

# Üstün Yıldırım<sup>1</sup>

Michigan State University  
Department of Mathematics  
619 Red Cedar Road  
East Lansing, Michigan 48824, USA

Email: [ustun@mailbox.org](mailto:ustun@mailbox.org)  
Website: [ustunyildirim.com](http://ustunyildirim.com)  
Phone: +1 (269) 277-6992

## Education

2012-2018 (expected)	<b>Michigan State University, USA</b> Ph.D. Candidate, Mathematics Advisor: Selman Akbulut Thesis title: <i>Cayley Grassmannian and Deformations in <math>G_2</math> manifolds</i> (in progress) Research interests: $G_2$ and Spin(7) manifolds, low dimensional topology
2007-2012	<b>Middle East Technical University, Turkey</b> B.S., Mathematics
2007-2012	B.S., Computer Engineering

## Academic Appointments

Spring 2016 - Spring 2018	<b>Michigan State University</b> Research Assistant
Fall 2012 - Spring 2018	Teaching Assistant
Fall 2014 - Fall 2016	Math Learning Center Lead TA
Fall 2015	Mentoring Leader at the Center for Instructional Mentoring
Spring 2011, Fall 2011	<b>Middle East Technical University</b> Undergraduate Teaching Assistant

## Honors and Awards

Summer 2018	<b>Dissertation Completion Fellowship</b> Department of Mathematics, Michigan State University
Spring 2016	<b>Excellence in Teaching Award</b> Department of Mathematics, Michigan State University
Fall 2014	<b>Herbert T. Graham Scholarship</b> Department of Mathematics, Michigan State University

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<sup>1</sup>as of June 3, 2018

## Preprints

2. Selman Akbulut and Ustun Yildirim. Complex  $G_2$  manifolds. *arXiv preprint arXiv:1804.09951*, 2018
1. Üstün Yıldırım. On the minimal compactification of the Cayley Grassmannian. *arXiv preprint arXiv:1711.05169*, 2017

## Talks

	<b>Gökova Geometry Topology Conference 2018</b>
May 28, 2018	<i>Complex <math>G_2</math> manifolds and deformations of associative submanifolds</i>
	<b>AMS Sectional Meeting, Northeastern University</b>
Apr 22, 2018	<i>On the minimal compactification of the Cayley Grassmannian</i>
	<b>GSTGC 2018, University of Illinois at Chicago</b>
Apr 7, 2018	<i>Associative and Cayley Grassmannian</i>
	<b>Algebra Seminar, Tulane University</b>
Dec 7, 2017	<i>Cayley Grassmannian</i>
	<b>Topology Seminar, MSU</b>
Nov 20, 2017	<i>On the minimal compactification of the Cayley Grassmannian</i>
	<b>Student Geometry and Topology Seminar, MSU</b>
Fall 2017	<i>Complexified Cayley Grassmannian</i>
Spring 2017	<i>Conformal split <math>G_2</math> holonomy</i>
Fall 2016	<i>The Automorphism Group of the Octonions and Associated Geometrical Structures</i>
Fall 2015	<i><math>G_2</math> manifolds and Joyce's construction of compact examples</i>
Spring 2015	<i>Principal bundles and <math>G</math>-structures</i>
Spring 2014	<i>Gluck twisting 4-manifolds with odd intersection form</i>

## Teaching Experience

	<b>Michigan State University</b>
Spring 2017, Fall 2017	MTH 235 Differential Equations (recitation)
Fall 2015	MTH 132 Calculus I
Summer 2015	MTH 234 Multivariable Calculus
Fall 2014, Spring 2015	MTH 124 Survey of Calculus
Fall 2013, Spring 2014	MTH 124 Survey of Calculus
Fall 2012, Spring 2013	MTH 133 Calculus II (recitation)

As part of being an MLC lead TA:

Fall 2014, Spring 2015	Lead common review sessions for all MTH 124 sections
Fall 2015, Spring 2016, Fall 2016	Lead common review sessions for all MTH 132 sections

## Service

- Served as a referee for the Proceedings of Gökova Geometry/Topology (GGT)

- Serving as an editor for the Journal of GGT and Proceedings of GGT
- Scientific staff at the GGT Institute
- Created and maintaining the website of the GGT Institute
- Co-organized Graduate Student Topology and Geometry Conference 2017
- Co-typeset “Notes on Algebraic Topology” by Selman Akbulut

## Skills and Languages

- C, C++, Haskell, Java, Latex, Python, Sage, JavaScript, PHP, MySQL
- English (advanced), German (beginner), Turkish (native)

## References

Selman Akbulut (Advisor)  
Department of Mathematics  
Michigan State University  
akbulut@math.msu.edu  
+1 (517) 353-7997

Mahir Bilen Can  
Department of Mathematics  
Tulane University  
mcan@tulane.edu  
+1 (504) 862-3448

Matthew Hedden  
Department of Mathematics  
Michigan State University  
mhedden@math.msu.edu  
+1 (517) 353-0881

Benjamin Schmidt  
Department of Mathematics  
Michigan State University  
schmidt@math.msu.edu  
+1 (517) 353-8484

Andrew Krause (Teaching)  
Department of Mathematics  
Michigan State University  
krausea3@math.msu.edu  
+1 (517) 884-7436