		Appendix B	
		PhD Doctorates Awarded in the Department of Mathematics and Statistics	
	Doctorate Position	Dissertation Title	Advisor Commencement Date
1	Kenneth L. Pothoven	Characterizations of Some	Kung-Wei Yang
	University of South Florida	Functors of Categories of Banach Spaces	December 1969
2	John A. Mitchem	On External Partitions of	Gary Chartrand
	San Jose State University	Graphs	April 1970
3	Wayne W. Bishop	A Theory of Multiplicity for	John W. Petro
	California State University, Los Angeles	Multiplicative Filtrations	April 1971
4	Mauice L. Eggan	Discrete Approximations to continuous Optimal Control Problems	Arthur W. J. Stoddart
	Trinity University, San Antonio, Texas		April 1972
5	Pascal D. Mubinga	Convergence Bounds in Optimization	Arthur W. J. Stoddart
	Returned to Zaire		April 1972
6	Alan A. Bishop	Completion of Lattices with	Erik A. Schreiner
		Semicomplementation	August 1972
7	Timothy B. Carroll	Severance Classes and Multi-	Anthony A. Gioia
	Eastern Michigan University	pliclative Arithmetic Functions	April 1973
8	Donald W. VanderJagt	Local Connectivity in Graphs	Gary Chartrand
	Grand Valley State University		April 1973
9	Krishnamachari S.	Linear Operators Between	Kung-Wei Yang
	Nadathur  Bishop Herber College, India (retired)	Nonarchimedian Banach Spaces	August 1973
10	James E. Williamson	On Hamiltonian-Connected	Gary Chartrand
	University of Dubuque	Graphs	August 1973

11	Kenneth G. Hummell	The Automorphism Group of	Joseph T. Buckley
	Eureka Company	the Wreath Product of Finite Groups	August 1974
12	Linda M. Lesniak	On the Theory of	Gary Chartrand
	Drew University	Hamiltonian Graphs	August 1974
13	John A. Roberts	Indegrees, Outdegrees, and	Gary Chartrand
	University of Louisville	the Hamiltonian Theme	August 1975
14	Saul Stahl	Self-Dual Embeddings of	Arthur T. White
	University of Kansas	Graphs	August 1975
15	Kenneth P. Johnson	Symmetric Maps of S3 onto a	Alden H. Wright
	Grand Valley State University	Homotype 3-sphere	August 1975
16	Brian L. Garman	Cayley Graph Imbeddings	Arthur T. White
	University of Tampa	and the Associated Block Designs	August 1976
17	James M. Benedict	On Ramsey Numbers	Gary Chartrand
	Augusta State University, Georgia	Defined by Factorizations of Regular Complete Multi- partite Graphs	August 1976
18	H. Joseph Straight	Partitions of the Vertex Set or	Don L. Lick
	SUNY, College at Fredonia	Edge Set of a Graph	August 1977
19	Jerome J. Przybylski	On a System of Nonlinear	Philip Hsieh
	Elmira College, New York	Ordinary Differential Equations with an Irregular Type Singularity: A Degenarte Case	August 1978
20	Nancy J. Boynton	Markovian Multiserver	A. Bruce Clarke
	SUNY, College at Fredonia	Queuing Systems with Servers in Series	April 1979
21	Ronald J. Gould	Traceability in Graphs	Gary Chartrand
	Emory University		August 1979
22	David Burns	Uniform Factorization in	Shashi F. Kapoor
	Ferris State University	Graphs	December 1979

