

# Pengcheng Xu

## Address

School of Mathematics  
Sun Yat-sen University  
Xingangxi Road 135, Haizhu  
Guangzhou, Guangdong, China, 510275

## Contact information

xupch5@mail.sysu.edu.cn

## EDUCATION

- Ph.D. in Mathematics  
Oklahoma State University  
Advisor: Jesse E. Johnson  
Co-Advisor: Henry Segerman
- B.S. in Mathematics  
Sun Yat-sen University

Aug 2010–May 2016  
Stillwater, OK, USA

Sept 2006–Jun 2010  
Guangzhou, Guangdong, China

## ACADEMIC APPOINTMENTS

- Sun Yat-sen University  
Postdoctoral Fellow

Aug 2016–Present

## HONORS AND AWARDS

- Jeanne Agnew Endowed Fellowship
- Hamilton Awards for Topology
- Hamilton Awards for Topology
- Hamilton Awards for Topology

April 14, 2015  
April 14, 2015  
April 17, 2014  
April 28, 2011

## RESEARCH INTERESTS

My main research interests lie in the fields of low dimensional topology and hyperbolic geometry. In particular, I'm interested in the studies of topological decompositions of 3- and 4-manifolds and the hyperbolic geometry information about these manifolds.

## PAPERS

- P-moves between pants-block decompositions of 3-manifolds. (Submitted)
- Hyperbolic structure on pants-block decompositions of 3-manifolds, with Henry Segerman (In preparation)
- Ph.D thesis: Pants-block decompositions of 3-manifolds.

## INVITED TALKS

- University of Georgia  
*Hyperbolic structures on 3-manifolds with pants block decompositions* Mar 21, 2016  
Athens, Georgia
- School of Mapping Class Groups and Related Topics  
South China University of Technology  
*Introduction to trisections of 4-manifolds* Feb 17, 2016  
Guangzhou, China
- University of Georgia  
*P-moves between pants block decompositions of 3-manifolds* Mar 23, 2015  
Athens, Georgia
- Sun Yat-sen University  
*P-moves between pants block decompositions of 3-manifolds* Mar 4, 2015  
Guangzhou, China
- Redbud Topology Conference  
University of Arkansas  
*P-moves between pants block decompositions of 3-manifolds* Nov 1, 2014  
Fayetteville, Arkansas

## CONFERENCE TALKS

- Moab Topology Conference  
Utah State University at Moab  
*P-moves between pants block decompositions of 3-manifolds*  
May 18-21, 2015  
Moab, UT
- Spring Western Sectional Meeting  
University of Nevada, Las Vegas  
*P-moves between pants block decompositions of 3-manifolds*  
Apr 18-19, 2015  
Las Vegas, NV
- The Tenth East Asian School of Knots and Related Topics,  
East China Normal University  
*P-moves between pants block decompositions of 3-manifolds*  
Jan 26-29, 2015  
Shanghai, China
- The thin manifold: A conference on knots and 3-manifolds,  
student workshop, University of Iowa  
*Pants decompositions and layered models.*  
Aug 5-10, 2014  
Iowa city, IA
- Graduate Student Topology and Geometry Conference  
UT Austin  
*Pants decompositions and layered models.*  
Apr 5-6, 2014  
Austin, TX

## ACTIVITIES

- School of Mapping Class Groups and Related Topics  
South China University of Technology  
Feb 17-19, 2016  
Guangzhou, China
- Workshop on Geometric Structures on 3-Manifolds  
Institute for Advance Study  
Oct 5-9, 2015  
Princeton, NJ
- Moab Topology Conference  
Utah State University  
May 18-21, 2015  
Moab, UT
- AMS Spring Western Sectional Meeting  
University of Nevada, Las Vegas  
Apr 18-19, 2015  
Las Vegas, Nevada
- The Tenth East Asian School of Knots and Related Topics  
East China Normal University  
Jan 26-29, 2015  
Shanghai, China
- 4th annual Tech Topology conference  
Georgia Institute of Technology  
Dec 5-7, 2014  
Atlanta, GA
- 52nd Texas Geometry and Topology Conference  
UT Austin  
Nov 14-16, 2014  
Austin, TX
- 7th Redbud Topology Conference  
University of Arkansas  
Nov 1, 2014  
Fayetteville, AR
- Yamabe Symposium  
University of Minnesota  
Oct 17-19, 2014  
Minneapolis, MN
- JDG Conference on Geometry and Topology  
Harvard University  
Sept 12-14, 2014  
Boston, MA
- The thin manifold: A conference on knots and 3-manifolds  
University of Iowa  
Aug 5-10, 2014  
Iowa city, IA
- Topology student workshop  
Georgia Institute of Technology  
Jun 9-13, 2014  
Atlanta, GA
- Georgia topology conference  
University of Georgia  
May 21-25, 2014  
Athens, GA

