

# CURRICULUM VITA KIT C. CHAN

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## ACADEMIC DEGREES

Ph. D. (Mathematics), 1988, University of Michigan.  
B. Sc. (Mathematics), 1983, University of Hong Kong.

## ACADEMIC POSITIONS

### Teaching Positions

Professor, Bowling Green State University, 2002 – present.  
Associate Professor, Bowling Green State University, 1996 – 2002.  
Assistant Professor, Bowling Green State University, 1992 – 1996.  
Instructor, Michigan State University, 1989 – 1992.  
Lecturer, University of Michigan, Jan, 1989 – Aug, 1989.  
Teaching Assistant, University of Michigan, 1984 - 1988.

## ADMINISTRATIVE POSITION

Chair, Department of Mathematics and Statistics, BGSU  
July 2007 - December 2013.

## TEACHING EXPERIENCES

### A. Undergraduate Courses

#### • BGSU: Fall 1992 - Fall 2023

Precalculus - large lecture (60 students), MATH 1280, 3 semesters.  
Calculus I, MATH 1310, 1 semester.  
Calculus IA, MATH 1340, 2 semesters.  
Calculus IB, MATH 1350, 1 semester.  
Discrete Mathematics, MATH 2220, 4 semesters.  
Discrete Mathematics, MATH 3220, 16 semesters.  
Proof-Writing, MATH 3280, 1 semester.  
Elementary Linear Algebra, MATH 3320, 9 semesters.

#### • Michigan State University: Fall 1989 - Spring 1992

Precalculus - large lecture (540 students), 3 quarters.  
Calculus I - large lecture (240 students), 3 quarters.  
Calculus II, 1 quarter.

Calculus III, 1 quarter.  
Differential Equations, 2 quarters.  
Boundary Value Problems. 1 quarter.  
Real Analysis, 1 quarter.

• **University of Michigan: Spring 1984 - Spring 1989**

Precalculus, 1 semester.  
Business Calculus, 2 semesters.  
Calculus I, 3 semesters.  
Calculus II, 2 semesters.  
Calculus III, 2 semesters.

**B. Undergraduate-Graduate Courses**

• **BGSU: Fall 1992 - Spring 2021**

Advanced Calculus, MATH 4300/5300, 2 semesters.  
Vector Calculus, MATH 4340/5340, 1 semester.  
Differential Forms, MATH 4340/5340. 2 semesters.  
Linear Algebra, MATH 4320/5320, 1 semester.  
Elementary Real Analysis, MATH 4650/5650, 16 semesters.  
Topics in Real Analysis - Multivariable Calculus, MATH 4660/5660, 1 semester.  
Elementary Complex Analysis, MATH 4610/5610, 7 semesters.  
Topics in Real Analysis - Integration and Series, MATH 4660/5660, 6 semesters.

**C. Graduate Courses**

• **BGSU, Fall 1992 - Fall 2023**

Real Analysis I, MATH 6650, 2 semesters.  
Real Analysis II, MATH 6660, 2 semesters.  
Complex Analysis I, MATH 6610, 3 semesters.  
Complex Analysis II, MATH 7620, 2 semesters.  
Abstract Measures, MATH 7650, 7 semesters.  
Functional Analysis, MATH 7660, 8 semesters.  
Linear Dynamics, MATH 7680, 1 semester.  
Inequalities, MATH 6800, 4 semesters.  
Fourier Series, MATH 6800, 2 semesters.  
Operator Theory, MATH 6800, 3 semesters.  
Riemann Surfaces, MATH 6800, 1 semester.  
Weak Topologies I, MATH 6800, 2 semesters.  
Weak Topologies II, MATH 6800, 2 semesters.  
Fredholm Theory, MATH 6800, 1 semester.  
Spectral Theory, MATH 6800, 1 semester.

**D. Teaching Supervision**

• **Calculus Coordinator, BGSU**

4 semesters (Fall 2003 to Spring 2005).

Designed syllabi for calculus courses – MATH 1310, 1340, 1350, 2320, 2330.  
Supervised about 15 sections of Calculus 1 in one semester.  
Supervised about 3 sections of Calculus 2 in one semester.  
Supervised about 3 sections of Calculus 3 in one semester.

- **Precalculus Coordinator, BGSU**

9 semesters (Fall 1996 - Spring 1999, and Spring 2002 - Spring 2003).  
MATH 1280, taught by teaching assistants and instructors, 8 to 15 sections each semester.  
Designed Syllabus.  
Wrote uniform examinations and grading guidelines.  
Visited and commented on classes of inexperienced teachers.

- **Lecturer, Michigan State University**

Fall 1989 – Spring 1992.  
Taught 3 Precalculus lectures (540 students each, with 18 teaching assistants).  
Taught 3 Calculus lectures (240 students each, with 8 teaching assistants).

- **Business Calculus Coordinator, University of Michigan**

Business Calculus, taught by teaching assistants, 8 sections, Spring 1989.

## E. PhD Dissertation Students

- **PhD Students Under My Supervision**

Zeno Madaraz, PhD (2023), BGSU.  
Aiham Hassan, PhD (2023), BGSU.  
Thomas Tuberson, PhD (2022), BGSU.  
Matthew Switlyk, PhD (2021), BGSU.  
Fadelah Almohammedali, PhD (2021), BGSU.  
Serge Phanzu, PhD (2020), BGSU.  
David Walmsley, PhD (2017), BGSU.  
Leonardo Pinheiro, PhD (2014), BGSU.  
George Turcu, PhD (2013), BGSU.  
Gokul Kadel, PhD (2013), BGSU.  
Irina Seceleanu, PhD (2010), BGSU.  
Rebecca Sanders, PhD (2004), BGSU.  
Ronald Taylor Jr, PhD (2000), BGSU.

- **Membership on Ph. D. Dissertation Committees (Not Chairing)**

Aleksei Luchinsky, (Prelim Exam), Data Science  
Christopher Foster, (Prelim Exam), Mathematics

Baffour Koduah, (Prelim Exam), Statistics  
 Hassani Pathirana, 2023, Statistics  
 Danielle Witt, 2022, Mathematics  
 Samuel Hokamp, 2019, Mathematics.  
 Sabrina Gonzales, 2019, Psychology.  
 Samuel Carolus, 2019, Mathematics.  
 Nikolai Teyrulnikov, 2019, Chemistry.  
 Jordon Bounds, 2019, Mathematics.  
 Shashini Premathilaka, (Prelim Exam), 2017, Physics.  
 Dimitrios Papathanasiou, 2017, Mathematics.  
 Swarup Ghosh, 2014, Mathematics.  
 David Rumsey, 2012, Mathematics.  
 Melanie Henthorn, 2011, Mathematics.  
 Tumpa Bhattacharjee, 2011, Mathematics.  
 Kate Overmoyer, 2011, Mathematics.  
 Kevin Rion, 2011, Mathematics.  
 Seung-Geuk Shin, 2010, Biology.  
 Ozgur Martin, 2010, Mathematics.  
 Kevin Drees, 2009, Mathematics.  
 Papiya Bhattacharjee, 2009, Mathematics.  
 Mihaela Marcusanu, 2007, Mathematics.  
 Lynette Boos, 2006, Mathematics.  
 Juan Marin, 2005, Mathematics.  
 Bill Rolli, 2004, Mathematics.  
 Bernie Elec, 2002, Mathematics.  
 Daria Filippova, 2001, Mathematics.  
 Shengrong Tan, 1999, Mathematics.  
 Igor Tretiakov, 1998, Photochemistry.  
 James Lesko, 1997, Mathematics.  
 Dan Green, 1996, Mathematics.

- **Membership on Master's Thesis Committees**

Jessica Patrick, 2020, mathematics.  
 Michael Gulas, 2020, mathematics – Chair  
 Vincent Vascimini, 2019, mathematics – Chair  
 Katherine Shoemaker, 2018, mathematics  
 Christopher Gardiner, 2017, mathematics.

