

Funda GÜLTEPE

CONTACT INFORMATION

Department of Mathematics
University of Oklahoma
Norman, Oklahoma 73019

fundagultepe@ou.edu
<http://www.math.ou.edu/~fgultepe/>
Phone:(405) 325-6711

RESEARCH INTERESTS

My research interests are in low dimensional topology and geometric group theory. I am particularly interested in understanding the group of outer automorphisms of free group $\text{Out}(F_n)$ using topology of 3-manifolds and mapping class groups.

EDUCATION

- Ph.D., Mathematics, University of Oklahoma, USA. August 2013, expected.
Dissertation: Intersections of tori in $\sharp_n(S^2 \times S^1)$ and Subgroups of $\text{Out}(F_n)$.
Thesis Advisor: Kasra Rafi
- M.Sc., Mathematics, Ankara University (Ankara, Turkey), 2005.
Dissertation: Totally Umbilical Submanifolds of semi-Riemannian Manifolds.
- B.Sc., Mathematics, Ankara University (Ankara, Turkey), 2002.

PAPERS

- Intersections of tori and Dehn Twists in Outer Space (with Matt Clay and Kasra Rafi), in preparation.
- Normal tori in $\sharp_n(S^2 \times S^1)$. To appear in *Topology and its Applications*, arXiv:1112.3693v2 [math.GT].

TEACHING EXPERIENCE

- Calculus I, discussion section. (Fall 2008, Spring 2012)
- Calculus II, discussion section. (Spring 2008, Fall 2011, Fall 2012)
- Business Calculus. (Spring 2009)
- Differential and Integral Calculus III, discussion section. (Fall 2009)
- College Algebra. (Fall 2010, Spring 2011, Spring 2013.)

AWARDS AND HONORS

- University of Oklahoma Graduate College Robberson Travel Grant, 2013.
- University of Oklahoma Lissa Cy Wagner Scholarship, 2012.
- University of Oklahoma Mathematics Department Graduate Achievement Award, 2012.
- University of Oklahoma College of Arts and Sciences Fellowship, 2007–2012.
- University of Oklahoma Department of Mathematics Fellowship, 2007–2010.
- Scientific and Technological Research Council of Turkey (TUBITAK) Ph.D. Scholarship, 2006.

INVITED TALKS

- Essential tori and Dehn twists of the free group. Summer School on Geometry of Outer Space, Aix Marseille Universite, France. July, 2013. (Scheduled)
- Essential tori and subgroups of $\text{Out}(F_n)$ generated by twists. Spring Topology and Dynamics Conference, CCSU, Connecticut. March 23-25, 2013.
- Essential tori and subgroups of $\text{Out}(F_n)$ generated by twists. G^3 conference, South Padre Island, Texas March 21-24, 2013.
- Subgroups of $\text{Out}(F_n)$ generated by two Dehn twists. Geometry and Topology Seminar, Brown University, Rhode Island. January 30, 2013.
- Tori, twists and subgroups of $\text{Out}(F_n)$. Cooldown workshop on groups of automorphisms of free group, CRM Barcelona. November 19-23, 2012.
- Essential tori and Dehn twists in Outer Space, Redbud Topology Conference, University of Oklahoma. November 3, 2012.
- Dehn twists in Outer Space. Topology Students workshop. Georgia Institute of Technology, Atlanta, June 10-15, 2012.
- Normal spheres and Normal Tori in $\#_n(S^2 \times S^1)$. OSU Workshop on the Torelli group, Mapping class group, and $\text{Out}(F_n)$, Columbus, Ohio. May 2-6, 2011.

SEMINAR TALKS

- Bass-Serre Theory I, II. Student Topology Seminar, Spring 2012.
- Braid Groups, Mapping Class Groups and Configuration Spaces. Student Topology Seminar, Fall 2011.
- Normal tori in $\#_n(S^2 \times S^1)$. Geometry and Topology Seminar, Fall 2011.
- Introduction to Hyperbolic Geometry. Graduate Student Seminar, Fall 2011.
- Introduction to $\text{Out}(F_n)$ and Culler-Vogtmann Graph. Student Topology Seminar, Fall 2010.
- Normal spheres and normal tori in $\#_n(S^2 \times S^1)$ I, II, III. Student Topology Seminar, Spring 2011.
- Curve Complex and Mapping Class Groups. Graduate Student Seminar, Fall 2010.
- Automorphisms of the Disk Complex I, II. Geometry and Topology Seminar, Spring 2010.
- Automorphisms of the Disk Complex I,II. Student Geometry and Topology Seminar, Spring 2010.
- Lightlike Submanifolds of semi-Riemannian Manifolds, Student Geometry and Topology Seminar, Spring 2008.

OTHER
CONFERENCES
AND WORKSHOPS
ATTENDED

- AIM Workshop on Lipschitz Metric on Teichmüller Space, Palo Alto, October 2012.
- GEAR retreat. University of Illinois, Urbana Champaign, July 2012.
- PCMI Summer school in Geometric Group Theory. Utah, July 2012.
- RTG Workshop on Recent Progress on Hyperbolic 3-manifolds. University of Michigan, Ann Arbor, May 2012.
- Redbud Topology Conference, Rank versus Genus. Oklahoma State University, Stillwater, March 2012.
- Redbud Topology Conference. University of Arkansas, Fayetteville, November 2011
- PCMI Summer School in Moduli Spaces of Riemann Surfaces. Utah, July 2011
- 45th Annual Spring Topology and Dynamics Conference 2011. University of Texas, Tyler, March 2011.
- Main Workshop of the Trimester Program in Geometry and Dynamics of Teichmüller Space. Hausdorff Institute of Mathematics, Bonn, Germany, June 2010.
- Jacofest. Oklahoma State University, Stillwater, June 2010.
- Summer School in Examples of Group Actions. Ohio State University, Columbus, May 2010.
- RTG Workshop on Mapping Class Groups. University of Michigan, Ann Arbor, April 2009.

REFERENCES

- Mladen Bestvina, University of Utah.
- Marc Culler, University of Illinois, Chicago.
- Darryl McCullough, University of Oklahoma.
- Kasra Rafi, University of Toronto.
- Gerard Walschap, (Teaching) University of Oklahoma.