorial in Geometry, first year Maths, 24h (First term 2017)

### CONFERENCES, WORKSHOPS AND VISITS

Algebraic and Analytic aspects of Automorphic forms, ICTS Bangalore, March 2019

On the Langlands Program : Endoscopy and Beyond, Singapore, 17 December to January 2019

Women in Automorphic forms, Darmstadt, 4-6 September 2018

Workshop on Representation Theory of Reductive Groups Over Local Fields, Weizmann Institute of Science, 4-16 June 2017

Class field theory course, IISER Trivandrum, 22-25 December 2017

Varanasi, TIMC AMS conference, 14-17 December 2017

Relative Trace Formula, Periods, L-Functions and Harmonic Analysis, 16-27 May 2016

Summer School on Reductive Groups, Franken-Akademie Schloß Schney, 27/07/2015-7/08/2015

Automorphic forms, Shimura varieties, Galois representations and L-functions Workshop, 1-5 December 2014, MSRI, Berkeley

Academic visits

Max Planck Institute, Bonn, May-June 2018

Tata Institute of Fundamental Research, 15th of December-15th of January 2017

### **TALKS**

The Generalized Injectivity conjecture, presented at Max Planck Institute and Gottingen, June 2018; at University of Calgary, Tsinghua University (Winter 2018) and Bangalore ICTS (March 2019).

Symplectic Models for unitary groups, Varanasi, December 2016

- Seminar Algebra and Geometry, Versailles, May 2017
- Seminar Poitiers, May 2017
- Workshop on Representation Theory of Reductive Groups Over Local Fields, Weizmann Institute of Science, June 2017

Formule des traces relative appliquée à la démonstration d'un résultat de Waldspurger RGR Seminar, I2M Marseille, March 2016

Seminar on Trace formulae organized by Farrell Brumley at Jussieu:

- December 2015, Le côté spectral de la Formule des Traces pour GL2
- March 2016, Formule des traces relative et un résultat de Waldspurger

Young seminars:

Introduction à la théorie des représentations de groupes réductifs : représentations distinguées et modèles :

- Grenoble, February 2017
- Paris 7, May 2017

#### ADDITIONAL ACTIVITIES

# **Popularization**

Hippocampe program Spring 2015 (a one week introduction to mathematical research for High School students); participation in Piday Mucem in 2015 and «Fête de la Science»; Maths games with High School students at CIRM library.

Participation in the PEPS-Egalité program (correspondence de Langlands) organized by Anne-Marie Aubert in April 2015. Poster presentation for a public of High School students.

Instructor in the workshop Math C2+ organized by the Polytechnique School to encourage High School female students from Aix-Marseille area to enroll in Sciences Studies.

#### Service

PhD students representative at the AMU Mathematics-Computer Science Doctoral School, 2015-2018.

### PROFESSIONAL EXPERIENCE

July 2014 Counter advisor, Banque Populaire

September-May 2013-2014 Teaching assistant for first year undergraduates in Mathematics, at the University Pierre et Marie Curie.

April-August 2012 Internship at Centre d'Analyse Strategique (CAS) : Programming of a micro-simulation software for the socio-fiscal French system : (http://www.openfisca.fr/)

July 2011 « Magistere » Internship at Neuromathcomp, INRIA.

Summer 2010 Nurse assistant. Psychiatry Department, Montauban Hospital.

Summer 2009 Internship at the Physics-Chemistry Lab: LCHMR, University Pierre et Marie Curie.

July-August 2009 Help desk assistant, Manufacturers Department, AXA Assistance.

August 2008 International volunteering on an environmental project, association SEEDS ICELAND.

July 2008 Employee in a supermarket, Intermarche Lagos, Portugal.

### EXTRACURRICULAR

# Languages

French: Mother tongue

English : Fluent Spanish : Moderate Mandarin : Learning

# IT Skills (to be refreshed)

Intermediate: Stata, R,GNUPLOT,OpenOffice, Excel

Advanced: LTEX, PYTHON

# **Personal interests**

Sports: Climbing, Mountaineering and Running

Mathematics, Literature, Theatre, Duduk

I have been a member of the Association Genepi which militates for « opening up » prisons. I was organizing cultural workshops for prisoners twice a month from January 2016 to June 2017. I left this association at the Autumn 2018.