# INDIV: PERSONNEL REPORT (Faculty/IAS Promotions/Retention/Tenure) (August 1, 2013 - December 31, 2017)

# I. GENERAL INFORMATION

Faculty		
Name:	Edward D. H. Kim	Department: Mathematics

# Education

Ph D, University of California, Davis, Mathematics. (2010).

MA, University of California, Davis, Mathematics. (2007).

BA, University of California, Berkeley, Mathematics. (2004).

# **II. NARRATIVE**

# A. Combined Teaching, Scholarship, and Service Narrative

Download File (ekim/promotion/KIM-Edward.promotion-narrative-1.pdf)

# **B.** Retention/Tenure and Merit Narratives

Download File (ekim/review/KIM-Edward.retention-narrative.2016-Fall-1.pdf)

Download File (ekim/review/KIM-Merit-Report-20160601-20170531-1.pdf)

#### **III. TEACHING**

# A. Teaching Schedule

# Spring 2017

Course & Section MTH 175-1	Title Applied Calculus Download File (eki	New Cours Prep. No	e Ex C	New ormat for isting ourse	Enrollment 32	Number of Credit Hours 4	Delivery Mode Classroom
MTH 175-2	Applied Calculus	III/SCITTER	No	abus-1	<u>33</u>	4	Classroom
			-			· ·	
MTH 225-1	Foundations of		Yes		28	4	Classroom
	Advanced						
	Mathematics						
	Download File (eki	m/schte	ach/Syl	labus-10	0. <u>pdf)</u>		
MTH 495-2	Special Topics in	,	Yes		1	1	Independent
	Mathematics:						Study
	Computational						,
	Commutative Algeb	ora					
	Download File (eki	m/schtea	ach/Syl	labus-9.	<u>pdf)</u>	11	

Course & Section	Title	New Course Prep.	New Format for Existing Course	Enrollment	Number of Credit Hours	Delivery Mode
MTH 150-5	College Algebra	Yes		35	4	Classroom
	<u>Download File (ek</u>	<u>im/schteacl</u>	h/Syllabus - I	<u>MTH 150 Sec</u>	<u>tion 05-1.pd</u>	<u>f)</u>
MTH 150-8	College Algebra	Yes	S	34	4	Classroom
MTH 411-1	Abstract Algebra I	No	)	5	3	Classroom
	Download File (ek	im/schteacl	h/Syllabus-8	. <u>pdf)</u>		

# Spring 2016

Course & Section	Title	New Course Prep.	New Format for Existing Course	Enrollment	Number of Credit Hours	Delivery Mode
MTH 175-5	Applied Calculus	No		24	4	Classroom
	<u>Download File (ek</u>	<u>im/schteacl</u>	n/Syllabus-6.	<u>pdf)</u>		
MTH 175-8	Applied Calculus	No		25	4	Classroom
	Download File (ek	im/schteacl	n/Syllabus-7.	<u>pdf)</u>		
MTH 411-1	Abstract Algebra I	Yes	6	15	3	Classroom
	<u>Download File (ek</u>	im/schteacl	n/Syllabus-5.	<u>pdf)</u>		

# Fall 2015

Course & Section	Title	New Course Prep.	New Format for Existing Course	Enrollment	Number of Credit Hours	Delivery Mode
MTH 175-5	Applied Calculus	No		33	4	Classroom
	Download File (eki	m/schteach	/Syllabus-4.	<u>pdf)</u>		
MTH 175-7	Applied Calculus	No		31	4	Classroom
	Download File (eki	m/schteach	/Syllabus-3.	<u>pdf)</u>		
MTH 310-1	Calculus III: Multi Calc	Yes		23	4	Classroom
	Download File (eki	m/schteach	/Syllabus-2.	<u>pdf)</u>	•	

# Summer 2015

Course & Section	Title	New Course Prep.	New Format for Existing Course	Enrollment	Number of Credit Hours	Delivery Mode
MTH 175-101	Applied Calculus	Yes		22	4	Classroom

# Spring 2015

			New			
			Format			
		New	for		Number	
Course &		Course	Existing		of Credit	Delivery
Section	Title	Prep.	Course	Enrollment	Hours	Mode

MTH 151-1	Precalculus	No		29	4	Classroom			
	Download File (ekim/	schteach/	MTH151.20	)15-Spring.Ki	m.syllabus	-1.pdf)			
MTH 151-2	Precalculus	No		31	4	Classroom			
	Download File (ekim/schteach/MTH151.2015-Spring.Kim.syllabus-2.pdf)								
MTH 413-1	Topics in Linear	Yes		9	3	Classroom			
	Algebra								
	Download File (ekim/	schteach/l	<u>MTH413.20</u>	)15-Spring.Ki	m.syllabus	<u>-1.pdf)</u>			
MTH 498-4	Independent Study:	Yes		1	1	Independent			
	Chemical Applications	5				Study			
	of Group Theory on								
	Molecular Symmetry								
MTH 498-5	Independent Study:	Yes		1	1	Independent			
	Polyhedral graph					Study			
	abstractions								

# Fall 2014

Course & Section	Title	New Course Prep.	New Format for Existing Course	Enrollment	Number of Credit Hours	Delivery Mode		
MTH 151-1	Precalculus	No		36	4	Classroom		
MTH 151-3	Precalculus	No		34	4	Classroom		
	Download File (ekim/schteach/MTH151.2014-Fall.Kim.syllabus-1.pdf)							
MTH 208-5	Calculus II	Yes	5	24	4	Classroom		
	<u>Download File (eki</u>	<u>m/schteach</u>	<u>/MTH208.2</u>	014-Fall.Kim.s	syllabus-1.p	<u>df)</u>		
MTH 498-5	Independent Study Convergence Theorems	: Yes	6	1	1	Independent Study		
MTH 499-1	Research Topics: Polyhedral Researc Methods	Ch Yes	6	1	1	Independent Study		

