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# Curriculum Vitae:

# Alp Uzman

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## Personal & Contact Information

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🌐 : <https://alpuzman.github.io/>

## Education

**Ph.D. in Mathematics** Pennsylvania State University, University Park Sep. 2016 – May 2023 (expected)

Advisor: Federico Rodríguez Hertz

**B.Sc. in Mathematics, Summa Cum Laude** Koç University, Istanbul Sep. 2011 – Jun. 2016

**B.A. in Philosophy** Koç University, Istanbul Sep. 2012 – Jun. 2016

**Exchange Program** University of California, Irvine Jan. 2015 – Jun. 2015

**Lycee Diploma** Kabataş Erkek Lisesi, Istanbul Sep. 2006 – Jun. 2011

## Publications

**Arithmeticity for Maximal Rank Positive Entropy Actions of  $\mathbb{R}^k$  [In Preparation]**

**Fried Average Entropy for Nilpotent Groups [In Preparation]**

## Honors & Scholarships

**PSU** Pettit Scholarship in Science Aug. 2016, Jan. 2017, Aug. 2017, Aug. 2018

**KU** 1st Ranking Graduate in the College of Sciences Jun. 2016

**KU** 2nd Ranking Graduate in the Department of Philosophy Jun. 2016

**KU** Exchange Program Grant Jan. 2015

**TEV (Turkish Foundation of Education)** Eclat Scholarship Sep. 2012 – Jun. 2015

**KU** Tuition Scholarship Sep. 2011 – Jun. 2016

## Research Talks

**University of Utah** Arithmeticity for Smooth Maximal Rank Positive Entropy Actions of  $\mathbb{R}^k$  Nov. 2022

**PSU Semi-annual Workshop in Dynamical Systems and Related Topics** Oct. 2021

Katok-Rodríguez Hertz Arithmeticity for Maximal Rank Positive Entropy Actions of  $\mathbb{R}^k$

## Poster Sessions

**Simons Center Flexibility and Rigidity in Dynamical Systems** Mar. 2021

Katok-Rodríguez Hertz Arithmeticity for Maximal Rank Positive Entropy Actions of  $\mathbb{R}^k$

## Expository Talks at the Dynamics Student Seminar<sup>1</sup>

CC Geometry and Lyapunov Spectrum Rigidity, Part II	Apr. 2022
CC Geometry and Lyapunov Spectrum Rigidity	Apr. 2022
A Roadmap for Sub-Riemannian Dynamics	Feb. 2022
Smooth Ergodic Theory of Higher Rank Abelian Actions	Oct. 2021
Young's Explicit Examples of Nonuniformly Hyperbolic Cocycles that are not Uniformly Hyperbolic	Apr. 2021
Spaces of Anosov Diffeomorphisms	Nov. 2020
Some Remarks on the Definition of Hyperbolic Cascades	Oct. 2020
A Categorical Approach to Mixing Properties	Oct. 2020
Decay of Correlations in Random Dynamics	Aug. 2020
Property (FH), Property (T), and Harmonicity	Feb. 2020
First Cohomology with Representation Coefficients, Property (FH) and Property (T)	Jan. 2020
Ergodic Theory and Weil Measures for Foliations III	Nov. 2019
Ergodic Theory and Weil Measures for Foliations II	Oct. 2019
Ergodic Theory and Weil Measures for Foliations I	Oct. 2019
Basics of Topological Entropy	Oct. 2019
The Grigorchuk Group	Sept. 2019
The Problem of the Non-Integrability of the Center Distributions of Partially Hyperbolic Diffeomorphisms	Feb. 2019
A Criterion for the Simplicity of the Lyapunov Spectrum	Oct. 2018
Margulis' Normal Subgroup Theorem	Apr. 2018
Kazhdan Property (T)	Mar. 2018
Amenability	Feb. 2018
Moore Ergodicity Theorem	Jan. 2018
Quasi-periodic Schrödinger Operators	Dec. 2017
Yomdin's Theorem & Shub Entropy Conjecture	Nov. 2017
Random Dynamics	Sep. 2017