## CURRICULUM DEVELOPMENT

### **A. Graduate Topics Courses Taught at BGSU**

Linear Dynamics (2016)  
 Inequalities (1993, 1997, 2002, 2016)  
 Weak Topologies II (2000, 2007)

Weak Topologies I (1999, 2006)  
Spectral Theory (2005)  
Fredholm Theory (2004)  
Operator Theory (1995, 1998, 2003)  
Fourier Series (1994, 2001)  
Riemann Surfaces (1996)

## **B. Reading Courses Taught at BGSU: Fall 1992 - Spring 2021**

Basic Calculus Theory, Math 6700, 1 semester.  
Riemann Integration and Power Series, Math 6700, 1 semester.  
Hypercyclicity, Math 6700, 18 semesters.  
Operator Theory, Math 6700, 5 semesters.  
Topology, Math 6700, 2 semesters.  
Weak Topologies, Math 6700, 1 semester.  
Optimization, Math 6700, 1 semester.  
Problems in Analysis, Math 6800, 3 semesters.  
Elementary Analysis, Math 4700, 4 semesters.

## **PROFESSIONAL DEVELOPMENT**

### **A. Administrative Development: Sessions Attended**

Online course: Anti-Hazing: University Policy, State Law, & Reporting Requirement: Oct 2021.  
Online course: Prevent Sexual Violence Together, 2017-2022 (annually).  
Online course: Prevent Discrimination and Harassment Together, 2017 -2022 (annually).  
Online Reporter Training, Aug 2020.  
Workshop: Implicit Bias in Hiring Faculty, Nov 2018.  
Online course: Campus Sexual Violence Elimination, October 2016.  
Online course: Workplace Harassment Fundamentals, October 2016.  
Online course: Stop Harassment, January, 2015.  
Online course: Stop Discrimination, January, 2015.  
Online course: Stop Harassment and Discrimination, January, 2014.  
Online course: Report and Prevent Sexual Misconduct (Ohio), December, 2013.  
BGSU Retreat for Chairs/Directors, August, 2013.  
Provost's Academic Affairs Updates, Summer and Fall 2012.  
BGSU Retreat for Chairs/Directors, August, 2012.  
Diversity Workshop, National Coalition Building Institute, Bowling Green, March 2012.  
Science Policy Forum, American Mathematical Society, Washington DC, March 2012.  
Chairs Workshop, American Math Society Meeting, Boston, January, 2012.  
BGSU Retreat for Chairs/Directors, August, 2011.  
Chairs Workshop, American Math Society Meeting, New Orleans, January, 2011.  
BGSU Retreat for Chairs/Directors, August, 2010.  
Foundation Workshop, BGSU, March, 2010.  
Chairs Workshop, American Math Society Meeting, San Francisco, January, 2010.  
Career paths in math, American Math Society Meeting, Washington DC, January, 2009.

Chairs Workshop, American Math Society Meeting, Washington DC, January, 2009.  
Online Employment Discrimination Course, December, 2008.  
BGSU Retreat for Chairs/Directors, August, 2008.  
Online Sexual Harassment Course, May, 2008.  
Graduate Studies Workshop, American Math Society Meeting, San Diego, January, 2008.  
Chair Workshop, American Math Society Meeting, San Diego, January, 2008.  
Science Policy Forum, American Mathematical Society, Washington DC, April 2007.  
BGSU Retreat for Chairs/Directors, August, 2007, 2008, 2009, 2010, 2011.  
Chairs' Seminar, Kansas City, Council of Colleges of Arts and Sciences, July, 2007.

### **B. Teaching Development: Sessions Attended**

Ohio Mathematics Summit, Foundational Math, Columbus, May 2013.  
Education Meeting, American Math Society, Washington DC, October, 2011.  
Math Redesign Meeting, Ohio Board of Regents, Columbus, Ohio, Feb, 2010.  
Restoring Education, Panel Discussion, Amer Math Soc Meeting, Washington DC. Jan 2009.  
STEM education, Panel Discussion, BGSU, November 2008.  
Graduate Teaching Forum, Univ of Wisconsin, Madison, June, 2008.  
Special Presentation: Contextual Learning, BGSU, April, 2003.  
Special Presentation: Graduate students teaching in Sciences, BGSU, Jan, 2003.  
President Lecture Series: Infuse Values in Classrooms, BGSU, March, 2002.  
Community Discussion: Critical Thinking about Values, BGSU, November, 2001.  
Conference: Mathematical Association of America, BGSU, March, 2001.  
The Future of the BGSU Libraries Discussion Group, October, 2000.  
Harassment Training Session, BGSU, September, 2000.  
Second Annual Teacher Preparation Summit, BGSU, September, 2000.  
Computer Workshop: Developing Online Pedagogies, BGSU, May, 2000.  
Computer Workshop: Teaching with Maple, BGSU, March, 1998.  
Panel Discussion: Minority Students, Dept of Journalism, BGSU, April, 1998.  
Teaching Workshop: American Mathematical Society, Baltimore, Jan, 1992.

### **C. Research Development: Sessions Attended**

Grant Writing Workshop: Bowling Green State University, November 15, 2012.  
Grant Writing Workshop: University of Michigan – Ann Arbor, Dec 3, 2011.  
Grant Writing Workshop: National Science Foundation, Univ of Toledo, Sept 21, 2010.  
Grant Writing Tips, by Dr. Leontis, February 24, 2010.  
Grant Writing Workshop: Univ of Toledo/BGSU, Perrsburg, Ohio, April, 2007.  
Grant Writing Workshop: National Science Foundation, Cleveland State Univ, Sept, 2005.

### **D. BGSU Training Sessions Attended**

Power Point: 3 training sessions, February 2008.  
Financial Management Solutions–Principle Investiagtor: November 2007.  
Financial Management Solutions–Chair: July 2007.  
PeopleSoft: July, 2007.

Purchasing Card: July, 2007.

#### **E. Administrative Leave**

BGSU, Spring 2014.

#### **F. Faculty Improvement Leave**

BGSU, Spring 2024.

BGSU, Spring 2016.

BGSU, Spring 2000.

#### **G. Mathematics Conferences Attended**

American Math Society Eastern Sectional Meeting, Binghamton, New York, October 2019.

International Conference on Recent Trends in Topology and Its Applications,

St. Joseph College, Irinjalakuda, India, December 2018.

International Conference on Topology and Applications, Cochin, India, December 2018.

International Workshop on Topology and Applications, Cochin, India, December 2018.

27th International Conference on Operator Theory, Timisoara, Romania, July 2018.

Informal Analysis Seminar, Kent State University, April, 2017.

Informal Analysis Seminar, Kent State University, October, 2016.

Informal Analysis Seminar, Kent State University, April, 2014.

Workshop on Algorithms for Modern Massive Data Sets, Stanford Univ, June, 2012.

Banach Algebras 2011, University of Waterloo, Canada, August 2011.

International Functional Analysis Conference, Valencia, Spain, June 2010.

Informal Analysis Seminar, Kent State University, March, 2010.

Hypercyclicity & Chaos for Linear Operators & Semigroups, Valencia, Spain, June, 2009.

Mathematical Association of America, Conference, Bowling Green State Univ, April 2009.

American Mathematical Society, Conference, Washington DC, January 2009.

American Mathematical Society, Conference, San Diego, January, 2008.

Hypercyclicity, Mathematisches Forschungsinstitut Oberwolfach, Germany, August, 2006.

Probabilistic/Combinatorial Approach in Analysis, Kent State University, August, 2006.

Math, Math Education, Mathematician, Univ of Hong Kong, June, 2005.

National Science Foundation Day, Cleveland State Univ, April, 2005.

American Math Society Conference, Univ of North Carolina, October, 2003.

Informal Analysis Seminar, Kent State University, April 2003.

Informal Analysis Seminar, Kent State University, February, 2003.

Informal Analysis Seminar, Kent State University, October, 2002.

Informal Analysis Seminar, Kent State University, October, 2001.

Functional Analysis Meeting, Valencia, Spain, July, 2000.

Informal Analysis Seminar, Kent State University, April, 2000.

Informal Analysis Seminar, Kent State University, March, 2000.

Analysis Miniconference, Kent State University, March, 1999.

American Math Society Conference, Kansas State University, March, 1998.

