

# Andrea N. Young

---

## Personal Data

### *Citizenship*

United States of America

### *Current Address*

Department of Mathematics  
University of Arizona  
617 N. Santa Rita Ave  
Tucson, AZ 85721-0089

### *Phone*

520-621-2891 (office)

### *Email*

[ayoung@math.arizona.edu](mailto:ayoung@math.arizona.edu)

### *Website*

<http://www.math.arizona.edu/~ayoung/>

## Education

### **Ph. D. in Mathematics:**

University of Texas at Austin

May 2008

*Advisor* Karen Uhlenbeck

### **B.S. in Mathematics:**

Pennsylvania State University (High Honors)

December 2001

## Academic Positions

### **VIGRE Postdoctoral Fellowship**

University of Arizona

August 2008-present

## Research Interests

Differential Geometry, Geometric Analysis, Geometric Partial Differential Equations

## Mathematical Writing

### **Modified Ricci Flow on a Principal Bundle**

(Ph.D. dissertation)

Spring 2008

### **Asymptotic stability of the cross curvature flow at a hyperbolic metric**

(with Dan Knopf) Proc. Amer. Math. Soc. 137 (2009), 699-709

Fall 2008

### **The Cross Curvature Flow on a Negatively Curved Solid Torus**

(with Dan Knopf and Jason DeBlois) In preparation

Fall 2007

### **Flapping Flags and Conformal Mappings**

(Undergraduate Honors Thesis)

Fall 2001

## Awards and Fellowships

### **Bruton Fellowship Dissertation Award**

Spring 2008

### **Graduate School Fellowship**

Fall 2007-Spring 2008

### **David Bruton, Jr. Graduate Fellowship**

Spring 2006

### **Clay Mathematics Institute 2005 Summer School**

Ricci Flow, 3-manifolds, and Geometry

Summer 2005

### **VIGRE Graduate Traineeship**

Fall 2004-Summer 2005

### **VIGRE Graduate Traineeship**

Fall 2002-Summer 2003

### **Geometry Group Support**

Summers 2004, 2006, Spring 2007

**Honorable Mention:**

NSF Graduate Fellowship Program Spring 2002

**Evan Johnson Memorial Award:**

Penn State Department of Math Spring 2000

**Academic Excellence Award:**

Schreyer Honors College Penn State Fall 1997-Fall 2001

**Selected Talks****An Introduction to Geometric Flows**

Geometry Seminar, University of Arizona Fall 2008

**Stability of Geometric Flows**

Special Seminar, University of Warwick Spring 2008

**Kaehler-Ricci Flow**

Jr. Geometry Seminar, UT Austin Spring 2007

**Asymptotic Stability of the Cross Curvature Flow at a Hyperbolic Metric**

GADGET Seminar, UT Austin Fall 2006

**An Introduction to Geometric Flows**

Jr. PDE Seminar, UT Austin Fall 2006

**An Introduction to Mean Curvature Flow**

Jr. PDE Seminar, UT Austin Spring 2006

**A Limiting Case of the Porous Medium Equation**

Special PDE Seminar, UT Austin Fall 2005

**Ricci Solitons**

Jr. Geometry Seminar, UT Austin Fall 2005

**Neckpinches in the Ricci Flow**

Jr. Geometry Seminar, UT Austin Spring 2005

**On “3-manifolds with Positive Ricci Curvature” (Candidacy Exam)**

Special Geometry Seminar, UT Austin Fall 2004

**An Introduction to Substitution Tiling (Prelim Option)**

Jr. Topology Seminar, UT Austin Spring 2004

**Numerical Methods for Conservation Laws**

AMS Joint Mathematics Meetings, San Diego, CA Spring 2002

**Spindown of an Elastic Fluid**

Nebraska Conference for Undergraduate Women in Mathematics Spring 2001

**Spindown of an Elastic Fluid**53<sup>rd</sup> Annual Meeting of the Division of Fluid Dynamics Fall 2000**Professional Experience****Instructor**

M125: Calculus 1 (University of Arizona) Fall 2008

M408D: Differential and Integral Calculus (University of Texas) Summer 2008

**Assistant Instructor (Instructor of Record)**

M305G: Elementary Functions and Coordinate Geometry Fall 2005, Fall 2006

M210T: Parallel Instruction for M305G Fall 2005, Fall 2006

M316K: Foundations of Arithmetic Spring 2006

**Teaching Assistant**

M310T: Mathematical Methods-Writing Intensive	Fall 2007
M408M: Multivariable Calculus	Summer 2007
M408C: Differential and Integral Calculus	Summer 2004
M408K: Calculus I for Business and Economics (SI Leader)	Fall 2003
<b>Graduate Research Assistant</b>	
<i>Advisor</i> Karen Uhlenbeck	Summers 2004, 2006, and Spring 2007
<i>Advisor</i> Charles Radin	Spring 2003

### Outreach

<b>Distinguished Women in Mathematics lecture series (UT)</b>	
Co-organizer	Fall 2007
<b>Annual Women in Mathematics Reception (UT Undergraduate Math Club)</b>	
Panelist	Fall 2007
<b>Symposia on Analysis of Geometric Evolution (UT)</b>	
Co-organizer of Undergraduate Outreach Component	Spring 2007
<b>Symposia on Analysis of Geometric Evolution (UT)</b>	
Co-organizer of Graduate Component	Spring 2007
<b>Expanding Your Horizons</b>	
Workshop Leader	Spring 2007
<b>Supplemental Instruction</b>	
SI Leader	Fall 2003
<b>Saturday Morning Math Group (UT)</b>	
Graduate Student Volunteer	Fall 2002-Spring 2004

### Conferences Attended

<b>Symposia on Analysis of Geometric Evolution</b>	
University of Texas	Spring 2007, Spring 2008
<b>Geometric Evolution Equations</b>	
MSRI	Spring 2007
<b>Introductory Workshop on Geometric Flows</b>	
MSRI	Fall 2006
<b>Connections for Women: Geometric Analysis and Nonlinear PDE</b>	
MSRI	Fall 2006
<b>Texas Geometry and Topology Conference</b>	
University of Houston	Spring 2006
<b>21<sup>st</sup> Annual Geometry Festival</b>	
University of Pennsylvania	Spring 2006
<b>Women in Mathematics: The Legacy of Ladyzhenskaya and Oleinik</b>	
MSRI	Spring 2006
<b>Texas Geometry and Topology Conference</b>	
University of Texas	Fall 2005
<b>Clay Mathematics Institute 2005 Summer School</b>	
MSRI	Summer 2005

## References

Karen Uhlenbeck (advisor), UT Austin  
Dan Knopf, UT Austin  
Takis Souganidis, UT Austin  
Jason Deblois, UIC  
Lorenzo Sadun, UT Austin (teaching)