

# Jing Wang | Curriculum Vitae

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## Research Interests

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- **Probability:** degenerate hypoelliptic diffusion processes, stochastic processes on sub-Riemannian manifolds.
- **Differential Geometry:** sub-Riemannian geometry, in particular the generalized notion of curvature
- **Analysis:** concentration of measure and functional inequalities with geometric contents

## Postdoc Appointments

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**J.L. Doob research assistant professor** UIUC, Urbana, IL **2015-Present**  
**Postdoc fellow** IMA, University of Minnesota, Minneapolis, MN **2014-2015**

## Education

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**Ph.D., Mathematics:** Purdue University, West Lafayette, IN **May 2014**  
*Advisor: F. Baudoin*

**M.S., Computational Finance** Purdue University, West Lafayette, IN **May 2013**

**B.S., Mathematics:** Fudan University, Shanghai, China **August 2008**

## Publications

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- F. Baudoin, J. Wang,** Stochastic areas, Winding numbers and Hopf fibrations, *Probability Theory and Related Fields*, (2016) doi:10.1007/s00440-016-0745-x
- J. Wang,** Conformal transforms and Doob's  $h$ -processes on Heisenberg groups *Birkhauser's series, Progress in Probability*, 2016, to appear
- N. Feldheim, A. Marsiglietti, P. Nayar, J. Wang,** A note on the convex infimum convolution inequality, 2015, *Bernoulli Journal*, to appear
- J. Wang,** The Subelliptic Heat Kernel on the anti-de Sitter spaces, *Potential Analysis*, (2016), 45(4), 635-653
- F. Baudoin, B. Kim, J. Wang,** Transverse Weitzenböck formulas and curvature dimension inequalities on Riemannian foliations with totally geodesic leaves, *Communications in Analysis and Geometry*, (2014) to appear
- F. Baudoin, J. Wang,** The Subelliptic Heat Kernels of the Quaternionic Hopf Fibration, *Potential Analysis*, 41, no 3, (2014) 959-982
- F. Baudoin, J. Wang,** Curvature dimension inequalities and subelliptic heat kernel gradient bounds on contact manifolds, *Potential Analysis*, 40, (2014) 163-193
- F. Baudoin, J. Wang,** The Subelliptic Heat Kernel on the CR Sphere, *Mathematische Zeitschrift*, 275, (2013), 1-2, 135-150

## Talks

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### Invited Conference Talks

Summer School in Probability, Northwestern University, Jul. 2016  
First Symposium on stochastic Partial Differential Equations, Wuhan, China, Jun. 2016  
Brownian Motions and Stochastic Processes-Conference in memory of Marc Yor, Japan. Jun. 2016  
Summer School on Stochastic Analysis and Geometry, University of Illinois at Chicago, Aug. 2014  
AMS Western Spring Sectional Meeting, University of New Mexico, Apr. 2014  
Perspectives in Analysis and Probability Conference, Workshop 4: Stochastic Differential Geometry, France, May. 2013  
Graduate Research Day, Purdue University, April. 2013  
Perspectives in HA, GMT, and PDEs, and their Applications to SCV Conference, Temple University, Sept. 2012

### Invited Seminar Talks

Northwestern University, Analysis Seminar, Mar. 2016  
Purdue University, Probability seminar, Sept. 2015  
Women in Probability ECPG online seminar, May. 2015  
Temple University, Analysis seminar, Mar. 2014  
UIUC, Probability seminar, Oct. 2013  
University of Virginia, Probability seminar, Sept. 2013  
Courant Institute, New York University, Probability seminar, Sept. 2013

### Contributing Conference Talks

36th Conference on Stochastic Processes and their Applications, Boulder, CO, July. 2013  
JMM 2013, San Diego, CA, Jan. 2013

### Seminar Talks at Home Institution

UIUC, Probability Seminar, Feb. 2016  
UIUC, Several Complex Variables and CR Geometry Seminar, Sept. 2015  
Purdue University, Student Colloquium, Mar. 2014  
Purdue University, Probability seminar, Oct. 2012  
Purdue University, PDE seminar, Apr. 2012

## Undergraduate Research Supervisions

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### Illinois Geometry Lab Project (Math 492) UIUC

Spring 2016

Project: Brownian motion and diffusion processes

Graduate Students: Derek Jung, Yunchao Qi

Undergraduate Students: Lucas M. Capoa, John A. Haug, Zhe Hu, Zhaopeng Liu

### Undergraduate Summer Research Project UIUC

Summer 2016

Project: Brownian sheet and stochastic volume processes

Undergraduate Students: Zhe Hu

## Teaching Experience

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### Teaching in UIUC

Math 567/476 Actuarial Risk Theory	Fall 2016
<i>Math Fiance course for Actuarial Science Program (21 graduate and 51 undergraduate students)</i>	
Math 210 Theory of Interest	Spring 2016
<i>First course in financial mathematics for Actuarial Science Program (85 students)</i>	
Math 441 Differential Equations	Fall 2015

### Teaching in Purdue (As Recitation Instructor)

Math 161 Plane Analytic Geometry And Calculus I	Spring 2013, Fall 2011
Math 261 Multivariate Calculus	Spring 2012
Math 262 Linear Algebra And Differential Equations	Fall, Spring 2010

### Leaderships and Activities

<b>Instructor</b> Purdue Salsa Club	Jan. 2012- May. 2014
<b>President</b> Purdue Salsa Club	May. 2012-May. 2013

## Grants and Scholarships

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<b>Purdue Research Foundation fellowship</b> Purdue University	2013-2014
<b>SPA Travel Grant</b> <i>36th SPA conference, Boulder, CO</i>	Jul. 2013
<b>Henri Lebesgue Center Mobility Grant</b>	May. 2013
<i>2013 Prospectives in Analysis and Probability Conference, Rennes, France.</i>	
<b>Association for Women in Mathematics (AWM) travel grant</b> Purdue University	Spring 2013
<b>AMS JMM Travel Grant</b> <i>2012 Joint Mathematics Meetings, San Diego, CA</i>	Jan. 2013
<b>Women in Science Programs (WISP) Travel Grant</b> Purdue University	Fall 2012
<b>Research Grant under D. Xiu</b> Purdue University	Fall 2012
<b>AMS MRC Travel Grant</b> <i>AMS MRC Program, Snowbird, UT</i>	Jun. 2012
<b>Purdue University Graduate Student Summer Research Grant</b>	Summer 2012
<b>Research Grant under F. Baudoin</b> Purdue University	Spring 2011
<b>Purdue University Graduate Student Summer Research Grant</b>	Summer 2010

## Professional Service

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<b>Co-orgnizer</b> Probability Seminar, UIUC
<b>Referee/Reviewer</b> Math Review, Annales de la Faculté des Sciences de Toulouse

## Posters

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Seminar on Stochastic Processes, University of Delaware, Newark, DE, Apr. 2015
Postdocs Show and Tell, IMA, University of Minnesota, Minneapolis, MN, Sept. 2014
Stochastic processes and high dimensional probability distributions, St. Petersburg, May. 2014
Workshop in Partial Differential Equations and Several Complex Variables, Brazil, Aug. 2013
Workshop for Women in Probability, Duke University, NC, Oct. 2012
AMS Mathematics Research Communities Program, Snowbird, UT, Jun. 2012

## References

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