Hypercyclicity Conference, Kent State University, March, 1998.

Colloquium, University of Toledo, November, 1997.  
 American Math Society Conference, Univ of Wisconsin-Milwaukee, October, 1997.  
 Wabash Modern Analysis Conference, Indianapolis, September, 1997.  
 Colloquium, University of Toledo, May, 1997.  
 Conference: Mathematics Today and Tomorrow, Univ of Central Florida, 1997.  
 Symposium in Honor of Calderon, University of Chicago, February, 1996.  
 American Math Society Conference, Kent State University, November, 1995.  
 Quasiconformal Mappings Conference, Univ of Michigan, August, 1995.  
 Old Dominion Analysis Conference, Washington and Lee Univ, March, 1995.  
 Colloquium, University of Toledo, February, 1995.  
 Colloquium, University of Michigan, January, 1995.  
 Wabash Modern Analysis Conference, Indianapolis, October, 1994.  
 Nevanlinna Colloquium, University of Michigan, June, 1993.  
 American Math Society Conference, Wright State University, October, 1992.  
 Wabash Modern Analysis Conference, Indianapolis, September, 1992.  
 American Math Society Conference, Baltimore, January, 1992.  
 American Math Society Conference, Louisville, January, 1990.  
 Wabash Modern Analysis Conference, University of Michigan, August, 1989.  
 South Eastern Analysis Conference, University of Arkansas, April, 1989.  
 American Math Society Conference, Atlanta, January, 1988.

## **ACADEMIC ADVISING**

### **A. Graduate Students Academic Advising: Year (Number of Students)**

2022 (12 students);  
 2007 (11 students); 2006 (11 students); 2005 (12 students); 2004 (8 students);  
 2003 (11 students); 2002 (students); 2001 (8 students); 2000 (10 students);  
 1999 (10 students); 1998 (5 students); 1997 (8 students); 1996 (3 students);  
 1995 (4 students); 1994 (4 students); 1993 (3 students); 1992 (3 students).

### **B. Graduate Students Mentoring: Year (number of students)**

1999 (2 students); 1998 (2 students); 1997 (2 students)

## **RESEARCH INTERESTS**

### **Functional Analysis, Operator Theory, Function Theory, Data Science**

Linear Dynamics, Cyclic Operators, Operators on Function Spaces  
 Operators on Banach Spaces, Data Science.

## **RESEARCH PROJECTS AND GRANTS**

### **A. National Science Foundation Grant, Submissions as Principal Investigator**

Collaborative Research: Authentic Research Experiences for Undergraduate Students in  
 Dynamics through innovative Learning Demonstrations and Applets, joint with Rebecca  
 Sanders and Irina Seceleanu, not selected for funding, submitted in January 2015.



Common Hypercyclic Vectors for a Path of Operators, joint with Rebecca Sanders not selected for funding, submitted in September 2007.

**B. Simons Foundation, Submissions as Principal Investigator**

Collaboration Grants for Mathematicians: Travel Funding for Research on Hypercyclic Factorization, not selected for funding, submitted in January 2019.

**C. FRC Speed Grants, BGSU**

Miniworkshop: Hypercyclicity, Oberwolfach, Germany, \$400, August, 2006.  
Functional Analysis Meeting, Valencia, Spain, \$350, July, 2000.  
Young Analysts Meeting of Southeast, Furman University, \$350, July, 1999.  
American Math Society Meeting, Univ of Wisconsin-Milwaukee, \$400, Oct, 1997.  
Wabash Analysis Miniconference, Indianapolis, \$184, September, 1997.  
Conference: Math Today and Tomorrow, Univ of Central FL, \$300, March 1997.  
Symposium in Honor of Calderon, University of Chicago, \$200, February, 1996.  
Old Dominion Analysis Conf., Washington and Lee Univ, \$150, March, 1995.  
Wabash Analysis Miniconference, Indianapolis, \$150, October, 1994.

**D. Special Projects Funding, College of Arts and Sciences, BGSU**

American Math Society Meeting, Kent State Univ, \$195, November, 1995.

**E. FRC Basic Grants, BGSU**

Cyclic Vectors and Reducing Subspaces in the Hardy Space, \$3000, 1994.  
Hypercyclic Functions in the Hardy Space, \$3000, 1993.

**F. New Faculty Start-Up Grant, BGSU**

Computer Equipment, \$2600, 1992.

**G. National Science Foundation Grants for PhD Students**

Winter Semester of 1988, \$3600.  
Summer Semester of 1987, \$2000.  
Winter Semester of 1987, \$3600.  
Summer Semester of 1986, \$2000.  
Summer Semester of 1985, \$1200.

**PUBLICATIONS: Refereed Journal Articles**

**A. Articles on Data Science**

44 *A simple framework for vector representation of persistence diagrams*,  
(with Islambekov, Luchinsky, Sanders), Journal of Machine Learning Research,

August 2022.

## B. Articles on Functional Analysis, Operator Theory, Function Theory

43. *Conditions for universality of linear fractional compositions on the Hardy space  $H^2$* , (with Hassan), manuscript in preparation.
42. *A strictly weakly hypercyclic operator with a hypercyclic subspace*, (with Madarasz), submitted for publication.
41. *Hypercyclic composition operators with automorphisms of the upper half-plane*, (with Almohammedali), Journal of Math Analysis and Applications, Volume 519 (2023), 1-24.
40. *Every pure quasinormal operator has a supercyclic adjoint*, (with Phanzu), Houston Journal of Mathematics, Volume 47 (2021), 393-407.
39. *Cyclic behavior of holomorphic functions on a Runge domain*, (with Switlyk), Journal of Mathematical Analysis and Applications, Volume 503 (2021), 1-24.
38. *Hypercyclic Shift Factorizations for Bilateral Weighted Shift Operators*, (with Sanders), Journal of Operator Theory, Volume 85 (2) (2021), 323-345.
37. *Linear factorization of hypercyclic functions for differential operators*, (with Hofstad, Walmsley), Journal of Math Analysis and Applications, Volume 485 (2) (2020), 1-21.
36. *A constructive approach to the universality criterion for semigroups*, (with Walmsley), Math Proceedings of the Royal Irish Academy, Volume 119A (1) (2019), 27-55.
35. *Hypercyclic shift factorizations for unilateral weighted backward shift operators*, (with Sanders), Journal of Operator Theory, Volume 80 (2018), 349-374.
34. *Simultaneous chaotic extension for general operators on a Hilbert subspace*, (with Pinheiro), Journal of Mathematical Analysis and Applications, Volume 448 (2017), 937-967.
33. *Chaotic differentiation operators on harmonic functions and simple connectivity*, (with Kadel and Pinheiro), Revista de la Real Academia de Ciencias: Serie A, Mathematics, Volume 109 (2015), 385-393 .
32. *Dual hypercyclic extension for an operator on a Hilbert subspace*, (with Kadel), Houston Journal of Mathematics, Volume 41 (2015), 1221- 1256.
31. *Cyclicity of vectors with orbital limit points for backward shifts*, (with Seceleanu), Integral Equations and Operator Theory, Volume 78 (2014), 225 - 232.
30. *Restrictions of an invertible chaotic operator to its invariant subspaces*, (with Kadel), Journal of Mathematical Analysis and Applications, Volume 409 (2014), 996-1004.
29. *Prescribed behaviors of compressions of dual hypercyclic operators*, Proceedings of the American Mathematical Society, Volume 140 (9) (2012), 3133-3143.
28. *Hypercyclicity of shifts as a zero-one law of orbital limit points*, (with Seceleanu),