23	John Frederick Fink Univ. of Michigan – Dearborn	Random Factors and Isofactors in Graphs and Digraphs	Gary Chartrand August 1982
24	Brian T. Mitchell Environmental Research Institute of Michigan	Parameter Optimization Using a Hierarchial System of Learning Automata	Dion Kountanis August 1982
25	Sergio Ruiz Deceased	On Isomorphic Decompositions of a Graph	Gary Chartrand December 1983
26	John G. Gimble Univ. of Alaska Fairbanks	The Chromatic ad Cochromatic Number of a Graph	Linda M. Lesniak April 1984
27	John M. Rahn Western Michigan University	On the Genus of a Block Design	Arthur T. White August 1984
28	Hung Bin Zou Intermagnetics General Corp.	On Common Subgraphs	Gary Chartrand December 1985
29	Kohn A. Kapenga Western Michigan University	Jacobi Moments in Applied Mathematics and Computer Science	Philip Hsieh August 1986
30	Ortrud R. Ollermann University of Winnipeg	Generalized Connectivity in Graphs	Gary Chartrand August 1986
31	Farhad Shahrokhi University of North Texas	Design and Analysis of Efficient Routing Algorithms	Donald W. Matula  December 1986
32	Thomas J. Vidmar  Pharmacia and Upjohn	Design and Analysis of Drug Combination Experiments	Joseph W. McKean  April 1986
33	James Buddy Davis Radford University	Robust Rank Analysis for Multivariate Linear Models	Joseph W. McKean April 1987
34	Zhuguo Mo Returned to China	Graph and Directed Graph Augmentation Problems	Kenneth L. Williams June 1988

35	Garry L. Johns Saginaw Valley State Univ.	Generalized Distance in Graphs	Gary Chartrand August 1988
36	Paresh J. Malde	Chromatic Partitions	Allen J. Schwenk December 1988
37	Charlene E. Beckmann Grand Valley State University	The Effect of Computer Graphics Use on Student Understanding of Calculus Concepts	Dwayne E. Channell April 1989
38	Karen S. Holbert Grand Valley State University	Specified Subgraphs and Subgraph-defined Parameters in Graphs	Gary Chartrand April 1989
39	Lee D. Witt  Davenport College	Coefficients of Multiple Determination Based on Rank Estimates	Joseph W. McKean  April 1989
40	Grzegorz Kubicki University of Louisville	Greatest Commons Subgraphs	Gary Chartrand August 1989
41	Eva Kubicki University of Louisville	The Chromatic Sum and Efficient Tree Algorithms	Allen J. Schwenk August 1989
42	Sudhakar H. Rao Schering-Plough Research Institute, Kenilworth, NJ	Measures of Partial Association Based on Rank Estimates	Gerald L. Sievers August 1989
43	Robert G. Rieper	The Enumeration of Graph Imbeddings	Arthur T. White August 1990
44	Sonlin Tian  Central Missouri State Univ.	On Distance in Graphs and Digraphs	Gary Chartrand August 1990
45	Bruce P. Mull  Lake Michigan College	Enumerating the Orientable 2-Cell Imbeddings of Complete n-Partite Graphs	Arthur T. White August 1990
46	Thomas B. Sprague Cornerstone University	Shape Preserving Piecewise Cubic Interpretation	Dennis D. Pence August 1990

47	Ghidewon Abay Asmeron	Graph Products and Covering Graph Imbeddings	Arthur T. White December 1990
	Virginia Commonwealth Univ.		December 1990
48	Jamal H. Nouh	Improving Network reliability	Alfred J. Boals
	Birzeit University, West Bank		December 1990
49	Héctor Hevia	A Representation of chemical	Gary Chartrand
	Universidad Católica de Valparaisi, Chile	Reactions by Labeled Graphs	June 1991
50	Elzbieta B. Jarrett	Transformations of Graphs	Gary Chartrand
	Modesto Junior College	and Digraphs	June 1991
51	David L. Craft	Surgical Techniques for	Arthur T. White
	Muskingum College	Constructing Minimal Orientable Imbeddings of Joins and Compositions of Graphs	June 1991
52	Hung-Ir Li	On Rank Procedures for the Logistic Models	Joseph W. McKean
	Eli Lilly Company		December 1991
53	Jiuziang Liu	Maximal and Maximum Independent Sets in Graphs	Yousef Alavi
	Eastern Michigan University		June 1992
54	Hang Chen	Common Moment Sets of	Allen J. Schwenk
	Central Missouri State Univ.	Complememtar Graphs	June 1992
55	Himli Yahya	A Progressive Disease Model	Daniel Mihalko
		for Doubly-censored Bivariate Survival Data that Accommodate Covariate Information	August 1992
56	Kimberly Tucker Perry	A Critical Examination of the	Michael R. Stoline
	Pharmacia and Upjohn	Use of Preliminary Tests in Two-sample Tests of Location	August 1992
57	Ignatious E. Vakalis	Multivariate Quadrature on	Elise DeDoncker
	Capitol University	MIMD Machines with Shared or Distributed Memory	August 1992

