

Diane C. Holcomb

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INFORMATION Department of Mathematics people.kth.se/~holcomb
Lindstedtsvägen 25
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RESEARCH Probability with a focus in random matrices.

POSITIONS Postdoctoral Fellow, KTH mathematics, Sweden, August 2017-present.
Richard Pierce Postdoctoral Fellow, University of Arizona, USA,
August 2014 - August 2017.

EDUCATION **University of Wisconsin-Madison**, Madison, WI USA
Ph.D., Mathematics, May 2014.
Advisor: Benedek Valkó
Thesis: Point Process Limits of Random Matrices
The George Washington University, Washington, D.C. USA
B.A., Mathematics, Summa Cum Laude, May 2008

PAPERS Holcomb, D., Lambert, G., Paquette, E., Vetó, B., and Virág, B., *A CLT for linear statistics of $Sine_\beta$* , in preparation.

Gonzalez, A. and Holcomb, D., *Evolution of the stochastic Airy eigenvalues under a changing boundary*, preprint October 2018.

Holcomb, D., *The random matrix hard edge: rare events and a transition*, Elec. J. Prob., v. 23, p. 1-20 (2018) .

Holcomb, D., and Paquette, E., *The maximum deviation of the $Sine_\beta$ counting process*, Elec. Comm. Prob., v. 23, p.1-13 (2018).

Holcomb, D., and Paquette, E., *Tridiagonal models for Dyson Brownian motion*, <https://arxiv.org/abs/1707.02700> July 2017.

Holcomb, D. and Valkó, B., *Overcrowding asymptotics for the $Sine_\beta$ process*, AIHP, v. 53, no. 3, p. 1181-1195 (2017).

Holcomb, D. and Valkó, B., *Large deviations for the $Sine_\beta$ and Sch_τ processes*, PTRF, v.163, Issue 1 (2015), p. 339-378 10.1007/s00440-014-0594-4.

Holcomb, D. and Moreno-Flores, G., *Edge Scaling of the β -Jacobi Ensemble*, J. Stat Phys, 149:1136-1160, December 2012.

OTHER Holcomb, D. and Virág, B., *An introduction to operator limits of random matrices*, Book Chapter, To appear Park City Mathematics Series for 2017 summer school.

- AWARDS
- AWM conference travel grant, February 2016
 - University of Wisconsin-Madison
 - Mary Ellen Rudin Scholarship, 2011-2012
 - VIGRE fellowship, Spring/Summer 2009
 - Honored Instructor Award, Fall 2010, Fall 2011
 - Mathematics Graduate Student Teaching Award, 2010-2011
 - The George Washington University
 - Ruggles Undergraduate Mathematics Prize, 2007
 - Luther Rice Research Fellowship, 2006
 - Science Scholar for Mathematics, 2004
- UPCOMING TALKS
- Probability Seminar, University of Bristol, Bristol, UK, November 2018.
 - “XIV Brunel-Bielefeld Workshop on RMT,” Brunel University, UK, December 2018.
 - “Integrability and Randomness in Mathematical Physics and Geometry,” CIRM, Marseille, France, April 2019.
- INVITED TALKS
- On the centered maximum and linear statistics of the Sine beta process-* “Gaussian Fields in Random Matrix Theory,” Mittag-Leffler institute, Stockholm, Sweden, June 2018.
 - On the centered maximum of the Sine beta process-* Probability Seminar, University of Toronto, Canada, March 2018.
 - Random matrix limits via stochastic differential equations-* “Optimal and Random Point Configurations,” ICERM, Providence, RI USA, March 2018.
 - Random Matrices via differential equations-* Seminar, Renyi Institute, Budapest, Hungary, October 2017.
 - Tridiagonal models and operator limits-* Random matrices and integrable systems seminar, CIMAT, Guanajuato Mexico, June 2017.
 - Tridiagonal Models for Dyson Brownian Motion-* CIMAT-UA workshop, U of AZ, Tucson, AZ USA, March 2017.
 - From the hard edge to the bulk: a point process transition-* “Random matrices and integrable systems,” AMS sectional meeting, Boulder, CO USA, October 2016.
 - Local limits of Dyson Brownian Motion at multiple times-* Probability seminar, UW-Madison, WI USA May 2016.
 - Rare events for the Sine $_{\beta}$ process-* Probability seminar, University of Colorado-Boulder, USA, April 2016.
 - Rare events for the Sine $_{\beta}$ process-* “Beta Ensembles: Universality, Integrability, and Asymptotics,” BIRS workshop, Banff, Canada, April 2016.
 - Local limits of Dyson Brownian Motion at multiple times-* Analysis seminar, GWU, Washington, DC, USA March 2016.
 - Rare events for the Sine $_{\beta}$ process-* Probability seminar, University of Toronto, Canada, March 2016.
 - Rare events for the Sine $_{\beta}$ process-* Probability seminar, UC–Davis, CA USA October 2015.

Park City Math Institute	
Teaching Assistant for Balint Virag	June-July 2017
Institute for Advanced Study - Women and Mathematics	
Teaching Assistant	May 2014
Summer Program for Women in Math	
Teaching Assistant	Summer 2010 and 2011

REFERENCES	Maurice Duits	Benedek Valkó
	Associate Professor	Professor
	KTH	University of Wisconsin, Madison
	duits@kth.se	valko@math.wisc.edu
	Kurt Johansson	Bálint Virág
	Professor	Professor
	KTH	University of Toronto
	kurtj@kth.se	Balint@math.toronto.edu
	Brian Rider	Bruce Bayly (concerns teaching)
	Professor	Professor
	Temple University	University of Arizona
	brian.rider@temple.edu	bjb@math.arizona.edu