- Journal of Operator Theory, Volume 67 (2012), 257 – 277.
27. *Common hypercyclic vectors for the unitary orbit of a hypercyclic operator*, (with Sanders), Journal of Mathematical Analysis and Applications., Volume 387 (2012), 17-23.
  26. *An SOT-dense path of operators with same hypercyclic vectors*, (with Sanders), Journal of Operator Theory, Volume 66 (1) (2011), 107-124.
  25. *Chaotic extensions of operators on Hilbert subspaces*, (with Turcu), Revista de la Real Academia de Ciencias: Serie A, Mathematics, Volume 105 (2) (2011), 415-421.
  24. *Common hypercyclic vectors for the conjugate class of a hypercyclic operator*, (with Sanders), Journal of Mathematical Analysis and Applications, Volume 375 (2011), 139-148.
  23. *Orbital limit points and hypercyclicity of operators on analytic function spaces*, (with Seceleanu), Mathematical Proceedings of the Royal Irish Academy. Volume 110A (1) (2010), 99–109.
  22. *Two criteria for a path of operators to have common hypercyclic vectors*, (with Sanders), Journal of Operator Theory, Volume 61 (2009), 191-223.
  21. *Common supercyclic vectors for a path of operators*, (with Sanders), Journal of Mathematical Analysis and Applications, Volume 377 (2008), 646-658.
  20. *Weak \* hypercyclicity and supercyclicity of shifts on  $\ell^\infty$* , (with Bes and Sanders), Integral Equations and Operator Theory, Volume 55 (2006), 363-376.
  19. *Every weakly sequentially hypercyclic shift is norm hypercyclic*, (with Bes and Sanders), Mathematical Proceedings of the Royal Irish Academy, Volume 105 A (2) (2005), 79-85.
  18. *A weakly hypercyclic operators that is not norm hypercyclic*, (with Sanders), Journal of Operator Theory, Volume 52 (2004) 39-59.
  17. *Approximation by chaotic operators and by conjugate classes*, (with Bes), Journal of Mathematical Analysis and Applications, Volume 284 (2003) 206-212.
  16. *Denseness of hypercyclic operators on a Frechet space*, (with Bes), Houston Journal of Mathematics, Volume 29 (2003) 195-206.
  15. *The density of hypercyclic operators on a Hilbert space*, Journal of Operator Theory, Volume 47 (2002), 131-143.
  14. *Universal meromorphic functions*, Complex Variables, Volume 46 (2002), 307-314.
  13. *Hypercyclic subspaces of a Banach space*, (with Taylor), Integral Equations and Operator Theory, Volume 41 (2001), 381-388.
  12. *Chaotic unbounded differentiation operators*, (with Bes and Seubert), Integral Equations and Operator Theory, Volume 40 (2001), 257-267.

11. *Hypercyclicity of the operator algebra for a separable Hilbert space*, Journal of Operator Theory, Volume 42 (1999), 231-244.
10. *C\*-algebra generated by a subnormal operator*, (with Cuckovic), Transactions of the American Mathematical Society, Volume 351 (1999), 1445-1460.
9. *Reducing subspaces of compressed analytic Toeplitz operators on the Hardy space*, (with Seubert), Integral Equations and Operator Theory, Volume 28 (1997), 147-157.
8. *Integral operators on certain subclasses of univalent functions*, (with Al-Amiri, Gresser, Mocanu, Seubert), Romanian Journal of Pure and Applied Mathematics, Volume 40 (1995), 339 -348.
7. *Starlikeness of certain analytic functions*, (with Al-Amiri, Gresser, Mocanu, Seubert), Mathematica, Volume 36(59) (1994), 73-79.
6. *Approximation by bounded functions in the Dirichlet space*, Journal of London Mathematical Society, Volume 43 (1993), 341-348.
5. *Zero sets, interpolating sequences and cyclic vectors for Dirichlet spaces*, (with Shields), Michigan Mathematical Journal, Volume 39 (1992), 289-307.
4. *The cyclic behavior of translation operators on Hilbert spaces of entire functions*, (with Shapiro), Indiana University Mathematics Journal, Volume 40 (1991), 1421-1449.
3. *On the Dirichlet space for finitely connected regions*, Transactions of the American Mathematical Society, Volume 319 (1990), 711-728.
2. *Common cyclic entire functions for partial differential operators*, Integral Equations and Operator Theory, Volume 13 (1990), 132-137.
1. *Common cyclic vectors for operator algebras on spaces of analytic functions*, Indiana University Mathematics Journal, Volume 37 (1988), 919-928.

## **INVITED PUBLICATIONS AND EDITOR OF CONFERENCE PROCEEDINGS**

1. Topological Dynamics and Topological Data Analysis (with Devaney and Vinod Kumar), IWCTA 2018, Kochi, India, December 9 - 11, Proceedings appeared in October 2021, Springer-Verlag, ISBN: 978-981-16-0174-3.

Three invited publications in the proceedings:

- (a) Some Examples of Hypercyclic Operators and Universal Sequences of Operators, p 121-126.
  - (c) Some Basic Properties of Hypercyclic Operators, p. 127-135.
  - (c) The Testing Ground of Weighted Shift Operators for Hypercyclicity, p. 137-145.
2. *The Circle: From Ancient Curiosity to Modern Abstraction and Applications*, a refereed book chapter of a book titled "Mathematics for the Curious: Why Study Mathematics", ISBN 978-1-925128-16-1, edited by Kishor Vaidya, 2014, Curious Academic Publishing.

## PAPERS READ TO PROFESSIONAL SOCIETIES

### **Invited Presentations**

*Some Structures of hypercyclic operators in the operator algebra.*

Online Colloquium, Chongqing University, China, November 15, 2022.

*Why are hypercyclic operators interesting?*

Online Colloquium, Henan Normal University, China, June 24, 2022.

*Linear factorization of an entire function that is hypercyclic for the translation*

American Math Society Eastern Sectional Meeting, Binghamton, New York, October 12, 2019.

*Interesting facts about hypercyclic operators*, International Conference on Recent Trends in Topology and Its Applications, St. Joseph's College, Irinjalakuda, India, December 13, 2018.

*Hypercyclic operators on analytic function spaces*, Colloquium, Cochin University of Science and Technology, Cochin, India, December 11, 2018.

*The testing ground of weighted shift operators for hypercyclicity*, International Conference on Topology and Applications, Rajagiri School of Engineering & Technology, Cochin, India, December 10, 2018.

*Some examples of hypercyclic operators and universal sequences of operators*, International Workshop on Topology and Applications, Rajagiri School of Engineering & Technology, Cochin, India, December 8, 2018.

*Some basic properties of hypercyclic operators*, International Workshop on Topology and Applications, Rajagiri School of Engineering & Technology, Cochin, India December 6, 2018.

*A constructive approach to the universality criterion*, 27th International Conference on Operator Theory, Timisoara, Romania, July 2 – 6, 2018.

*Hypercyclicity of Operators on Spaces of Analytic Functions*, Colloquium, Shantou University, Shantou, China, June 2014.

*Chaotic extension for an operator on a Hilbert subspace*, Informal Analysis Seminar, Kent State University, April, 2014.

*Zero-one phenomena for hypercyclic operators I & II*, two lectures, Beijing Insistute of Technology, Beijing, China, March 2014.

*Orbital limit points and hypercyclicity for shift operators*, Complex Analysis Seminar, University of Toledo, October, 2013.

*Common hypercyclic vectors for paths of hypercyclic operators*, International Conference on Banach Algebras 2011, University of Waterloo, Canada, August 2011.

*Chaotic extensions of an operator*, one-hour lecture, International Functional

Analysis Conference, Valencia, Spain, June 2010.

*Zero-one laws for hypercyclicity*, Hypercyclicity & Chaos for Linear Operators & Semigroups, Plenary Lecture, Valencia, Spain, June 2009.

*Recent developments in hypercyclicity*, Shandong University, Jinan, Shandong, China, May, 2009.

*Common hypercyclic vectors for paths of shift operators*, Miniworkshop, Mathematisches Forschungsinstitut Oberwolfach, Germany, August 2006.

*Weakly hypercyclic operators*, American Math Society Conference, University of North Carolina, Chapel Hill, North Carolina, October, 2003.

*Weak Hypercyclicity of weighted shift operators*, Non-linear Analysis Seminar, Kent State University, Kent, Ohio, April, 2003.

*Some properties of weakly hypercyclic operators*, Colloquium, Kent State University, Kent, Ohio, April, 2003.

*Density of hypercyclic operators on a Frechet space*, Colloquium, FernUniverstat, Hagan, Germany, July, 2000.