58	Sherry Dixon	Rank Based Procedures in	Joseph W. McKean
	National Center for Lead-Safe Housing	the Heteroscedastic Linear Model	December 1993
59	Steven Winters	Distances Associated with	Gary Chartrand
	Univ. of Wisconsin- Oshkosh	Subgraphs and Subdigraphs	June 1993
60	Brian A. Keller	Symbol Sense and Its	Christian R. Hirsch
	Iowa State University	Development in Two Computer Algebra System Environments	August 1993
61	Ian Campbell Walters,	Isospectral Graphs and the	Allen J. Schwenk
	Jr.	Expander Coefficient	June 1994
	D'Youville College		
62	Stavros Costa Pouloukas	Comparisons of Several	Michael Stoline
	Cyprus College, Cyprus	Medians in a Lognormal K- sample Context Where Some Date may be Left-censored	August 1994
63	Reza Rashidi	The Theory and Applications	Naveed Sherwani
	MCI, Tysons Corner, VA	of Stratified	December 1994
64	Fan Cong	Semi-Strongly Regular	Allen J. Schwenk
	Ford Motor Company	Graphs and Generalized Cages	April 1995
65	Feipeng Xie	Asymptotic Diagonalizations	Philip Hsieh
	Blue Cross & Blue Shield of Massachusetts	of a Liner Ordinary Differential System	April 1995
66	Esther Joy Tesar	Probability Polynomials for	Arthur T. White
	Educational Testing Services	Cubic Graphs in the Framework of Random Topological Graph Theory	May 1995
67	Quan Yue	Efficient Dominating Sets in	Allen J. Schwenk
	State Farm Insurance	Oriented Trees	June 1995
	Bloomington, IL		
68	Kelly Lynne Schultz	Step Domination in Graphs	Gary Chartrand
	Academic Talented Youth Program, Kalamazoo, MI		June 1995

69	Heather Gavlas Grand Valley State University	A Graph Theoretic Study of the Similarity of Discrete Structures	Gary Chartrand June 1996
70	Michelle Schultz University of Nevada at Las Vegas	Random Cayley Maps	Arthur T. White June 1996
71	Mei Huang Wang Pharmacia and Upjohn	Statistics Graphics: Applications to the R and GR Methods in Linear Algebra	Joseph W. McKean  December 1996
72	Allen Emerson  Wells College, Aurora, NY	Gender Discourse in Small Learning Groups of College- level Developmental Mathematics Students	Christine Browning  December 1996
73	Robert Vandell Indiana University- Purdue University, Fort Wayne	Integrity of Digraphs	Lowell W. Beineke December 1996
74	Jeffrey Terpstra  North Dakota State University	A Robust Estimate for an Autoregressive Time Series	Joseph W. McKean April 1997
75	Daniel Cheung State Farm Insurance Agency Kalamazoo, MI	Estimating IBNR Reserves with Robust Statistics	Joshua Naranjo April 1997
76	Lisa Hansen  Western New England  College	Domination in Digraphs	Gary Chartrand June 1997
77	James Kett Singapore American School	A Portrait of Assessment in Reformed Mathematics Classrooms	Christian R. Hirsch December 1997
78	Richard Low San Jose State University	Units in Integral Group Rings for Direct Products	Joseph T. Buckley June 1998

79	Myeong Joon Ann	Perturbed Hamiltonian	Philip Hsieh
		System of two parameters with Several Turning Points	June 1998
80	Melanie King Wahlberg	The Effects of Writing	Christine Browning
	The College of New Jersey	Assignments on Second- semester Calculus Students: Understanding Sense	June 1998
81	Ramon Figueroa-	Surface Models of Finite	Arthur T. White
	Centeno	Geometries	June 1998
	Pittsburg State University, Pittsburg, KS		
82	Pam Crawford	Fostering Reflective Thinking	Christian R. Hirsch
	Jacksonville University, FL	in First Semester Calculus Classes	June 1998
83	Dawn Jones	A Generalization of Cayley	Arthur T. White
	Keuka College, Keuka Falls, NY	Graphs for Finite Fields	August 1998
84	Rebecca Walker	Students' Conceptions of	Christian Hirsch
	Western Michigan University	Mathematics and the Transition from Standards- based Reform Curriculum to College Mathematics	December 1999
85	David Coffey	An Investigation Into	Cristine A.
	Western Michigan	Relationships Between alternative Assessment and	Browning
	University	Pre-Service Elementary Teachers' Beliefs About	June 2000
		Mathematics	
86	Linda Eroh	Rainbow Ramsey Numbers	Allen Schwenk
	University of Wisconsin, Oshkosh		June 2000
87	David Zeitler	Empirical Spectral Analysis	Joseph McKean
		of Random Number Generators	June 2001
88	Boyd Jay Hanson	A Comparison of Methods for	Michael R. Stoline
		Detection of Qualitative Interaction in Multicenter Trials	March 2001