# Spring 2014

Course & Section	Title	New Course Prep.	New Format for Existing Course	Enrollment	Number of Credit Hours	Delivery Mode
MTH 207-01	Calculus I	No		23	5	Classroom
	Download File (ek	<u>im/schteacl</u>	<u>n/MTH207.2</u>	01 <mark>4-Spring.Ki</mark>	m.syllabus-	<u>1.pdf)</u>
MTH 207-02	Calculus I	No		24	5	Classroom
	Download File (ek	im/schteacl	n/MTH207.2	01 <mark>4-Spring.K</mark> i	m.syllabus-	2.pdf)
MTH 495-05	Spec Tpcs in Math Convex Optimization		5	2	2	Independent Study
	Download File (ek		n/MTH/05-01	vllabus-1 ndf)		Siduy

Download File (ekim/schteach/MTH495-syllabus-1.pdf)

# Fall 2013

		Now	New Format		Number	
Course & Section	Title	New Course Prep.	for Existing Course	Enrollment	Number of Credit Hours	Delivery Mode

MTH 151-01	Precalculus	Yes		39	4	Classroom			
Download File (ekim/schteach/MTH151-1.2013-Fall.Kim.syllabus-1.pdf)									
MTH 151-03	Precalculus	Yes		36	4	Classroom			
	Download File (ekim/schteach/MTH151-3.2013-Fall.Kim.syllabus-1.pdf)								
MTH 207-06	Calculus I	Yes		18	5	Classroom			
	Download File (ekim/schteach/MTH207-6.2013-Fall.Kim.syllabus-1.pdf)								

# Non-Credit Instruction Taught

Instructor, FastTrack, 70 participants, Academic. (June 1, 2015 - Present).

Instructor, McNair Scholars, 15 participants, Academic. (June 1, 2014 - Present). <u>Download File (ekim/ncteach/introduction-to-GRE-Quantitative-Reasoning-1.pdf)</u>

# **B. Additional Teaching Evidence**

Compare and contrast exercises before Exam 1 for MTH 150 <u>Download File (ekim/review/compare-contrast-part1-1.pdf)</u>

Find the error slides: For general education courses, I have a catalog of frequent mathematical errors. I add to the collection every semester and use it to reflect on my own teaching.

Download File (ekim/review/find-the-error-all-gen-ed-courses-1.pdf)

This appendix contains the full text of all student nominations for the UWL Provost's Teaching Excellence Award (for 2015 and before) and the UWL Eagle Teaching Excellence Award (for 2016 and after), with names of nominating students redacted. Aside from removing student names, no other modifications (grammar/spelling corrections, etc.) have been made.

Download File (ekim/promotion/appendix-teaching-award-nominations-1.pdf)

Find the error slides: I add to the collection every semester and use it to reflect on my own teaching and share this as a resource for newer colleagues who are teaching a new prep. The full set of errors are reapportioned in manageable chunks with case studies for students and released on a practical schedule timed to in-class exams. Some of the case studies are reviewed during class where we open for a group discussion on thoroughly explaining the misconception. Students have access to the manageable and timed chunks in the form of slides in D2L.

Download File (ekim/promotion/find-the-error-all-gen-ed-courses-1.pdf)

MTH 310 (Calculus III) resource repository: visual demonstrations in class, videos, web applications for exploration, handouts (and static reference material), and links to external resources *Download File (ekim/promotion/appendix-MTH-310-resources-1.pdf)* 

MTH 175 (Applied Calculus) assessment report

Download File (ekim/promotion/appendix-MTH-175-assessment-2.pdf)

MTH 150 (College Algebra) initial assessment report

Download File (ekim/promotion/appendix-MTH-150-assessment-initial-2.pdf)

MTH 225 (Foundations of Advanced Mathematics) initial assessment report

Download File (ekim/promotion/appendix-MTH-225-assessment-initial-3.pdf)

MTH 310 (Calculus III) assessment report

Download File (ekim/promotion/appendix-MTH-310-assessment-2.pdf)

Annotated student work for MTH 411 (Abstract Algebra) -- Fall 2016

Download File (ekim/promotion/student-sample-work-with-annotations-1.pdf)

# **IV. SCHOLARSHIP**

# **A. Intellectual Contributions**

Published and Accepted

1. Book, Chapter in Scholarly Book-New

#### Kim, E., De Loera, J. A. (2014). Combinatorics and geometry of transportation polytopes: An update in Contemporary Mathematics (vol. 625, pp. 37-76). Providence, RI: American Mathematical Society. (Accepted: February 2014, Published: August 28, 2014). http://www.ams.org/books/conm/625/

Type of Review	Acceptance Rate	Author Workload	Author Ordering	Audience of Circulation
Peer-reviewed	Not Applicable%	Kim, Edward- 50% De Loera, Jesus A 50%	Authors in alphabetical order	International

Download File (ekim/intellcont/De Loera Kim - Combinatorics and Geometry of Transportation Polytopes - An Update - Offprint-1.pdf)

# 2. Journal Article, Academic Journal

Kim, E., Bogart, T. C. (2017). Superlinear subset partition graphs with dimension reduction, strong adjacency, and endpoint count. *To appear in Combinatorica*. (Submitted: September 24, 2014, Accepted: September 2015, Published: February 13, 2017).

	nups	.//шик.эрниуег.сс	111/article/10.1007	/300493-010-332
Type of	Acceptance	Author	Author Ordering	Audience of
Review	Rate	Workload		Circulation
Peer-reviewed	%	Kim, Edward- 50%	Authors in alphabetical	International
		Bogart, Tristram C 50%	order	

https	://link.springer.co	m/article/10.1007	7/s00493-016-3327-8

Download File (ekim/intellcont/superlinear-subset-partition-graphs-combinatoricaversion-1.pdf)

