

# Dr Emek Demirci Akarsu

## Contact Details

Recep Tayyip Erdogan University  
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## Appointments

Since December 2014      Lecturer, Recep Tayyip Erdogan University, Turkey  
July 2014- December 2014      Visiting Research Fellow, University of Bristol, UK

## Education

January 2010-March 2014      PhD in Mathematics, University of Bristol, UK  
Dissertation "Rational points on horocycles and incomplete Gauss sums"  
Supervised by Professor Jens Marklof  
September 2008-September 2009      MSc in Mathematics, Queen Mary, University of London, UK  
Dissertation "Graph homomorphisms and automorphisms"  
Supervised by Professor Peter Cameron  
September 2001-January 2005      BSc in Mathematics, Mugla University, Turkey

## Research interests

Analytic Number Theory:      Distribution and mean values of exponential sums  
in particular Gauss and Kloosterman sums  
Dynamical Systems:      Homogeneous dynamics, in particular equidistribution of horocycles  
Probability:      Convergence in distribution, random process

## Publications

- [1] *The value distribution of incomplete Gauss sums*. *Mathematika*, **59** (2)(2013), 381–398, joint with J. Marklof.
- [2] *Short incomplete Gauss sums and rational points on metaplectic horocycles*. *Int. J. Number Theory*, **10**(6)(2014), 1553–1576.
- [3] *Random Process generated by the incomplete Gauss sums*, *Turkish J. Mathematics*, **39**(2015), 527–537.

## Research grants

March 2007-March 2014 Recipient of postgraduate scholarship (MSc and PhD)  
by the Ministry of Education of Turkey

## Teaching experience

2015-2016 Lecturing for pure mathematics units  
e.g. Number Theory, Abstract Algebra, Selected Topics from Group Theory  
2010-2014 Tutoring and marking for the first year pure mathematics units  
e.g. Analysis, Number theory and Group theory, Calculus, Algebra

## Conference and seminar presentations

4 December 2015 Gebze Technical University, Mathematics Department, Kocaeli, Turkey  
Seminar talk given  
24 June 2015 Galatasaray University, Mathematics Department, Istanbul, Turkey  
Seminar talk given  
28 May 2015 MSGSU (Mimar Sinan Fine Arts University) General Seminar, Istanbul, Turkey  
Seminar talk given  
8 May 2015 IZTECH (Izmir Institute of Technology) Mathematics Departmental Seminar, Izmir, Turkey  
Seminar talk given  
11-17 July 2014 Enfant and Elephant Analytic Number Theory Workshop, Bonn, Germany  
Invited talk given  
18-19 April 2013 Women in Mathematics Day, Cambridge, UK  
Contributed talk given and poster presented  
20 November 2012 HFAKT seminar, Bristol, UK  
Seminar talk given  
4 October 2012 MINGLE, Bristol, UK  
Contributed talk given and poster presented  
7-12 August 2012 Four Faces of Number Theory, Wurzburg, Germany  
Poster presented  
17-22 June 2012 Canadian Number Theory Association XII (CNTA XII), Lethbridge, Canada  
Contributed talk given  
2-4 April 2012 Young Researchers in Mathematics 2012, Bristol, UK  
Contributed talk given  
22 June 2011 Junior Number Theory Seminar, Bristol, UK  
Seminar talk given

### Conferences/Workshops/Summer Schools

2-7 July 2013	KIAS Summer School on Homogeneous Dynamics Seoul, Korea
3-7 June 2013	Limit Theorems for Dynamical Systems EPFL, Lausanne, Switzerland
18-22 March 2013	Equidistribution in Number Theory and Dynamics Zurich, Switzerland
1-3 October 2012	Arithmetic of L functions Bristol, UK
3-7 September 2012	Synergies and Vistas in Analytic Number Theory Oxford, UK
26 June-1 July 2011	Spectral Theory and its applications, LMS-EPSRC short course UCL London, UK
6 May 2011	Women in Mathematics Day London, UK
25-30 July 2010	Ergodic Theory and Arithmetic Dynamics, LMS-EPSRC short course Queen Mary, London, UK

### Computer skills

Programming: HTML, C++  
 Packages: Matlab, Maple, Mathematica

### References

Professor Jens Marklof School of Mathematics, University of Bristol, UK  
 j.marklof@bristol.ac.uk  
 Professor Zeev Rudnick School of Mathematical Sciences, Tel-Aviv University, Israel  
 rudnick@post.tau.ac.il  
 Professor Alex Iosevich Department of Mathematics, University of Rochester, USA  
 iosevich@math.rochester.edu