*Density of hypercyclic operators on a Hilbert space*, Informal Analysis Seminar, Kent State University, Kent, Ohio, March, 2000.

*$C^*$  algebras generated by a subnormal shift operator*, American Math Society Meeting, Kansas State University, Manhattan, Kansas, March, 1998.

*Hypercyclicity of the operator algebra for a Hilbert space*, Hypercyclicity Conference, Kent State University, Kent, Ohio, March, 1998.

*Cyclic vectors for generalized backward shift operators*, American Math Society Conference, University of Wisconsin, Milwaukee, Wisconsin, October, 1997.

*Subnormal shift operators on the  $n$ -dimensional ball*, Conference: Math Today & Tomorrow, University of Central Florida, Orlando, Florida, March, 1997.

*Hypercyclic entire functions*, Colloquium, University of Oklahoma, Norman, Oklahoma, March, 1997.

*$C^*$  algebras generated by a subnormal operator*, American Math Society Conference, Kent State University, Kent, Ohio, November, 1995.

*Invariant subspaces of the Bergman shift operator*, Analysis Seminar, University of Michigan, Ann Arbor, Michigan, December, 1995.

*Compressed Toeplitz operators*, Colloquium, University of Toledo, Toledo, Ohio, December, 1994.

*Hypercyclic translation operators on entire functions*, Colloquium, Bowling Green State University, Bowling Green, Ohio, February, 1992.

*The Dirichlet space for a finitely connected region*, Colloquium,

University of Pittsburgh, Pittsburgh, Pennsylvania, March, 1989.

*Common cyclic vectors*, Colloquium,  
University of Missouri, Columbia, Missouri, February, 1989.

*The Dirichlet space for a finitely connected region*, Colloquium,  
Emory University, Atlanta, Georgia, February, 1989.

*Multiplication operators on the Dirichlet space*, Colloquium,  
University of Wisconsin, Milwaukee, Wisconsin, January, 1989.

*The Dirichlet space for a finitely connected region*, Colloquium,  
California State University, Long Beach, California, January, 1989.

*Common cyclic vectors*, Colloquium,  
Eastern Illinois University, Charleston, Illinois, March, 1988.

## **SERVICE**

### **A. Departmental Service at BGSU**

#### **• Department Chair: July 2007 to December 2013**

1. Conducted Tenure-Track Faculty Searches.  
One position starting Fall 2013: Computational Mathematics – position withdrawn.  
Two positions starting Fall 2012: Algebra/Topology and Math Education.  
Two positions starting Fall 2011: Algebra and Statistics.
2. Conducted Visiting Assistant Professor Searches.  
Two positions starting Fall 2010: Algebra and Analysis.  
One position starting Fall 2009: Algebra.
3. Conducted Part-Time Instructor Searches.  
Positions starting Fall 2013.
4. Conducted Full-Time Instructor Searches.  
Positions starting Fall 2012, 2011, 2010, 2009, 2008.
5. Conducted an Administrative Assistant Search.  
Position starting September 2011.
6. Managed department's budgets and development accounts.  
Four budgets: operating, overhead return, student fee, academic challenge.  
Few Foundational Accounts: development, scholarships, endowed professorship.
7. Service/Space assignment:  
Assign service to all faculty every semester.  
Assign office spaces to faculty and graduate students.
8. Wrote reports for faculty's promotion/tenure (year):  
Promotion to Full Professor – Izzo (08), J. Chen(09), Meel (10), Zirbel (11), Sun (12).  
Tenure and Promotion to Associate Professor – Nguyen (07), Rizzo(09), Shang (10),

- Blok (10), Irmak (10), Ning (11).  
 Reappointment Review – Blok (07), Irmak (07), Rizzo (07), Shang (07), Ning (08),  
 Staic (13), Wang (13).  
 Renewal Review – Blok(09, 10), Diesl (08, 09), Irmak(09, 10), Ning (07, 10, 11),  
 Rizzo(09), Rogers (13), Shang(09, 10), Staic (12, 13),  
 Wang (12, 13), Xie(13).
9. Wrote Annual and Enhanced Performance Review for Non-tenure-track faculty (Fall 2013):  
 Enhanced Performance Review – Burns, Dunlap, Franike, Friedberg, Trace.  
 Annual Performance Review: 10 non-tenure-track faculty.
  10. Chaired the weekly Advisory Committee meetings:  
 August 2007 to December 2013.  
 Discussed important department issues.  
 Resolve grievances filed by faculty/staff.  
 Wrote annual Department Compacts, or Unit-Level Strategic Plan.  
 Revised Department Organization Document.  
 Wrote weekly minutes to the Department.
  11. Chaired the Personnel Committee meetings:  
 Fall 2007 to present.  
 Determined faculty's ratings, and resolved faculty's appeals.
  12. Wrote faculty success plans:  
 First-year faculty – Diesl (2007).
  13. Wrote reports to the College:  
 Science and Math Strategic Plan for 2013-2018 (with 5 Science Chairs), Fall 12, Spring 13.  
 General Education Requirement: Fall 11.  
 Graduate Programs Resourcing: Fall 10.  
 Unit-Level Strategic Plan: Fall 10, Fall 11, Fall 12.  
 Annual Department Compact: Fall 08, 09.  
 Hiring Plan: Spring 10, 11, 12.  
 Annual Program Assessment Reports: Summer 07, 08, 09, 11.  
 Annual Contributions of Faculty: Fall 07, 08, 09, 10.  
 Budget Cutting Plan, Fall 09, Spring 11.  
 Fifth Year Funding for PhD Students, Fall 09.  
 Document Retention Schedule: Summer 08, Fall 12.  
 Emergency Plan: Spring 08.  
 Math as a STEM area: Fall 07.  
 Improving success rates of Math 1120: Spring 10.
  14. Policy/Procedures Manual:  
 Outlining the operations of the department secretaries: Spring 10.
  15. Wrote endorsements for faculty's leave applications (21 times).
  16. Approved faculty's grant proposals (about 10 times per year).



17. Invited speakers to the department:
  - Spring 2013 – Invited President & Dean.
  - Fall 2012 – Invited Provost, CFO, Dean, Associate VP for Capital Planning.
  - Spring 2012 – Invited Provost.
  - Fall 2011 – Invited President, Vice President, Associate Dean individually for three different faculty meetings.
  - Fall 2010 – Invited Dean to speak to faculty.
  - Spring 2010 – Invited Provost & Dean to speak to faculty.
  - Spring 2009 – Invited President, Provost, Dean for addresses at MAA Conference.
  - Spring 2009 – Invited Foundation Officer.
  - Spring 2009 – Invited Development Office, Disability Services, Counseling Center.
  - Fall 2008 – Invited Health Benefit.
  - Fall 2008 – Invited Stress Clinic.
  - Fall 2008 – Invited SmartEd Services.
  - Spring 2008 – Invited Don Nieman, Dean of College of Arts & Sciences.
  - Spring 2008 – Invited George Agich, BGeX Director.
  - Fall 2007 – Invited Heinz Bulmahn, Dean of the Graduate College.
  - Fall 2007 – Invited Diane Regan, International Programs.
18. Organized department meeting on Tuesdays. Issues Discussed:
  - New Collective Bargaining Agreement, redesign Moseley Hall for department, annual review of faculty, tenure and promotion of candidates, personnel ratings, department organization documents, department compact, scheduling courses, SETGO, new issues in a year, Math/Stat Consulting Center, future hiring plan.
19. Organized teas on Tuesdays. Issues Discussed:
  - course coordination, high school articulation, revising discrete math and linear algebra, math anxiety, math education courses, health benefit, SmartBoard demo, alumni donations, foundation accounts, student counseling, disability services, SETGO, economic development, graduate studies.
20. Organized department retreats and mini-retreats:
  - Classified Staff Retreats outside campus: Spring 10, 11.
  - Faculty Retreats outside campus: Fall 07, 08, 09, 10, 11, 12, 13.
  - Mini-Faculty Retreats at Union: October 2007 & September 2008.
  - Classified Staff Retreat: Spring 10.
21. Organized job recruitment for students:
  - National Security Agency: March 2008.
  - Allstate Insurance Company: November 2007.
22. Attended Job Expo at BGSU:
  - Fal and Spring, twice a year.
  - Spoke to potential employers of our students.
23. Organized peer teaching evaluations:
  - Evaluating tenure-track faculty and full-time instructors.