# Kim, E. (2014). Polyhedral graph abstractions and an approach to the Linear Hirsch Conjecture. *Mathematical Programming (Series A), 143*, 357-370. (Submitted: March 17, 2011, Accepted: October 2012, Published: February)

2014). http://link.springer.com/article/10.1007/s10107-012-0611-2

					-
Type of Review	Acceptance Rate	Author Workload	Author Ordering	Audience of Circulation	
Peer-reviewed	%	Kim, Edward- 100%	Authors in alphabetical order	International	
	Download E	la (alcim/intellagn	1/000/ 0110 10070	VOE-10107 010	061

Download File (ekim/intellcont/art%3A10.1007%2Fs10107-012-0611-2-1.pdf)

# 3. Journal Article, Professional Journal

Kim, E. (2015). Relating graphs of trigonometric functions to points on the unit circle via using special-purpose rulers. *Wisconsin Teacher of Mathematics*(2), 23-26. (Accepted: April 2015, Published: 2015).

Type of	Acceptance	Author	Author Ordering	Audience of
Review	Rate	Workload		Circulation
Editorial Board	%	Kim, Edward	Authors in alphabetical order	

Download File (ekim/intellcont/WToM article - journal version-1.pdf)

**Other Scholarly Activities** 

## 1. Paper presented at academic conference

Kim, E., SIAM Conference on Optimization, Society for Industrial and Applied Mathematics, Vancouver, BC, Canada, "Superlinear diameters for combinatorial abstractions of polyhedra",

http://www.siam.org/meetings/op17/, Abstract. (Date Presented: May 25, 2017).

Meeting Type	Scope	Format of Presentation	Published in Proceedings?	Refereed Proceedings?	Invited or Accepted	Published Elsewhere?
	International	Oral Presentation	No		Invited	Yes

Download File (ekim/present/20170525.KIM-

Edward.SuperlinearDiametersCombinatorialAbstractionsPolyhedra.slides-1.pdf)

Kim, E., Research and Innovation in Teaching Mathematics with Technology, University of Wisconsin-La Crosse, University of Wisconsin-La Crosse, "A Desmos demo to explore systems of linear equations and linear inequalities", https://www.uwlax.edu/conted/TMT/, Abstract. (Date Presented: July 11, 2016)

Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published
5 5 5		Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?
	Regional	Oral	No	No	Accepted	No
	-	Presentation				

Download File (ekim/present/a-desmos-demo-1.pdf)

Kim, E., Department of Mathematics Colloquium, University of Wisconsin-La Crosse, University of Wisconsin-La Crosse, "Efficiency of linear optimization and improved bounds for polyhedra". (Date Presented: April 8, 2016).

ĺ	Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published
			Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?
		Local	Oral Presentation	No	No		

<u>Download File (ekim/present/20160408.KIM-Edward.EfficiencyLP-improved-bounds-polyhedra.slides-1.pdf)</u>

Kim, E., Joint Mathematics Meetings, American Mathematical Society and

Mathematical Association of America, Seattle, WA, "Multiple geometry views in GeoGebra through the calculus sequence",

http://jointmathematicsmeetings.org/jmm, Abstract. (Date Presented: January 7, 2016).

		.,,.				
Meeting Type	Scope	Format of Presentation	Published in Proceedings?	Refereed Proceedings?	Invited or Accepted	Published Elsewhere?
	National	Oral Presentation	No	No		Yes

Kim, E. (Presenter Only), Teaching Mathematics with Technology, University of Wisconsin-La Crosse, La Crosse, WI, "Using GeoGebra to explain transformations of Cartesian, polar, and parametric equations". (Date Presented: July 20, 2015)

Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published		
		Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?		
	Regional				Accepted	Yes		

Kim, E. (Presenter Only), Wisconsin Mathematics Council Annual Meeting, Wisconsin Mathematics Council, Green Lake, WI, "Relating the Unit Circle to

# the Graphs of Sine and Cosine via Measurement". (Date Presented: May 8, 2015, Date Accepted: April 14, 2015).

Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published
		Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?
	Regional				Accepted	Yes

Kim, E. (Presenter Only), MAA Wisconsin Section Meeting, Mathematical Association of America, Wisconsin Section, Ripon College, Ripon, WI, "Lattice Path Lagrangian Matroids", http://sections.maa.org/wisconsin/meetings.shtml, Abstract. (Date Presented: April 24, 2015, Date Accepted: March 27, 2015, Date Submitted: March 14, 2015)

Meeting Typ	be Scope	Format of	Published in	Refereed	Invited or	Published				
		Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?				
	State	Oral Presentation	No	No	Accepted	Yes				

Kim, E., Department of Mathematics Colloquium, University of Wisconsin-La Crosse, University of Wisconsin-La Crosse, "Linear programming and the efficiency of the simplex algorithm for transportation polytopes". (Date Presented: March 6, 2015)

ĺ	Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published
			Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?
		Local	Oral Presentation	No	No		

#### Kim, E., Department of Mathematics Colloquium, Loras College, Loras College, "Linear programming and the efficiency of the simplex algorithm for transportation polytopes". (Date Presented: February 20, 2015).

Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published
		Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?
	Local	Oral	No	No		
		Presentation				

Download File (ekim/present/2015-02-20.KIM-

Edward.LinearProgrammingEfficiencySimplexAlgorithmTransportationPolytopes-1.pdf)

 Kim, E., 2015 Joint Mathematics Meetings, American Mathematical Society and Mathematical Association of America, San Antonio, TX, "Graphs of polytopes and abstract polytopes", http://jointmathematicsmeetings.org/jmm, Abstract. (Date Presented: January 12, 2015, Date Accepted: December 22, 2014, Date Submitted: September 3, 2014).

