

CURRICULUM VITAE

BIR B. KAFLE

Department of Mathematics, Statistics
and Computer Science
Purdue University Northwest

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EDUCATION

Ph.D., Mathematics August 2014
Advisor: Robert Perlis
Louisiana State University, Baton Rouge, LA

M.S., Mathematics May 2009
Western Illinois University, Macomb, IL

EXPERIENCE

Assistant Professor of Mathematics August 2015 - present
Visiting Assistant Professor August 2014 - July 2015
Purdue University Northwest

Teaching Assistant August 2009 - July 2014
Louisiana State University, Baton Rouge, LA

Graduate Teaching Assistant August 2007 - May 2009
Western Illinois University, Macomb, IL

RESEARCH INTERESTS

Number Theory: Algebraic Number Theory, Diophantine Equations, Arithmetical Similarities
Group Theory: Local Conjugations in Groups

AWARDS, HONORS

ACUE Teaching Fellow Fall 2018
(with Certificate in Effective College Instruction)
Purdue University Northwest

Certificate of Teaching Excellence Award Fall 2013
Department of Mathematics
Louisiana State University

Enhancement and Supplement Awards 2009 - 2013
 Graduate School
 Louisiana State University

Western Europeans and Others Group (WEOG) Award Spring 2008, Fall 2008
 Western Illinois University

Int. Student Education Award 2001 - 2002
 Soka University, Japan

PROFESSIONAL MEMBERSHIPS

Mathematical Association of America (MAA) 2015 - present
 The Fibonacci Association 2018 - present
 The Teaching Professor 2017 - present

PUBLICATIONS

Research:

1. *Markoff equation with Pell components*, Accepted to appear in *Fibonacci Quarterly*, (2020).
2. *Lucas Factoriangular numbers*, (with F. Luca, and A. Togbé), Accepted to appear in *Mathematica Bohemica*. Online first article available at doi.org/10.21136/MB.2018.0021-18
3. *Repdigits as sums of two Fibonacci numbers and two Lucas numbers*, (with B. V. Normenyo and A. Togbé), *Integers*, **19** #55 (2019).
4. *On the x -coordinates of Pell equations which are products of two Fibonacci numbers*, (with F. Luca, A. Montejano, L. Szalay, A. Togbé), *J. Number Theory*, **203** (2019) 310-333.
5. *On a conjecture concerning the multiplicity of the Tribonacci sequence*, (with E. F. Bravo, C. A. Gómez, F. Luca and A. Togbé), *Colloq. Math. Warsaw*, **159** (2020) 61-69.
6. *Triangular Repblocks*, (with F. Luca, and A. Togbé), *The Fibonacci Quarterly*, **56.4** (2018), 325-328.
7. *x -coordinates of Pell equations which are Lucas numbers*, (with F. Luca, and A. Togbé), *Boletín de la Soc. Mat. Mex.*, **25** (2019) 481-493.
8. *x -coordinates of Pell equations which are Tribonacci numbers II*, (with F. Luca, and A. Togbé), *Periodica Math. Hungarica*, **79** (2019), 157-167.
9. *On the x -coordinates of Pell equations which are Fibonacci numbers II*, (with F. Luca, and A. Togbé), *Colloq. Math. Warsaw*, **149** (2017), 75-85.

Pedagogy:

10. *Making Connections with Reading*, 30th International Conference on Technology in Collegiate Mathematics Proceedings (ICTCM) Pearson, 2019.
pearson.com/us/about/news-events/events/ictcm-archive-2018.html

PRESENTATIONS

Research:

1. *On Triangular Repblocks*, Indiana section of MAA meeting, Indianapolis, IN, April 05 - 06, 2019.

2. *On Factoriangular numbers*, Poster Presentation on PNW Days of Discovery, April 02 - 03, 2019.
3. *Factoriangular numbers in some interesting sequences*, Integers Conference, Augusta, GA, October 03-06, 2018.
4. *On x -coordinates of Pell equations which are in some interesting sequences*, Canadian Number Theory Association Conference - XV, Quebec City, Canada, July 09-13, 2018.
5. *Pell, Pell-Lucas and Associated Pell numbers of the form $2^a + 3^b + 5^c$* , The 18th International Conference on Fibonacci Numbers and Their Applications, Halifax, Canada, July 01-07, 2018.
6. *Conjugations in S_n and Application to Number Fields*, Tri-Section Meeting, Illinois, Indiana and Michigan sections of MAA, Valparaiso, IN, March 23-24, 2018.
7. *On the x -coordinates of Pell equations which are products Fibonacci numbers*, Joint Math Meetings, San Diego, CA, January, 10-13, 2018.
8. *Recent Developments on Gassmann Equivalence in Groups*, Southern Regional Number Theory Conference, Baton Rouge, LA, April, 08-09, 2017.
9. *On the x -Coordinates of Pell equations which are Fibonacci numbers*, Joint Math Meetings, Atlanta, GA, January, 04-07, 2017.
10. *Local Conjugation in Nilpotent Groups*, Joint Math Meetings, Seattle, WA, January 2016.
11. *Local Conjugation in Groups*, Joint Math Meetings, San Antonio, TX, January 2015.