## Other Expository Talks

<b>Student Geometric Functional Analysis Seminar</b> Hofstadter's Butterfly	Nov. 2017
<b>Working Seminar: Dynamics and its Working Tools</b> Random Dynamics VI	Oct. 2017
<b>WS</b> Random Dynamics III	Sep. 2017

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<sup>1</sup><https://math-cal.cloud.science.psu.edu/events/seminar/967>

## Service

- Turkish Math Society** DRP Turkey 2022, Mentor Jul.-Aug. 2022
- Mentee: Kaan Çim (Koç University); Topic: Expansive Homeomorphisms on Surfaces
- PSU** Dynamics Student Seminar, Leading Organizer Fall 2017 – Spring 2021
- Coorganizers: Nawaf Alansari & Ignacio Correa

## Conferences & Workshops Attended

- PSU** Recent Advances in Dynamics, Geometry, and Number Theory Aug. 2022
- Simons Center** Flexibility and rigidity in dynamical systems Mar. 2022
- PSU** Semi-annual Workshop in Dynamical Systems and Related Topics Oct. 2021, Sep. 2019, Oct. 2018, Oct. 2017, Oct. 2016
- Polish Academy of Sciences** 2020 Vision for Dynamics Aug. 2019
- Institute Des Hautes Études Scientifiques** Aspects of Geometric Group Theory Jul. 2019
- University of Maryland** Workshop on Dynamical Systems and Related Topics Apr. 2019, Apr. 2018
- University of Geneva** Borel Seminar 2018: Topology and Dynamics in the Swiss Alps Dec. 2018
- Universidad de la República** Workshop on Groups, Geometry and Dynamics Jul. 2018
- Institute for Pure & Applied Mathematics** New Methods for Zimmer's Conjecture Jan. 2018
- PSU** FRG Conference on Moduli of Sheaves and Strange Duality Dec. 2017
- University of British Columbia** Current Trends in Dynamical Systems and the Mathematical Legacy of Rufus Bowen Aug. 2017
- Brigham Young University** Dynamics Beyond Uniform Hyperbolicity 2017 Jun. 2017
- University of Houston** Houston Summer School on Dynamical Systems May 2015, May 2017
- KU & Philosophical Society of Turkey** International Summer Program "Problems of Legal Philosophy in the Application of Law" Jun. 2013

## Teaching Experience

- PSU** Graduate Teaching Assistant
- Grader** MATH 435 (Basic Abstract Algebra) Spring 2022
- Instructor** MATH 251 (Ordinary and Partial Differential Equations) Fall 2021
- Grader** MATH 513 (Partial Differential Equations I)
- Instructor** MATH 21 (College Algebra I) ( $\times 2$ ) Fall 2020
- Instructor** MATH 230 (Calculus and Vector Analysis) Spring 2020
- MATH 231 (Calculus of Several Variables)
- Instructor** MATH 251 Fall 2019
- Instructor** MATH 251 ( $\times 2$ ) Fall 2018
- Instructor** MATH 36 (Insights into Mathematics) ( $\times 2$ ) Fall 2017
- Instructor** MATH 22 (College Algebra II) Summer 2017

<b>Instructor</b> MATH 220 (Matrices)	Spring 2017
<b>Assistant</b> MATH 34 (Mathematics of Money)	Fall 2016

**KU Work & Study Program (Selected)**

<b>Teaching Assistant</b> MATH 203 (Multivariable Calculus)	Fall 2014
<b>Assistant</b> EQUR 121 (Symbolic Logic)	Spring 2014
<b>Teaching Assistant</b> EQUR 121	Fall 2013
<b>Assistant</b> MATH 103 (Introduction to Abstract Mathematics)	Fall 2013
<b>Assistant</b> MATH 204 (Differential Equations)	Spring 2013
<b>Teaching Assistant</b> MATH 107 (Linear Algebra)	Fall 2012
<b>Assistant</b> MATH 106 (Single Variable Calculus)	Fall 2012

**KU KOLT (Koç Office of Learning & Teaching)**

<b>Tutor</b> MATH 103 & PHIL 101 (Freshman Seminar)	Fall 2013
<b>Tutor</b> MATH 106 & MATH 203	Spring 2013
<b>Tutor</b> MATH 107	Fall 2012

**Languages**

**Mothertongue** Turkish

**Proficient** English

**Beginner** German