Meeting Typ	e Scope	Format of Presentation	Published in Proceedings?	Refereed Proceedings?	Invited or Accepted	Published Elsewhere?
	National	Oral Presentation	No	No		Yes

Download File (ekim/present/20150112.KIM-Edward.Graphs-of-polytopes-andabstract-polytopes.slides-1.pdf)

Kim, E. (Presenter Only), Project NExT Wisconsin Fall 2014 Meeting, Project NExT Wisconsin, University of Wisconsin-Sauk County, Baraboo, WI, "Technology advances with tablets",

http://sections.maa.org/wisconsin/NExt/insidepages/current\_fall.html. (Date Presented: October 4, 2014).

Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published	
		Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?	

Local	Oral Presentation	No	No	
	1 recontation			

Kim, E. (Presenter & Author), Recent Advances in Linear Optimization, Ecole des Ponts, ParisTech, "Diameters of Transportation Polytopes", http://www.fondation-hadamard.fr/en/pgmo/projects/meunier/workshop. (Date

Presented: August 1, 2014).

Meeting Type	Scope	Format of Presentation	Published in Proceedings?	Refereed Proceedings?	Invited or Accepted	Published Elsewhere?		
	International	Oral Presentation	No	No	Invited			

Download File (ekim/present/2014-08-01.KIM-

<u>Edward.DiametersTransportationPolytopes-RecentAdvancesLinearOptimization-</u> <u>1.pdf</u>)

 Kim, E. (Presenter Only), MAA Wisconsin Section Meeting, Mathematical Association of America, Wisconsin Section, University of Wisconsin-Whitewater, Whitewater, WI, "Polyhedral graph abstractions and an approach to the Linear Hirsch Conjecture", http://sections.maa.org/wisconsin/meetings.shtml, Abstract. (Date Presented: April 5, 2014, Date Accepted: March 27, 2014, Date Submitted: March 14, 2014).

Meeting Type	Scope	Format of	Published in	Refereed	Invited or	Published		
		Presentation	Proceedings?	Proceedings?	Accepted	Elsewhere?		
	State	Oral Presentation	No	No	Accepted	Yes		

Download File (ekim/present/20140405.KIM-

Edward.PolyhedralGraphAbstractionsApproachLinearHirschConjecture.slides-1.pdf)

Kim, E. (Presenter Only), Mathematics Colloquium, University of Wisconsin-La Crosse Department of Mathematics, University of Wisconsin-La Crosse, "Kissing, Coding, Bounding, and Semi-Definite Programming". (Date Presented: October 25, 2013).

Meeting Type	Scope	Format of Presentation	Published in Proceedings?	Refereed Proceedings?	Invited or Accepted	Published Elsewhere?	
	Local	Oral Presentation	No	No		No	
Download File (ekim/present/2013-10-25.Kissing-Coding-Bounding-SDP.UW							

Colloquium-1.pdf)

#### 2. Editorial and Review Activities

- "On the facial structure of Symmetric and Graphical Traveling Salesman Polyhedra", Discrete Optimization, Mathematical Reviews. (January 9, 2015). Reviewer for Mathematical Reviews
- "Computing and Proving with Pivots", RAIRO Operations Research, Invited Manuscript Reviewer, International, Appointed, 1 items edited/reviewed, Academic. (January 6, 2015). Reviewer for Mathematical Reviews
- "On the circuit diameter of dual transportation polyhedra", SIAM Journal on Discrete Mathematics, Invited Manuscript Reviewer, International, Appointed, 1 items edited/reviewed, Academic. (July 12, 2014 - September 13, 2014). Referee research article for a premier international journal in applied discrete mathematics

- "Optimal Response to Epidemics and Cyber Attacks in Networks", Networks, Invited Manuscript Reviewer, International, 1 items edited/reviewed, Academic. (April 21, 2014 - August 18, 2014). Referee of paper for journal
- "Packing unequal circles using formulation space search", Computers & Operations Research, Mathematical Reviews, International, 1 items edited/reviewed, Academic. (July 23, 2014). Reviewer for item MR3030981
- "Trees with small numbers of independent sets", Utilitas Mathematica, Invited Manuscript Reviewer, International, 1 items edited/reviewed, Academic. (April 24, 2014 - July 15, 2014). Journal referee for a paper in general combinatorics and graph theory
- "The Hirsch Conjecture for the Fractional Stable Set Polytope", Mathematical Programming, Invited Manuscript Reviewer, International, Appointed, 1 items edited/reviewed, Academic. (August 4, 2013).

#### 3. Other Faculty Development Activities Contributions

- Scholarship/Research, Informational Session, "NSA Grant Discussion Meeting", University of Wisconsin-La Crosse Office of Research and Sponsored Programs, La Crosse, WI, United States, No. (September 12, 2014). Discussed a revised National Security Agency grant proposal
- Scholarship/Research, Informational Session, "Early Start Grant Meeting", University of Wisconsin-La Crosse Office of Research and Sponsored Programs, La Crosse, WI, United States, No. (August 12, 2013). Discussed overview of faculty research grant proposal and National Science Foundation grant proposal

#### 4. Research Currently in Progress

- Kim, Edward, "Lower-dimensional counter-examples to the Hirsch Conjecture". (April 1, 2015).
- Kim, Edward, "Diameters of axial transportation polytopes". (December 20, 2014).
- Kim, Edward, "Strengthening the Bessis-Moussa-Villani Conjecture", Planning. (September 25, 2014).
- Kim, Edward, "New bounds for diameters of subset partition graphs". (September 1, 2014).

