

1.2 VIGRE supported REU students

Student ²	VIGRE REU	Project subject	Related activities	Undergraduate	Current status
Allred, Micah	Group Program Summer 2002 Khoshrnevisan	“Mathematics of Finance” and “Simulating the Wright-Fischer Gene Frequency Model”	Honor’s thesis: “Regulated Fractional Brownian Motion with Applications to Options Pricing	2003 Mathematics Japanese (minor) Economics (minor) Brigham Young University	Applying to PhD programs in Economics
Ayala, David	Individual Summer 2002 Korevaar	Minimal surfaces & CMC surfaces		2002 Mathematics University of Utah	PhD Program Mathematics Stanford University
Bagley, Spencer	Group Program Summer 2005 Ethier	Chemin de Fer and Sampling without Replacement		2006 Mathematics University of Utah	
Behumin, Ryan	Individual 2003-2004 AY A. Cherkhev	Problem of optimal design with unknown load		2004 Physics University of Utah	
Bowen, Kelly	Group Program Summer 2005 Ethier	Mathematics of Games of Chance		2006 Mathematics Cornell University	
Budge, Brian	Individual 2001-2002 AY Schmitt	Iterated function systems on function spaces	See App. 1	2002 Mathematics University of Utah	PhD Program Computer Science UC Davis
Burton, Ira	Individual Fall 2004 Wright	Neural networks		2005 Mathematics University of Utah	

²Female REU students’ names appear in italics.

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Butler, Rex	Group Program Summer 2001 Carlson/Toledo	Knot Theory: Colorability		2003 Mathematics University of Utah	Graduate Program Mathematics University of Utah
	Individual 2001-2002 AY Hecht	The irreducible representations of the symmetric group			
	Group Program Summer 2002 Khoshnevisan	Linear and Nonlinear Voter Voter Model			
Calaway, Christopher	Group Program Summer 2004 Dobson	Inverse problems in additive number theory		2006 Mathematics University of Utah	
	Group Program Summer 2001 Carlson/Toledo	Spatial embeddings of graphs		Mathematics University of Utah	
Cohen, Aaron	Individual 2001-2002 AY Bressloff	Application of dynamic equations to model cortical activity			
	Individual 2002-2003 AY M. Bestvina	Topological persistence on the structure of the contour tree		2003 Mathematics University of Utah	PhD Program Mathematics UCLA
Coon, Joshua	Individual Spring 2003 A. Cherkhaev	Packing problem		2005 Mathematics University of Utah	
	Individual 2002-2003 AY Kapovich	Relationships analogous to triangle inequalities		2003 Mathematics University of Utah	Software Engineer Autonomous Solutions Wellsville, UT

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Dalton, Matthew	Group Program Summer 2001 Carlson/Toledo Individual 2001-2002 AY M. Bestvina	Knot theory: colorability Automorphisms		2002 Mathematics Physics (minor) Spanish (minor) University of Utah	
Das, Dilip	Group Program Summer 2005 Ethier	Mathematics of Games of Chance		2007 Mathematics MIT	
Dobie, Ginger	Individual Fall 2005 Korevaar	Investigations related to the True Body Mass Index		2007 Mathematics University of Utah	
Du, Song	Individual 2001-2002 AY Fife Group Program Summer 2002 Khoshnevisan Individual Summer 2003 Bressloff	Lattice models for the motion of phase boundaries Hitting/Escape Probabilities for Brownian Motion Model the properties of spike sequences generated by neurons in response to known stimuli		2005 Mathematics Electrical Engineering University of Utah	
	Group Program Summer 2004 Dobson	Inverse problems and Applications			

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Ellis, Amanda	Group Program Summer 2002 Khoshnevisan	“Mathematics of Finance” “Simulating the Wright- Fischer Gene Frequency Model”		2002 Mathematics University of Utah	PhD Program University of Utah
Faust, John	Individual Spring 2003 Bressloff Individual 2003-2004 AY Bressloff Group Program Summer 2005 Ethier	A mathematical model of the primary visual cortex Model of direction selectivity in the visual cortex Mathematics of Games of Chance		2004 Mathematics University of Utah	Medical School George Washington University
Ferris, Dustin	Group Program Summer 2005 Ethier	Mathematics of Games of Chance		2006 Mathematics Duquesne University	
Finlayson, Troy	Individual 2001-2002 AY Golden Individual Summer 2002 Golden Individual 2002-2003 AY Golden	Thermal conductivity of sea ice Thermal conductivity of sea ice Comparison of thermal conductivity data with multi-component material bounds in order to estimate the thermal conductivity of sea ice	Attended ETOPIIM6, June 2002 Lecture at NCUR, March 2003 Research trip to Barrow, AK, June 2003 See App 1.	2004 Physics University of Utah	Medical School University of Utah