89	Mary Lynne Breyfogle  Bucknell University	Changing Mathematical Discourse: A Case of a Secondary School Mathematics Teacher	Laura Van Zoest July 2001
90	David J. Erwin Trinity College	Cost Domination in Graphs	Gary Chartrand April 2001
91	Peter Atwood  Cornerstone University	Learning to Construct Proofs in a First Course on Mathematical Proofs	Christian R. Hirsch July 2001
92	Jonathon K. Hodge Grand Valley State University	Separable Preference Orders	Allen J. Schwenk 2002
93	Varaporn Saenpholphat Srinahkarinwirot University	Resolvability in Graphs	Ping Zhang April 2002
94	Paula T. Smith	Local Symmetries of Symmetrical Cayley Maps	John Martino April 2002
95	Marcia L. Weller Weinhold Purdue University- Calumet	How Teachers Construct an Understanding of "Appropriate Use" of Graphing Calculators in the Context of Collegial Inquiry	Christian R. Hirsch July 2003
96	Kirsty Eisenhart Western Michigan University	Multiobjective Optimal Control Problems with Endpoint and State Constraints	Qiji (Jim) Zhu March 2003
97	Jihwa Noh University of Northern Iowa	An Investigation of Secondary Teachers' Knowledge of Rate of Change in the Context of Teaching a Standards-Based Curriculum	Kate Kline and Steven Ziebarth July 2004
98	Kathryn G. Shafer Bethel College	Two High School Teachers' Initial Use of Geometer's Sketchpad: Issues of Implementation	Tabitha Mingus November 2004
99	Paritawana Pacheenburawana Thummasat University	The Global Optimality Conditions in Mathematical Programming and Optimal Control	Yuri S. Ledyaev December 2004

100	Ralucca Gera	Stratification and Domination in Graphs and	Ping Zhang
	Naval Postgraduate School	Digraphs	November 2004
101	Archara Chaiyakarn	Structure Preserving	Niloufer Mackey
	Thummasat University	Algorihtms for Computing the Sympletic Singular Value Decomposition	November 2004
102	Joseph Fox	Nilpotent Orbits on	Terrell L. Hodge
	Salem State College	Infinitesimal Symmetric Spaces	March 2006
103	Sheri Stockero	The Effect of Using Video	Laura Van Zoest
	Michigan Technological Institute	Cases of Mathematics on Preservice Teachers' Development of a Reflective Stance Towards Teaching	June 2006
104	Henry Escuadro	Detectable Colorings of	Ping Zhang
	Janiata College	Graphs	January 2006
105	Futaba Okamoto	Measures of Traversability in	Ping Zhang,
	University of Wisconsin  – La Crosse	Graphs	April, 2007
106	Ovidiu Furdui	The Fock Space and Related	John Srdjan Petrovic
	University of Toledo	Bergman Type Integral Operators	June 2007
107	Nesrin Cengiz	What allows Teachers to	Theresa J. Grant and
	University of Michigan –	Extend Student Thinking During whole Group	Kate Kline
	Dearborn	Discussions?	August 2007
108	Dana Cox	Understanding Similarity:	Steven Ziebarth,
	Miami of Ohio	Bridging Numeric and Geometric Strategies for	and Jane-Jane Lo
	University	Proportional Thinking	Jane-Jane LO
			June 2008
109	Sandra Madden	High School Mathematics	Christian Hirsch,
	University of	Teachers' Evolving Understaning of Comparing	August 2008
	Massachusetts, Amherst	Distributions Distributions	
110	Anirban Dutta	Option Pricing and Stable	Qiji J. Zhu, Chair
	Letse, LLC	Trading Strategies in the Presence of Information Assymetry	April 2010