## Grants

- Kim, Edward (Principal), "Analyzing the efficiency of the simplex algorithm via abstract polytope constructions"(Funded), UWL Grant, Amount Proposed: \$7880, Amount Funded: \$7880. (July 1, 2014 - June 30, 2015).
- Kim, Edward (Principal), "Request for travel grant to collaborate on future CEA programs and present on current research results at Recent Advances in Linear Optimization at Ecole des Ponts ParisTech, Paris, France. (July 28-

August 1, 2014)"(Funded), UWL Grant, Amount Proposed: \$3058, Amount Funded: \$3058. (July 26, 2014 - August 3, 2014). <u>Download File 1 (ekim/grant\_proposal/Email-Invitation-1.pdf)</u> <u>Download File 2 (ekim/grant\_proposal/Flight Details - KAYAK-1.pdf)</u> <u>Download File 3 (ekim/grant\_proposal/Paris-Hotel-1.pdf)</u> <u>Download File 4 (ekim/grant\_proposal/2014-07-29.2014-08-02.Hotel-Paris-1.pdf)</u> <u>Download File 5 (ekim/grant\_proposal/UWL\_IDF\_app-1.doc)</u>

Kim, Edward (Principal), "Diameters of transportation polytopes and the efficiency of the simplex algorithm on transportation problems"(Not Funded), External Grant, Sponsored by National Security Agency, \$39672. (July 1, 2016 - June 30, 2018).

Download File (ekim/congrant\_external/project-description-and-references-2.pdf)

 Kim, Edward (Principal), "Discrete Algorithms for Optimization over Transportation Polytopes" (Not Funded), External Grant, Sponsored by National Security Agency, \$19813.00. (July 1, 2015 - June 30, 2016).
 Download File (ekim/congrant external/project-description-and-references-1.pdf)

#### **Student Research**

#### 1. Undergraduate Research

Gallagher, John, Mathematics, "Computational aspects of subset partition graphs," In-Process. (July 1, 2014 - Present). Germane Honors: Student researcher on UW-L Faculty Research Grant during Summer 2014.

MAA Student Travel Grant for JMM 2015 approved October 27, 2014. Dates and Locations Presented: College of Science and Health Summer Research Celebration – Poster. La Crosse, WI. (July 2014). Joint Mathematics Meetings: Undergraduate Poster Session – Poster. San Antonio, TX. (January 2015). Joint Mathematics Meetings: Contributed Talk – Oral Presentation. San Antonio, TX. (January 2015). University of Wisconsin-La Crosse Mathematics Colloquium – Oral Presentation. La Crosse, WI. (March 2015). MAA Wisconsin Spring Conference – Oral Presentation. Ripon, WI. (April 2015).

Le, Thong, Mathematics, "Combinatorics of transportation polytopes," (May 21, 2014 - May 30, 2016). Germane Honors: Awarded a URC grant on November 14, 2014 Dates and Locations Presented: MAA Wisconsin Spring Meeting – Oral Presentation. Ripon, WI. (April 2015).

#### V. SERVICE

#### A. Service

#### Department Service

WeBWorK online homework system, Primary support and maintenance. (August 25, 2017 - Present)

- Department Undergraduate Research Award Development Committee, Member. (September 1, 2016 - Present) Worked on the team which is determining the logistics for the implementation and administration of a new departmental research grant sponsored by J.D. Wine and Dave Bange
- Writing in the Major group, Member. (March 16, 2016 Present) Together with Robert Allen and Nathan Warnberg, we brought to the department a learning outcome for writing, examined the status of our current Writing in the Major program, developed a writing common rubric, and began proposing a formal assessment timeline.
- Department Assessment Committee, Member. (January 1, 2015 Present) I worked with Tushar Das on the pure math program assessment and initial discussions on coordinating our program and general education assessment. Together with Tushar Das, I was co-coordinator in submitting a complete program assessment plan for the 2016-2019 assessment period, including bringing to department votes our revamped learning outcomes, curriculum map (tied to our new major curriculum), assessment instruments, and assessment timeline.

Math and Stats club, Co-advisor. (September 11, 2014 - Present)

- WeBWorK online homework system, Support assistant. (January 1, 2015 August 24, 2017)
- Academic Program Review, Proofreader. (August 1, 2016 March 1, 2017) Reviewed submission for department's academic program review
- MTH 150/151 Textbook Committee, Member. (November 14, 2016 February 16, 2017) Reviewed textbooks for MTH 150/151

Scholarship committee, Member. (March 17, 2016 - May 30, 2016)

Department colloquium co-organizer, Member. (January 1, 2016 - May 15, 2016)

- MAA Wisconsin Spring 2016 Sectional Meeting Executive Committee, Member. (April 1, 2015 April 23, 2016) Plan the Spring 2016 MAA Sectional meeting to be held April 22-23, 2016.
- Wisconsin Mathematical Modeling Challenge, Member. (October 17, 2015 October 18, 2015) Judge for the Wisconsin Mathematical Modeling Challenge contest
- MTH 150 Credit-by-exam grading, Member. (September 16, 2015) Graded student exams for MTH 150 Credit-by-exam
- MTH 208 Program Assessment, Chair. (August 25, 2014 May 1, 2015)
- Webpage review/updates, Member. (September 1, 2013 May 1, 2015)
- IAS Search Panel, Member. (March 1, 2015 April 24, 2015) Search panel member for IAS search

- Regents Award for Teaching Excellence, Proofreader. (November 20, 2014 -December 20, 2014) Reviewed narrative and attachments written by the Department for submission to the Regents Award for Teaching Excellence.
- Wisconsin Mathematical Modeling Challenge, Member. (October 18, 2014 October 19, 2014)

Judge for the Wisconsin Mathematical Modeling Challenge contest

- MTH 151 General Education Assessment, Chair. (September 15, 2014 October 1, 2014)
- MTH 208 General Education Assessment, Chair. (August 25, 2014 October 1, 2014)
- MTH 150 Credit-by-exam proctoring, Member. (September 9, 2014)
- FastTrack tutoring. (August 27, 2014) Offer office hours to students in the FastTrack program studying for the math placement test
- Representative to Cultural Experiences Abroad, Paris Office, Representative. (July 29, 2014)

Attended meeting to initiate discussions with Mr. Christopher Edwards at CEA about the possibility of starting a summer program in mathematics at CEA Paris.