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Fossmo-Jacobs, Jenny	Individual Spring 2002 Treibergs	Exploring self-similarity & the geometry of fractals		2003 Mathematics University of Utah	High School Mathematics Teacher
	Individual Summer 2002 Treibergs	Hausdorff dimension & box counting dimension			
	Group Program Summer 2003 Bertram	Elliptic Curves			
Giessing, Michael	Group Program Summer 2003 Bertram	Elliptic Curves		2004 Mathematics University of Utah	Graduate Program Mathematics University of Utah
	Group Program Summer 2003 Bertram	Elliptic Curves		Mathematics University of Puerto Rico	
Groulx, David	Individual Spring 2004 Hartenstine	A level set model for realistic cloth simulation		2005 Mathematics University of Utah	
	Group Program Summer 2004 Dobson	Real time visualization and rendering			

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Gully, Adam	Group Program Summer 2004 Dobson	Digital cleaning of old painting	Research trip to Barrow, AK, Summer 2005	2007 Mathematics University of Utah	
	Individual 2004-2005 AY Golden	Inverse problems in the microstructure of sea ice			
	Individual Summer 2005 Golden	Mathematics behind the electromagnetic response of sea ice			
Hadley, Rhett	Individual Spring 2003 Golden	Develop an equation model to describe the optimal algal position in sea ice		2005 Biology University of Utah	Medical School
	Individual Summer 2003 Golden	that characterizes their preferred position as a maximum minimum problem			
	Individual 2003-2004 AY Golden	Stochastic DE & their simulation		2003 Mathematics University of Utah	Medical School Rosalind Franklin University
Hancock, Nathan	Individual 2002-2003 AY Fogelson	A Multifractal Walk down Wall Street		2007 Mathematics, Physics, & Theatre University of Utah	
Harris, Patrick	Individual Fall 2005 Schmitt				

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<i>Heaton, Amy</i>	Individual Spring 2002 Golden Individual Summer 2003 Golden Individual 2003-2004 AY Golden	Modeling the microstructure of glacial sea ice Permeability of fluid & gas through natural ices Bounds for fluid flow through sea ice	Attended ETOPI6, Summer 2002 Lecture at NCUR, March 2003 AMS Exhibitor, CNSF Presentation, US Congress Lecture, NCUR in Mathematics, 2003 Lecture at seminar, Victoria University, New Zealand, 2004 Research trip to Barrow, AK, 2003 Lecture, Undergraduate Research Symposium, 2005 See App. 1	2005 Chemistry University of Utah	PhD Program Chemistry University of Utah
<i>Henline, Jason</i>	Group Program Summer 2003 Bertram	Elliptic curves		2006 Mathematics Physics University of Utah	
<i>Henriksen, Tara</i>	Individual Summer 2001 Adler Individual 2001-2002 AY Adler	Relationship between between disease & pulmonary function Optimal time for cystic fibrosis patients		University of Utah	PhD Program Engineering University of Utah

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Hofmann, Michael	Individual Spring 2003 Savin	Investigate the properties of elliptic functions	Honor's thesis: "On the length of continued fraction of $p/\sqrt{3}$ "	2004 Honors Mathematics University of Utah	PhD Program Mathematics UCLA
	Individual Summer 2003 Savin				
	Individual 2003-2004 AY Savin	On the length of continued fraction of $p/\sqrt{3}$			
Haupt, Joseph	Group Program Summer 2005 Ethier	Unbalanced Card Counting		2005 Mathematics University of Utah	
	Individual Summer 2004 Khoshnevisan	Asymptotic properties of GARCH	See App. 1	2006 Mathematics University of Utah	
Horvath, Zsuzanna	Individual 2004-2005 AY Khoshnevisan	Using simulations to study the properties of non-linear time series			
	Individual Summer 2002 Golden	Electromagnetic waves in homogeneous media	Research trip to Barrow, AK, 2004 Lecture, Undergraduate Research Symposium, 2005	2006 Mathematics Computer Engineering University of Utah	PhD Program Engineering Columbia University
	Individual Summer 2004 Golden	Conductivity of resistor networks			
Individual Fall 2004 Golden					
Jabini, Ali					