- 6th Redbud Topology Conference  
University of Oklahoma **Apr 11-13, 2014**  
**Norman, OK**
- Graduate Student Topology and Geometry Conference  
UT Austin **Apr 5-6, 2014**  
**Austin, TX**
- 5th Redbud Topology Conference  
Oklahoma State University **Oct 26, 2013**  
**Stillwater, OK**
- Geometric Topology in New York  
Columbia University **Aug 12-16,2013**  
**New York, NY**
- Workshop and Conference on the Topology and Invariants  
of Smooth 4-Manifolds, University of Minnesota **Jul 30-Aug 10, 2013**  
**Minneapolis, MN**
- The topology of 3-dimensional manifolds  
Université de Montréal **May 6-17, 2013**  
**Montreal, Canada**
- 3-Manifolds: Heegaard Splittings, the Curve Complex,  
and Hyperbolic Geometry, Rice University, **Apr 19-21,2013**  
**Houston, TX**
- Hot Topics: Surface subgroups and cube complexes  
MSRI **Mar 18-22,2013**  
**Berkeley, CA**
- 4th Redbud Topology Conference  
University of Arkansas **Mar 8-9, 2013**  
**Fayetteville, AR**
- Current Developments in Mathematics 2012  
Harvard University **Nov 16-17, 2012**  
**Boston, MA**
- 48th Texas Geometry and Topology Conference  
Rice University **Nov 9-11, 2012**  
**Houston, TX**
- 3rd Redbud Topology Conference  
University of Oklahoma **Nov 3, 2012**  
**Norman, OK**
- Midwest Topology Seminar Fall 2012  
Michigan State University **Oct 27-28, 2012**  
**Lansing, MI**
- Georgia Topology Conference  
University of Georgia **May 9-13, 2012**  
**Athens, GA**
- 2nd Redbud Topology Conference  
Oklahoma State University **Mar 3-4, 2012**  
**Stillwater, OK**
- 19th Southern California Geometric Analysis Seminar  
UC Irvine **Jan 14-17, 2012**  
**Irvine, CA**
- 1st Redbud Topology Conference  
University of Arkansas **Nov 19, 2011**  
**Fayetteville, AR**
- 46th Texas Geometry and Topology Conference  
UT Austin **Oct 7-9, 2011**  
**Austin, TX**
- 18th Southern California Geometric Analysis Seminar  
UCSD **Feb 26-27, 2011**  
**San Diego, CA**
- 44th Texas Geometry and Topology Conference  
Texas A&M **Nov 12-14, 2010**  
**College Station,TX**

## TEACHING EXPERIENCE

### In Sun Yat-sen University

|  |            |           |
|--|------------|-----------|
| <b>Higher Mathematics</b><br>(include calculus and differential equations) | Instructor | Fall 2016 |
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### In Oklahoma State University

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|---------------------|------------|-----------|
| <b>Trigonometry</b> | Instructor | Fall 2015 |
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| <b>College Algebra</b> | Instructor | Fall 2014 |
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| <b>Trigonometry</b> | Instructor | Fall 2013 |
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| <b>Calculus III</b> | Instructor | Summer 2013 |
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| <b>Elementary Calculus</b> | Instructor | Summer 2011 |
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| <b>Elementary Calculus</b> | Teaching Assistant | Spring 2011, Fall 2011, Spring 2012,<br>Fall 2012, Spring 2013 |
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