SAH Celebration of Success slides preparation, Member. (May 5, 2014 - May 9, 2014) Format slides for the Math Department part of the SAH celebration of

success

- Set up for Math Department Honors Reception. (April 16, 2014) Set up tables and chairs for Math Department Spring Honors Reception. Clean boards.
- Regents Award for Teaching Excellence, Proofreader. (December 12, 2013 -December 20, 2013) Reviewed narrative and attachments written by the Department for submission to the Regents Award for Teaching Excellence.
- Fall Commencement, Member. (December 15, 2013) Attendance at the Fall 2013 Commencement
- Faculty Research Grant Feedback Meetings, Member. (August 21, 2013 November 3, 2013)
- Wisconsin Mathematical Modeling Challenge, Member. (October 20, 2013) Judge for the Wisconsin Mathematical Modeling Challenge contest
- Meeting with External Reviewer, Member. (September 30, 2013) Met with Dr. Jason Miller, external reviewer for the Math Department
- MTH 150 Credit-by-exam grading, Member. (September 12, 2013) Design solutions, determine grading rubic, and grade student exams for MTH 150 Credit-by-exam

MTH 150 Credit-by-exam proctoring, Member. (September 10, 2013) Proctoring for MTH 150 exam administered by Department of Mathematics (Fall 2013)

Department newsletter. (September 2, 2013) Author of contributing article

2013 FastTrack, Exam assistant. (August 29, 2013 - August 30, 2013) Generated solution key for exams. Scored placement exams.

#### **University Service**

#### 1. Committee Involvement

International Education, Member. (August 30, 2017 - Present)

structure and forward evaluation to the Chancellor.

Joint Multicultural Affairs Committee, Chair. (September 1, 2016 - August 31, 2017)

Diversity and Inclusion Council, Member. (August 20, 2015 - August 31, 2017)

Diversity Structure Strategic Planning Action Team, Member. (May 31, 2017 - July 15, 2017) Structure and meetings charged by Strategic Plan Implementation team to evaluate potential options for a more coordinated UWL diversity leadership

Joint Multicultural Affairs Committee, Chair. (September 1, 2015 - August 31, 2016)

- Discrete Mathematics Seminar Organizer, Chair. (August 30, 2014 May 30, 2016) Organize a seminar of three faculty in mathematics and one in computer science
- Joint Multicultural Affairs Committee, Member and Secretary. (September 15, 2014 June 1, 2015)
- Mentor for Faculty Research Grant. (September 20, 2014 October 25, 2014) External mentor for a Faculty Research Grant proposal in Psychology
- Institute for Campus Excellence New Faculty/IAS Orientation, Member. (August 25, 2014) Serve on a Q/A panel of newer faculty for incoming faculty/IAS during orientation
- Celebration of Student Research and Creativity, Session moderator. (April 18, 2014) Served as faculty session moderator for the Celebration of Student Research and Creativity

# **Professional and Community Service**

#### 1. Other professional and community service

Student Organization, UW-L Competitive Ballroom Dance Team, Faculty Advisor, approximately 30 hours spent for the year, No, neither, Pro Bono, Local. (September 9, 2016 - Present). I agreed to serve as faculty advisor to a team which was under suspension and had a written verdict charging the club's leadership team to rewrite bylaws. I worked with all members of the leadership team and other interested parties in revisions to the bylaws. With the work submitted and accompanied by a written statement carefully documenting how the new bylaws addressed each concern in the verdict, the club was successful in having the suspension lifted.

- Professional, MAA Wisconsin Section Meeting Planning Committee. (October 2, 2015 April 25, 2016).
- Professional, Joint Mathematics Meetings: Undergraduate Research Poster Session, Student Poster Session Judge, No, neither, Pro Bono, National. (January 8, 2016).

Served as judge for undergraduate research poster session at the 2015 Joint Mathematics Meetings

- Public/Community, La Crosse Design Institute (LDI) Pre-Showcase, Judge for student presentations, approximately 3 hours spent for the year, No, neither, Pro Bono, Local. (November 13, 2015). Provided feedback to students at LDI in preparation for their presentations later in the week
- Professional, UW-La Crosse Faculty Research Grant, Grant Proposal Reviewer, Internal, approximately 10 hours spent for the year, No, neither, Pro Bono, Local. (October 1, 2015 - October 20, 2015). Reviewed a grant proposal for a faculty member in Educational Studies submitting an FRG grant
- Public/Community, UW-La Crosse Math and Stats Club (Pi your Professor). (October 5, 2015).
- Student Organization, UW-La Crosse Math and Stats Club. (October 1, 2015). Presented lecture: What can you do with a degree in math?
- Professional, FastTrack, Compensated. (August 31, 2015 September 4, 2015).
- Professional, Engaging in Undergraduate Research: from funding to publishing, Workshop Organizer, Member, approximately 20 hours spent for the year, No, neither, Pro Bono. (September 20, 2014 - January 14, 2015).
  With three other math professors around the country, I co-organized a panel on getting involved with undergraduate research.
- Professional, Joint Mathematics Meetings: Undergraduate Research Poster Session, Student Poster Session Judge, No, neither, Pro Bono, National. (January 10, 2015 - January 13, 2015). Served as judge for undergraduate research poster session at the 2015 Joint Mathematics Meetings
- Professional, UW-La Crosse Faculty Research Grant, Grant Proposal Reviewer, Internal, approximately 10 hours spent for the year, No, neither, Pro Bono, Local. (October 1, 2014 - October 20, 2014). Reviewed a grant proposal for a faculty member in Psychology submitting an
  - Reviewed a grant proposal for a faculty member in Psychology submitting an FRG grant