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Jarstad, Allison	Individual Spring 2004 Palais Individual Summer 2004	DNA synthesis & PCR DNA melting temperature analysis		2006 Mathematics Physics (minor) University of Utah	
Jensen, Stephen	Individual Summer 2001 Ethier	Optimal drawing strategy for Dueces Wild video	Research written up as tech report Results were used in a paper: S. N. Ethier & D. Khoshnevisan, Khoshnevisan, Bounds on gambler's ruin in terms of moments, Methodology & Computing in Applied Probability, 4, 55-68, (2004)	2002 Mathematics University of Utah	2004 M.S. Statistics Oregon State University
Johnson, Alan	Group Program Summer 2004 Dobson	Diffuse tomography		2006 Mathematics Physics (minor) UC Berkeley	
Johnston, Ryan	Individual Fall 2005 Horvath	Credit Scores & Correlation with Actual Financial Risk			

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Kartchner, Les	Group Program Summer 2003 Bertram	Elliptic curves		2004 Mathematics University of Utah	Graduate Program Mathematics University of Maryland
	Individual 2003-2004 AY Savin	Representation of binary cubic forms			
	Group Program Summer 2004 Dobson	Inverse problems			
Knaeble, Brian	Group Program Summer 2003 Bertram	Elliptic curves		2004 Mathematics University of Utah	Graduate Program Mathematics Georgia Tech
	Group Program Summer 2004 Dobson	Inverse problems		2004 Mathematics University of Utah	Graduate Program Mathematics Johns Hopkins University
Kramer, Joel	Group program Summer 2004 Dobson	Recovering exposure coefficients in the SEIR model in two & three populations		2005 Mathematics Japanese (minor) Colby College	
	Group program Summer 2003 Bertram	Elliptic curves		2003 Mathematics University of Utah	Graduate Program Mathematics University of Utah
Lanson, Gregory	Group program Summer 2003 Bertram	Elliptic curves			
Lindsay, David	Group program Summer 2004 Dobson	Recovering exposure coefficients in the SEIR model in two & three populations			
	Individual 2001-2002 AY Niziol	Elliptic curves			

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Mahboubi, Pejman	Individual 2003-2004 AY Smale Individual Summer 2004 Smale	Measure theory, Lebesgue integral integral Fourier analysis & wavelets		2005 Mathematics University of Utah	Graduate Program Mathematics UCLA
McKay, Ron	Group Program Summer 2002 Khoshnevisan Individual Spring 2003 Khoshnevisan	Hitting/Escape Probabilities for Brownian Motion Ito diffusions		2003 Mathematics University of Utah	Graduate Program Mathematics University of Utah
Meckler, Scott	Group Program Summer 2004 Dobson	Using rays of light & mirror to determine the makeup of a the body of an object		2006 Mathematics SUNY Geneseo	
Milyavskaya, Polina	Group Program Summer 2005 Ethier	Composition Dependent Strategy at Blackjack: Hit or Stand on Sixteen Network theory		2006 Computer Science Mathematics University of Utah	
Morris, Jeremy	Individual Summer 2004 Trapa Individual 2004-2005 AY Trapa		Lecture, Undergraduate Research Symposium, 2005	2005 Mathematics University of Utah	Research Assistant Budget & Analysis University of Utah

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Morris, Megan	Individual Spring 2004 Golden	Imaging microstructures in sea ice	Research trip to Barrow, AK, 2004	2006 Biomedical Engineering University of Utah	
	Individual Summer 2004 Golden				
	Individual Fall 2004 Golden				
	Individual Summer 2005 Golden	Composite materials & their effective properties			
Murphy, Ben	Individual Summer 2002 Golden	Electroheological fluids		2004 Mathematics Physics University of Utah	Graduate Program Mathematics University of Utah
	Individual 2002-2003 AY Golden	Propagation & scattering of electromagnetic waves in composite media			
Nelson, Andrew	Individual Summer 2005 Smale	Wavelets, frames, & operator algebras		2006 Mathematics University of Utah	

