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Sukhair, Bahrain

RESEARCH INTERESTS Number theory and arithmetic geometry. More specifically, my interests lie in Iwasawa theory and the arithmetic of elliptic curves.

EDUCATION

Arizona State University, Tempe, Arizona USA

- Ph.D., Mathematics, May 2010
Thesis: Selmer Groups and the Fontaine-Mazur Conjecture
Advisor: Nancy Childress

University of Bahrain, Isa Town, Kingdom of Bahrain

- B.S., Physics, August 1998

EMPLOYMENT

Associate Professor, University of Bahrain, Spring 2023 - Present

Assistant Professor, University of Bahrain, Fall 2011 - Spring 2023

- Courses Taught: Calculus with Analytic Geometry I,II,III, Business Calculus, Linear Algebra, Elementary Number Theory, Abstract Algebra, Galois Theory

Instructor, Arizona State University, Fall 2010 - Spring 2011

- Courses Taught: Calculus I and College Mathematics

Graduate Teaching Associate, Arizona State University, Fall 2004 - Spring 2008

- Courses Taught: College Algebra, College Mathematics, Precalculus, Business Calculus, Calculus with Analytic Geometry I,II,III.

GRANTS AND AWARDS

Fellow of the Higher Educational Academy, Feb 2015

Erasmus Mundus Scholarship - Lille1 University, Sept 2012-Feb 2013

Graduate Student Research Award, Arizona State University, 2010

PUBLICATIONS

Boundedness of Iwasawa invariants of fine Selmer groups and Selmer groups (with Sören Kleine), submitted

On the $\mathfrak{M}_H(G)$ -property (with Ramdorai Sujatha and Sören Kleine), submitted

Kolyvagin's work and anticyclotomic tower fields: the supersingular case, Acta Arithmetica, Vol 201, No. 2 (2021), pp. 131-147

Plus/Minus Selmer Groups and Anticyclotomic \mathbb{Z}_p -extensions, Research in Number Theory, Vol 7, 43 (2021)

On the Lambda-cotorsion subgroup of the Selmer group, Asian Journal of Math, Vol 24, No. 3 (2020), pp. 437-456

Kolyvagin's result on the vanishing of the Tate-Shafarevich group and its consequences for anticyclotomic Iwasawa theory (with Jan Nekovar), J. Theorie des Nombres de Bordeaux, Vol 31, No. 2 (2019), pp. 455-501

Fine Selmer Groups, Heegner points and Anticyclotomic \mathbb{Z}_p -extensions, International Journal of Number Theory, Vol 14, No. 5 (2018), pp. 1279-1304

Selmer Groups and Anticyclotomic \mathbb{Z}_p -extensions, Mathematical Proceedings of the Cambridge Philosophical Society, Vol 161, No. 3 (2016), pp. 409-433

Selmer Groups and Generalized Class Field Towers, International Journal of Number Theory, Vol 8, No. 4 (2012), pp. 881-909

MENTORING AND SUPERVISED Mohammed Mansoor's senior project "Commutative rings and the Zariski Topology", Fall 2021

Supervised Mohammed AlFardan's senior project "An introduction to homological algebra", Fall 2020

Member of Fayadh Kadhem's senior project committee, Spring 2016

Supervised Jasim Isameel's senior project "An introduction to p -adic analysis", Fall 2015

Served on many department committees at the University of Bahrain. Most notably, head of website and e-learning committee Fall 2014-present and head of senior project committee Spring 2016

Referee for the International Journal of Number Theory

TALKS

Selmer Groups and Generalized Class Field Towers
Oct. 2012, Number Theory Seminar, Lille1 University

Selmer Groups and the Fontaine-Mazur Conjecture
Feb. 2010, Algebra and Number Theory Seminar, University of Arizona

Selmer Groups and Class Field Towers
Nov. 2009, Number Theory Seminar, Arizona State University

Euler Characteristics and Elliptic Curves
Feb. 2009, Number Theory Seminar, Arizona State University

Selmer groups and Mazur's Control Theorem
Sept. 2008, Number Theory Seminar, Arizona State University

Central Simple Algebras and Galois Cohomology
Sept. 2006, Number Theory Seminar, Arizona State University

CONFERENCES

AND WORKSHOPS Iwasawa 2019 Conference, Bordeaux, France June 24-28, 2019

ATTENDED

Iwasawa 2012 Conference, Heidelberg, Germany July 30-August 3, 2012

2011 Joint Mathematics Meeting, New Orleans, LA January 6-9, 2011

2010 Joint Mathematics Meeting, San Francisco, CA January 13-16, 2010

2010 Southern California Number Theory Day, Caltech May 15, 2010

CONFERENCE AND WORKSHOP ORGANIZATION International Conference on Emerging Trends in Pure and Applied Mathematics (ICETPAM) June 21-22 2021, Steering committee for the conference

\LaTeX workshop Spring 2012, workshop for university faculty members on using \LaTeX

MathXL workshops 2013-2017, conducted workshops for faculty members on using the online homework system MathXL

PROFESSIONAL CERTIFICATES Postgraduate Certificate in Academic Practice, University of Bahrain 2014

LANGUAGES English (Fluent), Arabic (Native)

CITIZENSHIP Kingdom of Bahrain