- Public/Community, La Crosse Design Institute (LDI) Pre-Showcase, Judge for student presentations, approximately 3 hours spent for the year, No, neither, Pro Bono, Local. (May 19, 2014). Provided feedback to students at LDI in preparation for their presentations later in the week
- Public/Community, PHY106 Idol Band Contest, Contest judge, approximately 1 hours spent for the year, No, neither, Pro Bono, Local. (April 16, 2014). Serve as judge for the PHY106 idol band contest for elementary education majors studying sound and music and building homemade instruments.
- Public/Community, MATHCOUNTS, Discussion leader, Invited discussion leader, approximately 2 hours spent for the year, No, neither, Pro Bono, Local. (February 7, 2014). Interacted with students who attended the local MATHCOUNTS mathematical competition

#### Service Presentations

- Kim, Edward (Co-Presenter), Murray, James (Co-Presenter), "Assessment Minimalism", University of Wisconsin-La Crosse Assessment Commons, University of Wisconsin-La Crosse. (January 18, 2017).
   Presented with James Murray on how to effectively do assessment for persons and departments getting started with formal assessment
   Download File (ekim/present service/assessment-minimalism-1.pdf)
- Kim, Edward (Moderator), "Sexism in Mathematics", Sexism in Mathematics, La Crosse, WI. (January 16, 2017).
  Presented and moderated discussion on attitudes in mathematics as it pertains to sex and gender identity and presentation.
  Download File (ekim/present service/SexisminmathematicsforATP-1.pdf)
- Kim, Edward (Co-Presenter), Allen, Robert (Co-Presenter), "College Readiness Math Symposium", University of Wisconsin-La Crosse. (December 3, 2016).
   Robert Allen and I spoke as co-panelists for area high school mathematics teachers to address the question of readiness for collegiate mathematics.
- Baumann, Douglas (Chair), Kim, Edward (Panelist), Das, Tushar (Panelist), George, Whitney (Panelist), Chen, Song (Panelist), Vidden, Chad (Panelist), "Graduate School Panel Discussion", UW - La Crosse. (November 12, 2015). Graduate school discussion activity for UW-L Math and Stat majors.
- Baumann, Douglas (Chair), Kim, Edward (Panelist), Allen, Robert (Moderator), Eager, Eric (Panelist), Das, Tushar (Panelist), George, Whitney (Panelist), Vesperman, Crystal (Panelist), Warnberg, Nathan (Panelist), "Graduate School Panel Discussion", UW - La Crosse. (October 9, 2014). Graduate school discussion activity for UW-L Math and Stat majors.
- Baumann, Douglas (Chair), Vidden, Chad (Panelist), Kim, Edward (Panelist), Chen, Song, Eager, Eric, Kelly, Susan E, "Graduate School Panel Discussion", UW
  La Crosse. (November 14, 2013).
  Graduate school discussion activity for UW-L Math and Stat majors.

#### **Professional Memberships**

Mathematical Association of America, National. (October 1, 2014 - Present).

Membership provided by Project NExT

Project NExT Wisconsin, State. (October 2013 - Present).

Project NeXT Wisconsin is a professional development organization for tenure-track faculty in mathematics which focuses on new methods and ideas in teaching mathematics.

Project NExT, National. (June 1, 2014 - May 31, 2016). Selected nationally as one of eighty fellows (annually) for professional development in mathematics by the Mathematical Association in America.

Society for Industrial and Applied Mathematics, International. (July 1, 2013 - December 31, 2014).

SIAM builds cooperation between mathematics and the worlds of science and technology through its publications, research, and community.

# **B. Additional Service Evidence**

E-mail from William Dunham, one of the plenary speakers at the Wisconsin Section meeting of the Mathematical Association of America (conference hosted at UWL in April 2016) Download File (ekim/promotion/appendix-service-MAA-William-Dunham-1.pdf)

Main document for 2016-2019 program assessment

Download File (ekim/promotion/pure-math-SLOs-curriculum-map-and-assessment-plan-v3-1.pdf)

Draft of revisions for writing in the major

Download File (ekim/promotion/appendix-writing-in-the-major-1.pdf)

Assessment plan and draft timeline for formal assessment of the Writing in the Major program <u>Download File (ekim/promotion/Writing in the Major - Meeting notes-1.pdf)</u>

Department narrative for the Regents Award for Teaching Excellence

Download File (ekim/promotion/Regents Award for Teaching Excellence Narrative-1.pdf)

Letter from Dr. Roger Haro documenting work on the Joint Multicultural Affairs Committee (JMAC), contributions to strategic planning in the area of diversity, and impact on work with McNair Scholars. *Download File (ekim/promotion/Kim Letter Sept 2017-1.pdf)* 

# **VI. ADDITIONAL INFORMATION**

#### A. Awards and Honors

Nominee for Eagle Teaching Excellence Award, University of Wisconsin-La Crosse Office of the Provost, Teaching. (June 25, 2017).

Nominee for the Most Accessible Award, Students Advocating Potential Ability, Teaching. (February 24, 2017).

Nominee for Eagle Teaching Excellence Award, University of Wisconsin-La Crosse Office of the Provost, Teaching. (June 25, 2016).

Nominee for Provost's Teaching Excellence Award, University of Wisconsin-La Crosse Office of the Provost, Teaching. (June 10, 2015).

Provost's Teaching Excellence Award, University of Wisconsin-La Crosse Office of the Provost, Teaching. (May 10, 2015).

Nominee for Provost's Teaching Excellence Award, University of Wisconsin-La Crosse Office of the Provost, Teaching. (June 25, 2014).

Nominee for the Most Accessible Award, Students Advocating Potential Ability, Teaching. (February 24, 2014).