24. Installed new on-line master's program:  
A new on-line program for the Master's of Arts in Teaching.
25. Reinitiated alumni newsletter (Math.Stat.Chat):  
Three yearly issues published: the first issue came out in Spring 2009.  
Wrote Chair's Message once a year.  
Collected materials for the newsletter every year.
26. Initiated a new computer component in Intermediate Algebra:  
Worked with Course Coordinator to improve success rates.
27. Conducted exit interviews for every graduate student:  
Discussed the strengths and weaknesses of graduate programs and the student's career outlook.
28. Special projects:  
2013: Implementation of new Collective Bargaining Agreement.  
2013: Helped write department's self-study for graduate programs.  
2013 – 2015: Design new Moseley Hall for the Department.  
2012: Wrote Strategic Plan for STEM departments.  
2012: Remodeled department office.  
2011: Installed overhead projector in colloquium room.  
2010: Installed copier/printer combo.  
2009: Helped install the new on-line degree program: Master of Arts in Teaching.  
2009: Remodel kitchenette, department front desk.  
2009: Purchase office chairs, carpet, copier, blinds.
29. Weekly meetings with the Assistant Chair:  
Discussed departmental issues.
30. Program Assessments:  
Organized department's program assessments.
31. Nominated faculty to university committees and awards:
32. Math Emporium:  
First Emporium in Olscamp Hall, Fall 2013.  
Attended software meetings with publisher, Fall 2012, Spring 2013.  
Visited Math Emporium, Kent State University, Kent, Ohio, April, 2012.  
Visited Math Emporium, University of Alabama, Tuscaloosa, February, 2012.  
Initiated emporium style of teaching in Intermediate Algebra.  
Designed a Math Emporium in Mathematical Sciences Building.
33. Designed new building for department:  
Designed New Building for department: Moseley Hall, 2012-2013.  
Building Committee: Met with Capital Planning in the Spring of 2013.  
Visited John Carroll University for a reference.  
Design survey for faculty, staff and graduate students for their input.
34. Meetings with development officer:

Met with development officer, Spring 2010, Fall 2011, Fall 2012.  
Development workshop: March 4, 2010.  
Special Program meeting: Feb 10, 2009.  
Annual fall meetings: August, 08, 09.  
Crisis with our foundation, November 2008.  
Identifying potential donors, August 2008.  
Identifying potential donors, September 2007.

35. College meetings attended as a department chair:
- Interviewed candidates for associate dean positions, Fall 2010 and Fall 2013
  - Student retention with university consultant, Dr. Farnum, Fall 2012 - Spring 2013.
  - Math Emporium: a floor plan and software design, March 2012, June 2013.
  - Search Meetings: for Vice President for Advancement, Fall 2012 - Spring 2013.
  - Search Meetings: for College Budget Director, Spring 2011.
  - Search Meetings: for Sponsored Programs Director, Spring 2011.
  - Printing & Copying Meetings: Fall 2010 and Spring 2011.
  - Standing meetings with the Dean: regular basis.
  - College's Chairs/Directors Meeting: once a month in academic year.
  - Doctoral Program Chairs Meeting: twice in academic year.
  - Science Chairs Meeting: once every two months in academic year.
  - Marketing & Communication, department promotional materials, December 2010.
  - Institutional Research, BGSU doctoral program rankings, October 2010.
  - Institutional Research, data interpretation, August 2010.
  - KME initiation ceremony: once a year.
  - College Council: once in 2008.
  - Prerequisites and university's new software.
  - STEM recruitment meetings.
  - STEM Day, once in every fall.
  - Choose Ohio First Meetings: Spring 2008 and 2011.
  - Preview Day, twice in the Fall and once in the Spring.
  - Reception for new majors, once in Fall 2010.
  - Promotion and tenure workshop: once or twice a year.
36. University meetings attended as a department chair:
- Interviewed candidates for Director of Foundation position, Spring and Fall, 2013.
  - Met with Graduate College Dean for future planning, Summer 2013.
  - Attended linked course meetings, with Vice Provost, Spring 2013.
  - Attended grant forums, Spring 2013.
  - Meetings: Collective Bargaining Agreement, Provost and Vice Provost, 2012-2013.
  - Student retention meetings, Spring and Fall 2012.
  - Big Data Day: new research initiative, September 2012.
  - Open Forum: Graduate Education, Spring 2011.
  - Open Forum: Research Environment, Spring 2011.
  - Instructor resourcing meeting, Fall 2010.
  - Committee of Academic Affairs, two meetings in Spring 2010.
  - BGSU Centennial Convocation, November 2010.

- Panelist, Graduate School Development Day, November 2010.
  - Connected Undergraduate Experience: multiple meetings in 2009, 2010.
  - Administration Retreats: Once every August, 2007 - present.
  - Library meetings: twice every year.
  - Family campaign meeting: once a year.
  - Dual enrollment: twice every year.
  - Graduate College Breakfast: twice every year, 2007 - present.
  - Career Expo: twice a year.
  - Preview Days: twice or three times every year.
  - IDEAL: Fall 11.
  - Presidential Inaugurations: Fall 09, Fall 11.
  - Open Forum: Connecting the Undergraduate Experiences, 2009.
  - Open Forum: Public Records, 2009.
  - AIMS Awards Ceremony: once every spring.
  - BG Visitor Bureau, October 2010.
  - General Education, Keeling & Associates, 2009.
  - PeopleSoft: a new software for student registration, 2009.
  - Dean and associate dean search; three meetings in 2008.
  - Educator's Summits: Fall 2007 and 2008.
  - Student Records Fitgap: Fall 2007.
  - President's Advisory Committee: Two meetings in Fall 2007 and Spring 2008.
  - Provost's Open Forums: Three forums in Fall 2007 and Spring 2008.
  - Graduate Study Strategic Plan: Spring 2011.
  - Learning Commons: Spring 2011.
  - Provost's Breakfast: How to handle conflicts?, Fall 2007.
  - Provost's four luncheons: budget, hiring, faculty success, chairing, Fall 2007.
37. Hosted visiting researchers:
    - Iskander Kapshayev, Fulbright scholar from Kazakstan, Fall 2008.
  38. Hosted a full-day visit of a prospective donor:
    - Tom Hileman, February, 2012.
    - Josef Blass, April, 2011.
  39. Graduate Students Recruiting:
    - Graduate Panelist, Miami University, Oxford, Ohio, Summer, 2010, 2011, 2012.
  40. Acting Chair for Computer Science Department:
    - May 21 - 31, 2011.
  41. Helped finalize planning for MS in Analytics:
    - Department of Applied Statistics and Operations Research took the lead in this new degree.
  42. Fire Safety Inspection:
    - Wrote responses to fire safety inspection, Summer 2013.

• **Department Committee Chairs**

1. Chair, Advisory Committee, 2007 – 2013.
2. Chair, Personnel Committee, 2007 – 2013.
3. Chair, Promotion/Tenure Committee, Fall 2014 to Spring 2015.  
Handled 8 promotion and reappointment cases.
4. Co-Chair, Advisory Committee  
Fall 2014 – Fall 2015, Fall 2016 – Spring 2017.  
Wrote faculty line requests  
Wrote Department Merit Policy  
Wrote Department Reappointment, Tenure & Promotion Policy  
Wrote Department Strategic Plan
5. Co-Chair, Chair Succession Committee, 2002-2003.
6. Chair, Chair Succession Committee, 2023.
7. Chair, Program Review Committee (Feb 2020 – June 2022).

