Curriculum Vitæ

Gönenç Onay

Mathematician. Born and grew up in Turkey, higher education in France, work experience in Paris, Münster, Istanbul, Berlin currently based in Istanbul.

gonenc@posteo.de

personal web page

Education

2011 Ph.D. in Mathematics, (distinction *summa cum laude*), (Speciality: Model Theory and Applications), University Paris-Diderot P7/CNRS-UMR 7586 (*Equipe Logique Mathématique*)

2006 Master in Mathematical Logic and Theoretical Computer Science, University Paris-Diderot P7

2004 Bachelor (BS) in Mathematics, University Joseph Fourier, Grenoble 1

2000 Galatasaray Lisesi - Lycée de Galatasaray (Turkish, French and English), Istanbul.

Job Experiences

08. 2023 Assistant Professor at Galatasaray University

01.2023 - 8.2004 Freelance Data Anaylist, collaboration with D4C-Ai and Miletos-Co

01.2022 - 12.2022 Data Scientist at Coach-AI. Worked on **action recognition** from squeleton data : *Building ML models, time series analysis, pose extraction, visualization.* Familiar with *version control (git), continuous integration (bamboo), docker containers, data management (dvc), mlops (mlflow).*

01.2021 - 12.2021 Scientific Advisor at d4c-Ai Data Analytics and Stochastic Optimization

04.2020 - 05.2020 Lecturer in XU-Exponential University (Potsdam)

10.2016 - 04.2019 Research Associate, Westfälische Wilhelms-University Münster

02.2012 - 12.2016 Junior Professor, Mimar Sinan University of Fine Arts (MSGSU), Istanbul

02.2011 - 02.2012 Lecturer, MSGSU, Istanbul

09.2009 - 09.2010 Research Associate and Lecturer (ATER), University Paris 7

09.2006 - 09.2009 Research Assistant, University Paris 7

09.2006 - 09.2009 Teaching Assistant, University Paris 12

Non-Benefits: Reviewer at American Mathematical Society. Basketball trainer for kids. Advisor for constructing mathematical teaching toys at Pentalitha (pentalitha.com)

Computer Science and Technical Skills

- **Theoretical.** Theory of algorithms, recursivity, automata theory, Turing machines, complexity analysis.

  Well understanding of underlying mathematics of neural networks (statistics, metrics and algebra). Interested in *ultrametric methods, topological data analysis*.

- **Practical.**

  · **Python**, in particular ML modules, e.g. `sklearn`, `tensorflow`, `keras`, `pytorch`.

  · IBM Data Science Professional Certificate: Python for Applied Data Science

  · Familiarity with Android Studio, **Kotlin**

  · **Technologies:** Git, Docker, Bamboo, Mlflow, Jira, Nginx, Linux Scripting

  · **C, Ocaml, Pascal, R, SQL, SageMath** for educational purposes.

- **Reporting/Others.** Proficiency in LaTeX, *Markdown*.

Awards - Grants

2024 - Chaire d'excellence (Lauréats - 2023) Le Consortium

2015-2018 TÜBİTAK 1001 research grant with Dr. Randriambololona (approx. €100,000)

2015 Dec TÜBİTAK publication award for DOI:10.1007/s00029-015-0183-0

2006-2009 *Allocations de Recherche* French Minister of Higher Education

Publication & Preprints (a selection)

2021 *Bolstering Stochastic Gradient Descent with Model Building,* **TOP 2024**. Birbil, Ş.İ., Martin, Ö., Onay, G., Öztoprak F.

2020 *Fields with automorphism and valuation*, **Archive for Mathematical Logic** with Beyarslan, Hoffman and Pierce. journal web page

2018 *Valued modules over skew polynomial rings II*, arXiv:1812.07333

2018 $\mathbb{F}_p((X))$ *is decidable as a module over the ring additive polynomials*, arXiv:1806.03123

2013 *Quantifier elimination for valued fields equipped with an automorphism*, with Durhan **Selecta Math. (N.S.) 21 (2015), no. 4, 1177–1201**. journal web page

2013 *Valued modules over skew polynomial rings I*, **J. Symb. Log. 82 (2017), no. 4, 1519–1540**. journal web page

Teaching Experience

I have taught almost all undergraduate topics and some graduate ones both for small and large group, supervised two Master's thesis.

- Current teachinig at onayg.com/teaching
- **XU Postdam** 2020 (Lecturer) - Financial Mathematics & Graph Theory
- **Münster** 2018 (Assistant) - Vertiefung Modelltheorie (Dependent/NIP theories) (Graduate)
- **Istanbul** 2011-2016 (Lecturer then Professor) - Topology (Graduate) - Probability Theory - Abstract Mathematics and Logic - Number Theory - Linear Algebra - Graph Theory - Combinatorics - Metric spaces - Measure and Integration Theory
- **Paris** 2006-2010 (Assistant) - Calculus - Linear Algebra - Multivariate Calculus

Administrative Responsibilities

2012-14 Member of the recruitment committee at MSGSU

2012-15 Member of the selection committee for Master's Program at MSGSU

2012-14 Member of the organization committee of the undergraduate studies at MSGSU

Invited Talks in Conferences/Seminars (a selection)

2020 Axiomatization of Laurent series over the algebraic closure of a finite field, *Oxford University Logic Seminar*, Oxford, March

2019 The field $\mathbb{F}_p^{alg}((t))$, *CMAF CIO – Universidade de Lisboa*, Lisbon, December

2018 Additive reducts of valued difference fields in *Trimester Model Theory, Combinatorics and valued fields* Institut Henri Poincaré, Paris, February

2016 Quantifier elimination and Kapranov's theorem, in *Algebra, Geometry and Topology of Singularities*, Istanbul, May

Organized Colloquia

2018 Regional Days in Model Theory and Applications III, Münster, Germany

2014 Summer School in Valuation Theory, Sirince, Izmir, Turkey

2011 Antalya Algebra Days, Antalya, Turkey

Language Skills

- Turkish *mother tongue*
- English *excellent*
- French *excellent*
- German *B2-C1*