#### **B. Faculty Development**

#### **Seminars Attended**

Professional, Seminar, "New faculty/IAS: University service", University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (February 26, 2014).

Professional, Seminar, "Retention and promotion seminar", University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (February 12, 2014).

#### **Other Activities**

Professional, Attended Conference, "Society for Industrial and Applied Mathematics Conference on Optimization", Society for Industrial and Applied Mathematics, Vancouver, BC, Canada, No. (May 22, 2017 - May 25, 2017).

Teaching, Workshop, "First Year Student Success Workshop", La Crosse, WI, United States, No. (May 16, 2017).

Teaching, Workshop, "STAT 145 Workshop", La Crosse, WI, United States. (May 9, 2017 - May 10, 2017).

Scholarship/Research, Attended Conference, "MAA Wisconsin Section Meeting", Mathematical Association of America, Wisconsin Section, Milwaukee, WI, United States, No. (April 21, 2017 - April 22, 2017).

Teaching, Workshop, "Assessment Commons", La Crosse, WI, United States. (January 18, 2017).

Teaching, Workshop, "College Readiness Math Symposium", La Crosse, WI, United States, No. (December 3, 2016).

Teaching, Attended Conference, "Research and Innovation in Teaching Math with Technology", La Crosse, WI, United States. (July 11, 2016 - July 12, 2016).

Teaching, Workshop, "Assessment Commons", La Crosse, United States, No. (February 20, 2016).

Teaching, Workshop, "Prior knowledge and misconceptions", Center for Advancing Teaching and Learning, University of Wisconsin-La Crosse, La Crosse, United States, No. (February 12, 2016).

Teaching, Webinar, "UW System SoTL videoconference", Center for Advancing Teaching and Learning, University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (January 14, 2016).

Scholarship/Research, Attended Conference, "2016 Joint Mathematics Meetings", American Mathematical Society and Mathematical Association of America, Seattle, WA, United States, No. (January 6, 2016 - January 9, 2016).

Teaching, Instructional-Related Conference, "Mathematics Education Technology Fair", University of Wisconsin-La Crosse Department of Mathematics, La Crosse, WI, United States, No. (December 7, 2015). Teaching, Instructional-Related Conference, "Fall 2015 NExT Conference", Mathematical Association of America, Wisconsin Project NExT, Baraboo, WI, United States, No. (November 7, 2015 - November 8, 2015).

Scholarship/Research, Attended Conference, "MathFest", Mathematical Association of America, Washington DC, United States, No. (August 5, 2015 - August 8, 2015).

Teaching, Attended Conference, "Research and Innovation in Teaching Math with Technology", La Crosse, WI, United States. (July 20, 2015 - July 21, 2015).

Teaching, Attended Conference, "Wisconsin Mathematics Council Annual Meeting", Wisconsin Mathematics Council, Green Lake, WI, United States. (May 7, 2015 - May 8, 2015).

Scholarship/Research, Attended Conference, "MAA Wisconsin Section Meeting", Mathematical Association of America, Wisconsin Section, Ripon, WI, United States, No. (April 24, 2015 - April 25, 2015).

Scholarship/Research, Attended Conference, "2015 Joint Mathematics Meetings", American Mathematical Society and Mathematical Association of America, San Antonio, TX, United States, No. (January 10, 2015 - January 13, 2015).

Teaching, Instructional-Related Conference, "Fall 2014 NExT Conference", Mathematical Association of America, Wisconsin Project NExT, Baraboo, WI, United States, No. (October 4, 2014 - October 5, 2014).

Scholarship/Research, Attended Conference, "MathFest", Mathematical Association of America, Portland, OR, United States, No. (August 7, 2014 - August 8, 2014).

Professional, Workshop, "Project NExT: New Jobs, New Responsibilites, New Ideas", MAA Project NExT, Portland, OR, United States, No. (August 4, 2014 - August 6, 2014).

Scholarship/Research, Attended Conference, "Recent Advances in Linear Optimization", Paris, France, Yes. (July 30, 2014 - August 1, 2014).

Scholarship/Research, Attended Conference, "MAA Wisconsin Section Meeting", Mathematical Association of America, Wisconsin Section, Whitewater, WI, United States, No. (April 4, 2014 - April 5, 2014).

Scholarship/Research, Research/Writing Presentation, "Faculty Research Day", University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (January 24, 2014).

Teaching, Instructional-Related Conference, "CATL Winter 2014 Conference on Teaching and Learning", Center for Advancing Teaching and Learning, University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (January 21, 2014).

Teaching, Instructional-Related Conference, "Mathematics Education Technology Fair", University of Wisconsin-La Crosse Department of Mathematics, La Crosse, WI, United States, No. (December 10, 2013).

Teaching, Instructional-Related Conference, "Fall 2013 NExT Conference", Mathematical Association of America, Wisconsin Project NExT, Baraboo, WI, United States, No. (October 5, 2013 - October 6, 2013).

Teaching, Lecture, "Effective Use of PowerPoint", Center for Advancing Teaching and Learning, University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (September 20, 2013).

Teaching, Instructional-Related Conference, "15th Annual Conference on Teaching & Learning", Center for Advancing Teaching and Learning, University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (August 27, 2013).

Professional, Tutorial, "University of Wisconsin-La Crosse New Faculty Orientation", University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (August 23, 2013 -August 26, 2013).

Teaching, Technology Training, "D2L Boot Camp", University of Wisconsin-La Crosse, La Crosse, WI, United States, No. (August 7, 2013 - August 8, 2013).

Professional, Tutorial, "Mathematics New Faculty Information Session", University of Wisconsin-La Crosse Department of Mathematics, La Crosse, WI, United States, No. (August 6, 2013).

# C. Pre UW-L CV Links

Download File (ekim/review/edward d kim cv-1.pdf)