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CURRICULUM VITÆ

EDUCATION

2023-2024: **IRIF**¹ : Ph.D. in Database Theory.

2022-2023: **Université Paris Cité** : M2 logique et fondements de l'informatique.

2021-2022: **Université Paris Cité** : M1 mathématiques fondamentales et appliquées.

2020-2021: **Sorbonne Université** : M1 mathématiques fondamentales et appliquées.

2019-2020: **Université Paris 7** : L3 mathématiques fondamentales et appliquées.

2018-2019: **Université Paris 13** : Diplôme Universitaire de Français Langue Étrangère.

2014-2018: **Boğaziçi University**² : Bachelor of mathematics.

2014: High school exit exam (Eskişehir, Turkey).

PH.D. AT IRIF

I am pursuing a Ph.D. in Database Theory under the supervision of Cristina Sirangelo and Leonid Libkin. Our research is in the intersection between the Graph Databases and Finite Model Theory.

COURSES TAKEN AT UNIVERSITÉ PARIS CITÉ (M2)

Calculability and Complexity. Category theory. Models and Games. Model theory. Proof theory. Set theory I, II (forcing methods).

I wrote a master's thesis³ under the supervision of Alessandro Vignati. It is on a weak extension property (due to Ilijas Farah) for maps between Stone-Čech remainders and how this depends on the set theoretic ambient.

¹<https://www.irif.fr>

²I had to leave Turkey for political reasons. My trial was documented by mathematicians. (https://demorgangazette.files.wordpress.com/2021/02/4f69c-dmg_12_1_cherlin-deloro-karhumaki.pdf) For any information on my interrupted studies in Turkey, you can contact Betül Tanbay, professor at Boğaziçi University, tanbay@boun.edu.tr.

³https://dyilmazlogic.files.wordpress.com/2024/04/yilmaz_deniz_memoir.pdf

COURSES TAKEN AT UNIVERSITÉ PARIS CITÉ (M1)

Algebra (Module theory). Algebraic geometry. Descriptive set theory. Functional analysis. Galois theory. Incompleteness and Undecidability. Logic.

I wrote a mini master's thesis entitled "Ultrafilters in Ramsey theory⁴" under the supervision of Alessandro Vignati.

COURSES TAKEN AT SORBONNE UNIVERSITÉ (M1 INTERRUPTED)

Because of the epidemic, 2020-2021 was an exceptionally difficult year for many students. This was my case (precariousness and health problems). That's why I couldn't take the M1 mathematics exams at Sorbonne University.

I wrote a mini master's thesis entitled "Sur les extensions de modèles de l'arithmétique de Peano⁵" under the supervision of Adrien Deloro.

SCHOLARSHIPS

TÜBİTAK (Scientific and Technological Research Council of Turkey):

Excellence grant (2014-2018).

INSMI (Institut national des sciences mathématiques et de leurs interactions of CNRS):

Funding for Master's thesis at IMJ-PRG (2023).

LANGUAGES

Turkish (native); **French, English** (fluent in speaking, reading and writing); **German** (can read).

COMPUTER SKILLS

LATEX, Python, C, OCaml, Haskell.

EXTRA-CURRICULAR ACTIVITIES

Boğaziçi University Mathematical Society. I was one of the founders of the *Boğaziçi University Mathematical Society*.

Research in Geophysics and Wavelet Analysis. Under supervision of Çağrı Diner (Earthquake Research Institute, Boğaziçi University), I studied wavelet analysis in the first semester of 2016-2017. We read *A First Course in Wavelets with Fourier Analysis* by Albert Boggess and Francis J. Narcowich.

Differential Geometry and Workshop on programming in Python. With Çağrı Diner, we organised a workshop on the differential form approach to analysis problems. We have also programmed in Python visualization tools for geometry problems and calculation tools.

OTHER INTERESTS

I have always been passionate about oil painting. I have worked on Orthodox icons from the Byzantine period. I made three icons for the Center for Byzantine Studies at Boğaziçi University. I play guitar in amateur rock bands.

⁴https://dyilmazlogic.files.wordpress.com/2024/04/ultrafilters_in_ramsey_theory.pdf

⁵<https://dyilmazlogic.files.wordpress.com/2024/04/yilmaz-pa.pdf>