111	Allen Bickle	The K-Core of a Graph	Allen Schwenk
			December 2010
112	Kyle Kolasinski	Hamiltonicity and	Ping Zhang
	U.S. Department of Defense	Connectivity in Distance- Colored Graphs	June 2011
113	Ryan Jones	Modular and Graceful Edge	Ping Zhang
	Grand Rapids Community College	Colorings	June 2011
114	Karen Fonkert	Pattern of Interaction and	Steven W. Ziebarth
	Charleston Southern University	Mathematical Thinking of High School Students in Classroom Environments that Include Use of Java-Based, Curriculum-Embedded Software	April 2012
115	Bryan Phinezy	Variations on a Graph	Ping Zhang
	Epic Systems	Coloring Theme	June 2012
116	Nicole Fonger	Characterizing and	Jon Davis
	University of Wisconsin- Maddison	Supporting Change in Algebra Students' Representational Fluency in CAS/Paper-and-Pencil Environment	August 2012
117	Jianwei Lin	The Domination Number of	Allen Schwenk
	Returned to China	$K_a \square K_b \square K_c$	August 2012
118	Benjamin Phillips	Boolean and Profinite Loops	Clifton E. Ealy, Jr.
	University of Michigan- Dearborn		December 2012
119	Daniel S. Sievewright	Weighted Shifts of Finite	John Srdjan Petrovic
	Kalamazoo College	Multiplicity	April 2013
120	Julienne Houck	A Pattern in the Lusternik-	Jeffrey Strom
	Innovative Software	Schnirelmann Category of Rational Spaces	August 2013

121	David Arnold	Classifying Spaces of Symmetric Groups and Wreath Products	John Martino December 2013
122	Napthalin Achubang Atanga Western Michigan University/MOST Project	Elementary School Teachers' Use of Curricular Resources for Lesson Design and Enactment	Ok-Kyeong Kim April 2014
123	Eric Andrews University of Alaska- Anchorage	On Eulerian Irregularity and Decompositions in Graphs	Ping Zhang June 2014
124	Alper Bulut Kuwait University	Lie Loops Associated with GL(H), H a Separable Infinite Dimensional Hilbert Space	Clifton E. Ealy, Jr. June 2014
125	Alden Jack Edson  Michigan State University	A Deeply Digital Instructional Unit on Binomial Distributions and Statistical Inference: A Design Experiment	Christian Hirsch and Steven Ziebarth June 2014
126	Joshua Goss University of New Haven	A Method for Assessing and Describing the Informal Inferential Reasoning of Middle School Students	Christine Browning June 2014
127	Robert Kipka  Kent State University	Mathematical Methods of Analysis for Control and Dynamic Optimization Problems on Manifolds	Yuri S. Ledyaev June 2014
128	Dustin O. Smith  Murray State University	Eliciting Elementary School Students' Informal Inferential Reasoning through Storytelling	Kate Kline August 2014
129	Chira Lumduanhom Srinakharinwirot University	Modular Monochromatic Colorings Spectra and Frames in Graphs	Ping Zhang December 2014
130	Vasilije Perovic University of Rhode Island	Spectrally Equivalent Matrix Polynomials: Non-Standard Bases and Preservation of Structure	D. Steven Mackey May 2015

131	James P. Schwass SalesPage Technologies	Phantom Maps, Decomposability, and Spaces Meeting Particular Finiteness Conditions	Jeffrey Strom May 2015
132	Daniel P. Johnston University of Montana	Edge Colorings of Graphs and Their Applications	Ping Zhang June 2015
133	Christina Zumbrun Trine University	Secondary Mathematics Teachers' Attitudes and Beliefs Toward Statistics: Developing an Initial Profile	Christine Browning & Steven Ziebarth June 2015
134	Timothy L. Clark	Resolving Classes and Resolvable Spaces in Rational Homotopy Theory	Jeffrey Strom June 2016
135	Elliot LaForge  Kalamazoo Valley  Community College	Chromatic Connectivity of Graphs	Ping Zhang June 2016
136	James Kratky Vivint Smart Home, Signtronix	Pedagogical Moves as Characteristics of One Instructor's Instrumental Orchestrations with Tinkerplots and the TI-73: A Case Study	Jon Davis December 2016
137	Zhenming Bi  VOBA Solutions  Northeastern University	Highly Hamiltonian Graphs and Digraphs	Ping Zhang June 2017
138	Stephen Devereaux  Cornerstone University	Color-Connected Graphs and Information-Transfer Paths	Ping Zhang December 2017
139	Khawlah Hamad Alhulwah Imam Mohammad University	Structures of Derived Graphs	Ping Zhang December 2017
140	Laars Helenius  U.S. Army Engineer Research and Development Center (ERDC)	Edge-Induced Weightings of Uniform Hypergraphs and Related Problems	Andrzej Dudek December 2017