Pedagogy:

12. *Making Connections with Textbooks*, talk presented at ICTCM, Washington D.C., March 15-18, 2018.
13. *Teaching Calculus with Technology in Cooperative Learning Setting*, talk presented at ICTCM, Atlanta, GA, March 10-13, 2016.
14. Invited talk on *Calculus Teaching with Technology* at Pearson Calculus Forum, Huntington Beach, CA, April 07-09, 2016.

GRANTS

1. *PRF Summer Research Grant*, Purdue University, Summer 2018.
2. Travel Grants:
 - *Integers Conference*, October 2018,
 - *The Eighteenth International Conference on Fibonacci Numbers and Their Applications*, July 2018, Halifax, Canada,
 - *Canadian Number Theory Association Conference-XV*, July 2018, Québec City, Canada,
 - *Southern Regional Number Theory Conference*, Baton Rouge, LA, April 2017.
3. *Faculty Development Summer Grant*, PNC, 2016.

COURSES TAUGHT

Purdue University Northwest:

- MA/CS 10000 An Introduction to Mathematical Sciences (F19)
- MA 16300 Integrated Calculus and Analytic Geometry I (F18, F16)
- MA 16400 Integrated Calculus and Analytic Geometry II (F19, Sp19, Sp18, Sp18, Su17, Sp17)

- MA 16019 Applied Calculus I for Technology (Sp18, F17, F16)
- MA 16021 Applied Calculus II and Differential Equations (Sp17)
- MA 15300 College Algebra (F19, Sp15, F14)
- MA 15400 Trigonometry (Sp19, F18, Sp16, Sp15)
- MA 22300 Introductory Analysis I (Sp15)
- MA 22400 Introductory Analysis II (F15, F14)
- MA 26100 Multivariate Calculus (F17, F14)
- MA 26200 Linear Algebra and Differential Equations (Sp18, Independent Study)
- MA 26400 Differential Equations (Su19)
- MA 11100 Algebra (Su15)
- MA 16700 Analytic Geometry and Calculus I - Lecture and Lab (Sp16, F15,
- MA 16900 Analytic Geometry and Calculus II- Lecture and Lab (Su16,)

Louisiana State University:

- Elementary Differential Equations and Linear Algebra (Sp14)
- MATH 1021 College Algebra (F10, F11)
- MATH 1022 Plane Trigonometry (Sp13)
- MATH 1100 The Nature of Mathematics (Su10)
- MATH 1550 Analytic Geometry and Calculus I (F12, Su12, S12, S11, Su11)
- MATH 1552 Analytic Geometry and Calculus II (F13, Su13)

Western Illinois University:

- MATH 099 Intermediate Algebra (F08, Sp09)

SELECTED SERVICE

1. Committees

- University Senate Subcommittee for Faculty Development, Member (since 2018).
- University Grade Appeal Committee, Member (since November 2016).
- Department Course Committees:
 - Calculus Courses Committee, Member (since Fall 2017),
 - Technology Courses Committee, Chair (since Fall 2017).
- PNW Office of Research, Grant Review Committees.
- Continuing Lecturer in Mathematics Hiring Committee, Member, PNW, 2015.

2. Represented MSCS (department) in following events:

- PNW Welcome Rally (Fall 2018, Fall 2019),
- PNW Major Fair (Fall 2018, Fall 2019),
- Preview PNW (Spring 2019, Fall 2019),
- PNW Open House (Spring 2017, Fall 2017, Fall 2018).

3. Conference Co-Organizer

- *Diophantine m -tuples and Related Problems II*, Purdue University Northwest, October 15-17, 2018.
Co-organizer and member of the scientific committee.
- *Indiana Section of MAA Fall meeting*, Purdue University North Central, October 17, 2015.
- *Diophantine m -tuples and Related Problems*, Purdue University North Central, November 12-14, 2014.

4. Judge for the *Regional Science Olympiad*, PNW , February 09, 2019.

5. Judge for the *Student Paper Presentation* sessions in MAA MathFest, Chicago, IL, June 28, 2017.