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<i>Newren, Nancy</i>	Individual 2002-2003 AY Fogelson Individual Summer 2003 Fogelson Group Program Summer 2004 Dobson	Elastic properties of fibrin meshes formed when blood clots Inverse Problems		2006 Mathematics University of Utah	
Nielsen, Hyrum	Individual 2003-2004 AY Enescu Group Program Summer 2001 Carlson/Toledo	Jet schemes for hyper- surfaces from a comput- ational point of view		2004 Mathematics University of Utah 2002 Computer Science Mathematics (minor) University of Utah	PhD Program School of Computing University of Utah
Pecharich, Jeremy	Individual 2004-2005 AY Bell Individual Summer 2005 Bell Group Program Summer 2003 Bertarm	Hyperbolic geometry CAT(0) groups and small cancellation groups Elliptic curves		2005 Mathematics Physics University of Utah 2006 Mathematics Physics University of Utah	Graduate Program Mathematics University of Utah
Perschon, Collin					

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Petersen, Kellen	Individual 2004-2005 AY Milton Individual Fall 2005 A. Charkaev	Composite materials with spiral geometry		2006 Mathematics Physics University of Utah	
Polevaya, Nika	Individual Summer 2004 Bromberg Individual 2004-2005 AY Bromberg	Three dimensional topology and geometry Hyperbolic geometry / topology		2005 Mathematics University of Utah	Medical School
Radke, Eric	Group Program Summer 2003 Bertram	Elliptic Curves		2004 Mathematics Case Western Reserve	Graduate Program Mathematics UCLA
Reimherr, Matthew	Group Program Summer 2005 Ethier Individual Fall 2005 Horvath	Mathematics of Games of Chance: Relationship between the Gambler's Ruin & Run Formulas Risk Associated with Credit Scores		2006 Mathematics University of Utah	
Rettberg, Ryan	Group Program Summer 2001 Carlson/Toledo	Knot theory: colorability		2002 Mathematics University of Utah	PhD Program Mathematics University of Illinois

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Sarijlou, Reza	Individual 2002-2003 AY E. Cherkaev	Study of random networks		2004 Mathematics Computer Engineering University of Utah	Myriad Genetics Studying biology
	Individual Summer 2003 E. Cherkaev	Investigate some of the many different kinds of networks			
	Individual 2003-2004 AY E. Cherkaev	Social networks			
Schweitzer, John	Group Program Summer 2002 Khoshnevisan			2003 Mathematics Physics Hillsdale College	
Shaha, Jacob	Individual Summer 2003 Bressloff	Computational modeling of the visual cortex		2005 Computer Engineering University of Utah	
Smalley, Jenise	Group Program Summer 2003 Bertram	Elliptic curves		2005 Mathematics Ashland University	High School Teacher Mathematics Ashland, OH
Stewart, Josh	Individual 2001-2002 AY Zhu	Black-Choles model in pricing both stock & bond options		University of Utah	
Taylor, Matthew	Group Program Summer 2002 Khoshnevisan			2003 Mathematics University of Utah	
Thomas, Mark	Group Program Summer 2005 Ethier	Mathematics of Games of Chance		2007 Mathematics University of Utah	

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Tran, Ban	Individual Fall 2005 Arcara	Solve Phenomenon Event Using a Computer Program		2006 Mathematics University of Utah	
Vannaisegaram, Sithparran	Group Program Summer 2005 Ethier	Mathematics of Games of Chance: Le Her with s Suits & d denominations	See App. 1	2006 Mathematics UC Berkeley	
Ward, Steven Lee	Individual Fall 2005 Montgomery	Time Delays in Differential Equations Modeling Traffic Flow		2007 Mathematics University of Utah	
Whitt, Allen	Group Program Summer 2001 Carlson/Toledo	Knot theory: colorability		2003 Physics University of Arizona, Tucson	
Woodbury, Michael	Individual Summer 2002 Fogelson Individual 2002-2003 AY Fogelson Group Program Summer 2003 Bertram	Modeling part of the process of blood clot lysis Mathematical applications of blood clot lysis Elliptic curves	Lecture, NCUR, 2003	2003 Mathematics University of Utah	Graduate Program Mathematics University of Utah
Young, Ben	Individual Spring 2003 Horvath	Biostatistics		2003 Mathematics University of Utah	