• **Department Committees**

Advisory Committee: Fall 1997 - Summer 1998; Fall 06 - Fall 13; Fall 14 – Summer 22.  
Personnel Committee: Fall 1998 - Spring 2006; Fall 2007 - Fall 2013.  
Promotion/Tenure Committee: Fall 2005 - Summer 2006; Fall 2007 - Fall 2013,  
Fall 2014 - Summer 2016.  
Special Project: Revised syllabus of Precalculus, Fall 2015.  
Graduate Student Admission Team: Fall 2014 – June 2015, Fall 2020– present.  
Analysis Search Committee: Spring semesters of 1994, 2000, 2001, 2002.  
Algebra Search Committee: Spring semesters of 2007, 2019.  
Postdoc Search Committee: Summer 2018.  
Senior Secretary Search Committee: Summer 2017.  
Instructors Search Committee: Spring semesters of 2006, 2007.  
Chair Selection Committee: 2002 – 2003, 2014 – 2015, 2018-2019.  
Problem Solver's Club: Fall 2000 - Spring 2004.  
Alumni Newsletter Committee: Fall 2000 - Spring 2001.  
Undergraduate Committee: Fall 1998 - Spring 1999.  
Presidents' Day: February, 1999.  
Preview Day: October, 1998.  
Panelist: Teaching Freshmen Math: November, 1998.  
Calculus Coordinator: Fall 2003 - Spring 2005.  
Precalculus Coordinator: Fall 1996 - Spring 1999, and Spring 2002 - Spring 2003.  
Undergraduate Advisor: Fall 1996 - Spring 1997.  
Graduate Exams Coordinator: Summer 95 - Spring 97, and Fall 03 - Spring 07.  
Curriculum Committee: Fall 1994 – Spring 1995.  
Graduate Student Advising Committee: Fall 1992 – Spring 2007.

Colloquium Committee: Fall 1992 – Spring 1994.

- **Department Mediator**

Fall 2015 – present.

- **Mentoring Faculty in the Department**

Mentored Timothy Clos (January 2019 – July 2019).

Mentored John Devere (August 2018 – July 2019).

Mentored Peng Wang (February 2012 – August 2014).

- **Peer Teaching Evaluations**

Evaluated classes of colleagues: Name of Faculty (Year)

Craig Zirbel (1996); Pamela Warton (1998); Tong Sun (2001); Corneliu Hoffman (2003);

Juan Bes (2003); Warren McGovern (2003); Dale Winter (2004); Jonathan Dunlap (2004);

Ann Darke (2004); Bethany Seto (2005); Diem Nguyen (2006); Elmas Irmak (2007);

Juan Bes (2014); Mihai Staic (2015); Wei Ning (2016); Elmas Irmak (2016);

Rieuwert Blok (2017); Xiangdong Xie (2018); Irina Franke (2019);

Aleksei Luchinsky (2019); Benjamin Ward (2022); Mihai Staic (2022).

- **Seminar Presentations at BGSU**

Infinite products hypercyclic for translation, I, II, III, February & March 2019.

Basic properties of hypercyclic operators, I, II, III, IV, September & October 2018.

Cyclicity of subnormal operators, I, II, III, IV, V, February – March 2018.

Hypercyclic factorizations for unilateral weighted backward shifts, I & II, September 2017.

Some remarks on cyclic vectors, April 2017.

Sensitive dependency on initial conditions, October 2016.

Zero-one laws for hypercyclic operators and vectors I & II, February 2015.

Chaoticity and connectivity I, II, III, November, 2014.

Hypercyclic vectors for the unitary orbit of a hypercyclic operator, August, 2011.

Chaotic extension of a bounded linear operator, February, 2011.

An SOT-dense path of hypercyclic operators in a conjugate class, February 2011.

A double density theorem in hypercyclicity I & II, February, 2010.

Common hypercyclic vectors for a path of operators I, II, III, IV, January-February, 2007.

Construction of operators with prescribed behavior (Grivaux) I, II, III, IV, September, 2005.

Cyclic properties of Volterra operators (Leon & Piquera) I, II, III, IV, October, 2003.

Rotations of hypercyclic operators (Leon & Muller) I, II, III, IV, , August-September, 2002.

Isoperimetric problems via Fourier series, September, 2001.

Bernoulli numbers and Zeta functions, September, 2001.

Hereditarily hypercyclic operators (Bes & Peris) I & II, April, 2001.

Universal meromorphic functions I, II, III, September, 2000.

Chaotic unbounded differentiation operators, March, 2000.

Essential spectra, November, 1999.  
 Semi-Fredholm Operators, October, 1999.  
 Fredholm Operators, October, 1999.  
 Hypercyclic entire functions, October, 1998.  
 The hypercyclicity criterion, September, 1998.  
 An overview on hypercyclicity I & II, September, 1998.  
 Universal series, March 1998.  
 Hypercyclic vectors, March, 1998.  
 Hypercyclic operators, February, 1998.  
 Schauder basis, November 1997.  
 The commutant of a generalized backward shift, October, 1997.  
 An analytic version of Wiener's  $1/f$  theorem, February, 1997.  
 Wiener's  $1/f$  theorem, December, 1996.  
 The distance from a closed convex set, April, 1996.  
 Several complex variables techniques in operator theory, November, 1995.  
 $C^*$ -algebras generated by a subnormal operator, October, 1995.  
 The Stone-Weierstrass theorem, December, 1994.  
 The Krein-Milman theorem, November, 1994.  
 The dual of the holomorphic functions, March, 1994.  
 Bounded approximation by polynomials, October, 1993.  
 Ideals of analytic functions, February, 1993.  
 Entire functions and parital differential operators, February, 1993.  
 The Riemann mapping theorem, October, 1992.  
 Interpolating sequences for spaces of analytic functions, October, 1992.

• **Colloquium Presentations at BGSU**

Density of hypercyclic operators, October, 2000.  
 Zero sets and orthogonality of the Hardy space, September, 1994.  
 Cyclic vectors and invariant subspaces of the Dirichlet space, October, 1992.

• **Writing and Grading Master's Comprehensive Exams (number of times)**

1. Real Analysis (21):  
 April 1994, November 1994, April 1995, July 1995, April 1996, July 1996,  
 November 2001, April 2002, November 2011, April 2016, November 2016 .  
 April 2017, June 2017, October 2017, April 2018, April 2019, April 2020.  
 June 2020, June 2021, June 2022, October 2022, December 2022, June 2023.
2. Applied Mathematics (6):  
 April 1995, July 1995, April 2007, April 2018, June 2020, December 2022.
3. Master's of Arts in Teaching (2)  
 July 1996, July, 2001.

- **Writing and Grading PhD Qualifying Exams (number of times)**

1. Real Analysis (24) :  
September 1994, January 1995, September 1995, January 1996, September 1998, January 1999, September 1999, September 2000, January 2001, September 2001, September 2002, January 2003, September 2003, January 2005, September 2005, September 2006, January 2007, April 2007, August 2011, August 2015, January 2016, August 2016, August 2018, August 2021.
2. Complex Analysis (14):  
September 1994, January 1995, September 1996, September 1997, January 1998, September 2000, January 2001, September 2001, September 2001, September 2002, January 2015, August 2016, August 2020, August 2022.
3. Linear Dynamics (2):  
August 2017, August 2018.

## **B. University Service**

- **Faculty Senate**  
Senator, College Division Representative: Fall 2018 – Spring 2021.  
Senator, College Division Representative: Fall 2002.
- **Arts and Sciences Council**  
Representative, Mathematics and Natural Science Division: Fall 2018 – Spring 2019.
- **College of Arts and Sciences Diversity Committee – Chair**  
Chair, Fall 2010 to Spring 2012.  
Member, Fall 2022 to present.  
Formed subcommittees to work on different projects.  
Wrote two proposals to the Dean.
- **China Affinity Group – Chair**  
Worked with Chinese Faculty and Director of Education Abroad and International Partnership.  
Discussed strategic plan for recruiting Chinese students, students/faculty exchange programs.  
Spring 2013 to Spring 2015.
- **Mentoring Faculty Outside Department**  
Mentored faculty Michael Decker in the Dept of Computer Science (Spring 2019 - present).
- **Committees – Members**  
Search Committee for Director of Big Data: Fall 2013.  
Building Committee for Moseley Hall: Fall 2012 - Summer 2013.  
College of Arts and Sciences Program Assessments Committee: Fall 2010, Fall 2013.  
College of Arts and Sciences Budget Committee: Fall 2010 - present.