141	Mehdi Vazifedan  TA, Western Michigan University	No-Arbitrage Principle in Conic Finance	Qiji Jim Zhu April 2018
142	Ian Hart	Induced Graph Colorings	Ping Zhang June 2018
143	Mary Achieng Ochieng	The Bellringer Sequence: Investigating What and How Preservice Mathematics Teachers Learn Through Pedagogies of Enactment	Laura Van Zoest June 2018
144	Alexis Byers Youngstown State University	Graceful Colorings and Connection in Graphs	Ping Zhang June 2018
145	Sean Joseph English Ryerson University	Probabilistic and Extremal Problems in Combinatorics	Andrzej Dudek August 2018
146	Mohra Abdullah Alqahtani King Khalid University	Generalized Line Graphs	Ping Zhang December 2018
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## **DEPARTMENT OF STATISTICS**

	<b>Doctorate Position</b>	Dissertation Title	Advisor
			Commencement Date
1	Asheber Abebe	Nonlinear Regression Based on Ranks	Joseph McKean
			April 2002
2	Kimberly Crimin	Visualization Methods: A comparative Study of New, Traditional and Robust Procedures	Joseph McKean
			July 2002
3	Diana R. Cucos	On Rank-Based	Joseph W. McKean
		Considerations for Generalized Liner Models and Generalized Estimating Equations Models	October 2002
4	Abou El-Makarim Abd El-Alim Aboueissa	New Statistical Methods for the Estimation Of the Mean And Standard Deviation From Normally Distributed Censored Samples	Michael R. Stoline
			November 2002
5	Ali A. Al-Shomrani	A Comparison of Different Schemes For Selecting and Estimating Score Functions Based On Residuals	Joseph W. McKean
			May 2003
6	Jason C. Parcon	Spearman Rank Regression	Joshua D. Naranjo
			May 2003
7	John E. Daniels	Determination of Spatial Strata for Environmental Regulatory Purposes	Michael Stoline
			July 2003
8	Feridun Tasdan	A Robust Two-sample Procedure to Estimate a Shift Parameter	Gerald L. Sievers
			November 2003
9	Ahmed N. Albatineh	On Similarity Measures for Cluster Analysis	Daniel Mihalko
			May 2004
10	John Kloke	Rank-Based Methods for Repeated Measures Data Under Exchangeable Errors	Joseph McKean
			May 2005

11	Rebecca C. Scherzer	Testing Procedures for Group Sequential Clinical Trials with Multiple Survival Endpoints	Daniel Mihalko August 2005
12	Marwan Daoud	Extensions of Two-Part Tests to Compare K Independent Populations	Magdalena Niewiadomska Bugaj June 2007
13	Ruvie Lou Maria C. Martinez	Diagnostics for Choosing Between Log-Rand and Wilxocon Tests	Joshua D. Naranjo September 2007
14	Mathew Anthony Cantos Rosales	The Robustness of Confidence Intervals for the Mean of Delta Distribution	Magdalena Niewiadomska- Bugaj March 2009
15	Oluwagbohunmi Adetunji Awosoga	Meta Analyses of Multiple Baseline Time Series Design Intervention Models for Dependent and Independent Series	Joseph W. McKean April 2009
16	Eric Nantz	Testing Equality of Competing Risks of Patient Discontinuation Across Multiple Disease States	Michael Stoline April 2009
17	Srinand Ponnathapura Nandakumar	Statistical Procedures for Bioequivalence Analysis	Joseph W. McKean April 2009