Diane C. Holcomb

Contact Information	KTH Department of Mathematics Lindstedtsvägen 25 100 44 Stockholm, Sweden	$\label{eq:loss} \begin{array}{l} {\rm holcomb@kth.se} \\ {\rm people.kth.se}/{\sim} {\rm holcomb} \end{array}$	
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., Vető, B., and Virág, B., A CLT for linear statistics of Sine_β, 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_β 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_β process, AIHP, v. 53, no. 3, p. 1181-1195 (2017). Holcomb, D. and Valkó, B., Large deviations for the Sine_β 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 PUBLICATIONS	Holcomb, D. and Virág, B., An introduc ces, Book Chapter, To appear Park Cit		

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	Probability Seminar, University of Bristol, Bristol, UK, November 2018.	
TALKS	"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.	
	<i>Tridiagonal models and operator limits</i> - 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.	

	Rare events for point process limits of random matrices- Probability seminar, UC–Irvine, CA USA, January 2015.		
	Rare events for point process limits of random matrices- Probability seminar, UC-San Diego, CA USA October 2014.		
	Rare events for point process limits of random matrices-"Number Theory Day," University of Stellenbosch, South Africa, July 2014.		
	Large Deviations for limits of eigenvalues of random matrices- Seminar, University of Sussex, UK, June 2014.		
	 Large Deviations for for point process limits of random matrices- "IAS Wome and Mathematics," IAS, NJ USA, May 2014. Large Deviations for point process limits of random matrices- "AWM Researce Symposium," Santa Clara University, March 2013. 		
	Local Scaling limits at the edge of β -ensembles- Probability seminar, University of Utah, Salt Lake City, UT USA, August 2012.		
Service	 -Organizer, Postdoc Welcome Day, Fall 2018 (KTH) -Organizer, Random Matrix Theory Seminar, 2017-2018, 2018-2019 academic years (KTH). -Founding organizer, AWM chapter, 2016-2017 academic year (U of A). -Organizer, department postdoc seminar, 2016-2017 academic year (U of A). -Applied Mathematics Program admissions committee, 2015 and 2016 (U of A). -Organizer, Cookies and Math seminar, Fall 2012 to Spring 2013 (UW-Madison). -Collaborated on curriculum materials for Math 132 (UW-Madison). -Organizer of WIMAW (Women In Math At Wisconsin), 2010-2011 academic year. 		
Outreach and Mentoring	 Graduate student mentoring, Angelica Gonzalez, Spring 2016-Fall 2018. Undergraduate TA mentoring, Spring 2015, Fall 2015, and Spring 2017. Undergraduate reading/research mentor, Spring 2015. Volunteer, Tucson Festival of Books, March 2016. Volunteer, Sonya Kovalevsky Day, March 2015. 		
Teaching	КТН		
	Short Course: Random Matrices via Differential Operators Fall 2017		
	University of Arizona		
	MATH 563: Probability (graduate) Fall 2016 MATH 464: Intro to Probability (undergraduate) Fall 2015/Spring 2017 MATH 413/513: Linear Algebra (undergraduate/graduate) Spring 2015 MATH 125: Calculus 1 (undergraduate) Fall 2014		
	University of Wisconsin-Madison		
	Instructor Fall 2013		
	MATH 132: Problem Solving: Algebra, Probability and Statistics Teaching Assistant Fall 2008 to Spring Calculus with algebra and trigonometry, calculus I, II, and III, linear bra, ordinary differential equations.		
	Summer Programs		

	Park City Math Institute			
Teaching Assistant for Balínt Virág		ig 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		

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