College of Arts and Sciences Diversity Committee: Fall 2009 - Fall 2011.  
Honors and Awards Committee: Fall 2009 - Spring 2011.  
AIMS Advisory Board: Spring 2008 – present.  
English as a Second Language Advisory Committee: 2007-2008, 2010-2012.  
English as a Second Language Strategic Planning Committee: Spring 2011 - Fall 2013.  
Faculty Senate Budget Committee: Fall 2004 - Spring 2005.  
International Students Committee: Fall, 2000 - Spring, 2001.  
Telecommunications Advisory Committee: Fall, 1993 – Spring, 1994.

- **Judge, Shanklin Research Excellence Awards, BGSU Graduate Student Senate**  
Spring 2017 and Spring 2020.  
Reviewed 10 papers from PhD students in Biology, Chemistry, and Math & Statistics.  
Judged oral presentations from six finalists for three divisions: Science and Math, Social Sciences, Arts and Humanities.
- **University Exchange Programs**  
Visited Hong Kong Baptist University, Hunan Normal University, Beijing Institute of Technology, with University Vice President to discuss exchange programs, October, 2012.
- **Volunteers**  
Etiquette Dinner: Students' early careers, BGSU Career Center, Spring 2018.  
Exploring the Role of Service in Faculty Careers: 2-week survey, participant, Spring 2015.  
STEM Day: Gave a talk to prospective undergraduate student, Fall 2013.  
Preview Day: presented to high school senior and junior students, 2010 – 2013.  
Summer Orientation and Registration: Presented to incoming freshmen, Summer 2008.  
Alumni & Friends Weekend: Department Representative, June 2008.  
Commencement Marshal: Commencement in May 2013.
- **Panel Discussion, BGSU**  
Panelist, Professors in Chinese and US universities, July, 2014.  
Panelist, Professional Development Panel on Work/Life Balance, April, 2014.  
Panelist, Job Search of Graduate Students, February, 2010.
- **Institutional Accreditation and Program Review**  
Made a short video for explaining the departmental program review, December 2022.

## C. Professional Service

- **Refereeing Papers for Journals**

Refereed 63 articles for the following 36 journals:

*Abstract and Applied Analysis*  
*Acta Mathematica Sinica*

*Acta Mathematica Universitatis Comenianae*  
*Applied Mathematics Letters*  
*Archiv der Mathematik*  
*Bulletin of the Belgian Mathematical Society*  
*Bulletin of the Iranian Mathematical Society*  
*Bulletin of the London Mathematical Society*  
*Complex Analysis and Operator Theory*  
*Complex Variables*  
*Complex Variables and Elliptic Equations*  
*Discrete and Continuous Dynamical System - A*  
*Electronic Research Announcements in Mathematical Sciences*  
*Houston Journal of Mathematics*  
*Indian Journal of Pure and Applied Mathematics*  
*Integral Equations and Operator Theory*  
*International Journal of Mathematics and Mathematical Sciences*  
*International Mathematics Research Notices*  
*Italian Journal of Pure and Applied Mathematics*  
*Journal of Approximation Theory*  
*Journal of the Korean Mathematical Society*  
*Journal of the London Mathematical Society*  
*Journal of Mathematical Analysis and Applications*  
*Journal of Operator Theory*  
*Journal of Operators and Matrices*  
*Journal of the Franklin Institute*  
*Michigan Mathematical Journal*  
*Monatshefte für Mathematik*  
*Osaka Journal of Mathematica*  
*Proceedings Mathematical Sciences*  
*Proceedings of the American Mathematical Society*  
*Proceedings of the Conference in Complex and Harmonic Analysis*  
*Proceedings of the Edinburgh Mathematical Society*  
*Punjab University Journal of Mathematics*  
*Revista de la Real Academia de Ciencias: Serie A, Mathematics*  
*Revista Matematica Complutense*  
*Studia Mathematica*  
*Taiwanese Journal of Mathematics*

- **Editorial Boards of Mathematics Journals**

Associate Editor, Punjab University Journal of Mathematics, February 2018 – present.  
 Academic Editor, Journal of Mathematics, August 2017 – July 2021.  
 Academic Editor, Journal of Operators, November 2012 – July 2017.

- **Reviewer, Mathematical Reviews, American Mathematical Society**

2005 (2 articles); 2006 (1 article); 2008 (1 article); 2009 (2 articles); 2010 (3 articles);

2011 (3 articles); 2012 (3 articles); 2013 (1 article); 2014 (3 articles); 2015 (2 articles); 2016 (3 articles); 2017 (1 article); 2018 (5 articles); 2019 (3 articles); 2020 (1 article); 2022 (1 article).

- **Reviewing Textbook Manuscript**

*Differential Geometry of Manifolds*, 1st Edition, by Stephen T. Lovett, report to the publisher, CRC Press, Taylor and Francis Group, 2018.

*Discrete Mathematics: A New Approach*, by Craig P. Bauer, report to the publisher, CRC Press, Taylor and Francis Group, 2018.

*Hypercyclic and Supercyclic Operators*, by Bayart and Matheron, report to authors, 2008.

*Precalculus with Limits: Functions and Graphs*, by Mark Dugopolski, Pearson Addison-Wesley, report to publisher, 2003.

*Introduction to Hilbert Spaces with Applications*, by Debnath & Mikusinski, Academic Press, report to authors, 1997.

*Discrete Mathematics and Its Applications*, by Kenneth Rosen, McGraw Hill Inc., report to publisher, 1994.

*Real Analysis*, by Carothers, Cambridge University Press, report to author, 1993.

- **Reviewing Graduate Textbook Proposals**

*A Primer on Analysis* by James K Peterson, CRC Press, Taylor and Francis Group, report to publisher, 2016.

*A Second Primer on Analysis*, by James K Peterson, CRC Press, Taylor and Francis Group, report to publisher, 2016.

*A Primer on Linear Analysis*, by James K Peterson, CRC Press, Taylor and Francis Group, report to publisher, 2016.

*A Primer on Measure Theory*, by James K Peterson, CRC Press, Taylor and Francis Group, report to publisher, 2016.

*A Primer on Functional Analysis and Topology*, by James K Peterson, CRC Press, Taylor and Francis Group, report to publisher, 2016.

- **Reviewing Summer Research Proposal**

External review for University of Toledo, November, 1996.

- **Chairing a Session of Research Presentations**

International Functional Analysis Conference 2010, Valencia, Spain, June, 2010.

Hypercyclicity and Chaos for Linear Operators and Semigroups,

Valencia, Spain, June, 2009.

Hypercyclicity and Chaos, Mathematisches Forschungsinstitut Oberwolfach,  
Oberwolfach, Germany, August, 2006.

Hypercyclicity Session, Functional Analysis Conference, Valencia, Spain, July, 2000.

- **Graduate School Panel Discussion, Miami University, Oxford, Ohio**  
Panelist, June, 2010 & July 2011 & June 2012.

## **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

### **A. The American Mathematical Society**

Member (1984 – present).

### **B. The Mathematical Association of America**

Member (1988 – 1992, 2007 - 2012).

## **HONORS AND AWARDS**

### **A. Letter of Teaching Appreciation – from Provost, BGSU, 2017**

The Provost's teaching appreciation letter states, "As we have done in previous years, we asked graduating students to identify faculty who have contributed to their academic and personal success. YOU were singled out as one who did just that!".

### **B. Certificates of Appreciation – Ph. D. Advisees won Dissertation Award**

Ph. D. Advisee, Irina Secelenau, won the 2012 BGSU Distinguished Dissertation Award.

Ph. D. Advisee, Rebecca Sanders, won the 2005 BGSU Distinguished Dissertation Award.

### **C. Dr. Hollis A. Moore University Service Award**

Presented by the Undergraduate Student Body, BGSU, April 1998.

### **D. KME Excellence in Teaching Mathematics Award**

KME Mathematical Society, BGSU, April 1997.

### **E. Nominations for Teaching Award**

Michigan State University, 1991 and 1992

### **F. Merit Undergraduate Scholarship**

University of Hong Kong, 1981 – 1983.