

### CONTACT INFORMATION

Department of Mathematics  
University of Bahrain  
P.O. Box 32038  
Sukhair, Bahrain

*Phone:* 17437805  
*E-mail:* amatar@uob.edu.bh  
*URL:* www.ahmedmatar.net

### 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

*Assistant Professor*, University of Bahrain, Fall 2011 - Present

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

*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 *Kolyvagin's work and anticyclotomic tower fields: the supersingular case*, In preparation
- Fine Selmer Groups, Heegner Points and Anticyclotomic  $\mathbb{Z}_p$ -extensions II*, In preparation
- On the Lambda-cotorsion subgroup of the Selmer group*, submitted
- Kolyvagin's result on the vanishing of the Tate-Shafarevich group and its consequences for anticyclotomic Iwasawa theory* (with Jan Nekovar), submitted
- 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 SERVICE 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-Fall 2017 and head of senior project committee Spring 2016-present

#### 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 2012 Conference, Heidelberg, Germany July 30-August 3, 2012  
ATTENDED

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

WORKSHOP  
ORGANIZATION

$\LaTeX$ 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