

# CURRICULUM VITA KIT C. CHAN

Department of Mathematics & Statistics  
Bowling Green State University  
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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, 1983 - 1988.

## ADMINISTRATIVE POSITION

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

## TEACHING EXPERIENCES

### A. Undergraduate Courses

#### • BGSU: Fall 92 - Fall 09

Precalculus - large lecture (60 students), Math 128, 3 semesters.  
Calculus I, Math 131, 1 semester.  
Calculus I, Math 134, 2 semesters.  
Discrete Mathematics, Math 222, 2 semesters.  
Discrete Mathematics, Math 322, 10 semesters.  
Linear Algebra, Math 332, 5 semesters.

#### • Michigan State University: Fall 89 - Spring 92

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: Fall 83 - Spring 89**

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 92 - Fall 12**

Advanced Calculus, Math 430/530, 2 semesters.  
Vector Calculus, Math 434/534, 1 semester.  
Elementary Real Analysis, Math 465/565, 12 semesters.  
Topics in Real Analysis - Multivariable Calculus, Math 466/566, 1 semester.  
Topics in Real Analysis - Integration and Series, Math 466/566, 5 semesters.  
Elementary Complex Analysis, Math 461/561, 3 semesters.

**C. Graduate Courses**

• **BGSU, Fall 92 - Summer 07**

Real Analysis I, Math 665, 1 semester.  
Real Analysis II, Math 666, 1 semester.  
Complex Analysis I, Math 661, 1 semester.  
Complex Analysis II, Math 762, 1 semester.  
Abstract Measures, Math 765, 5 semesters.  
Functional Analysis, Math 766, 6 semesters.  
Inequalities, Math 680, 3 semesters.  
Fourier Series, Math 680, 2 semesters.  
Operator Theory, Math 680, 3 semesters.  
Riemann Surfaces, Math 680, 1 semester.  
Weak Topologies I, Math 680, 2 semesters.  
Weak Topologies II, Math 680, 2 semesters.  
Fredholm Theory, Math 680, 1 semester.  
Spectral Theory, Math 680, 1 semester.

**D. Teaching Supervision**

• **Calculus Coordinator, BGSU**

4 semesters (Fall 03 to Spring 05).  
Designed syllabi for calculus courses – Math 131, 134, 135, 232, 233.  
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 96 - Spring 99, and Spring 02 - Spring 03).

Math 128, 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**

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.

## **E. Dissertation Students**

- **PhD Students**

Leo Pinheiro, current, BGSU.

Gokul Kadel, current, BGSU.

Irina Seceleanu, PhD (2010), BGSU.

George Turcu, PhD (2010), BGSU.

Rebecca Sanders, PhD (2004), BGSU.

Ronald Taylor Jr, PhD (2000), BGSU.

- **Membership on Ph. D. Dissertation Committees**

David Rumsey, 2012, Mathematics.

Melanie Henthorn, 2011, Mathematics.

Tumpa Bhattacharjee, 2011, Mathematics.

Kate Overmoyer, 2011, Mathematics.

Kevin Rion, 2011, Mathematics.

Irina Seceleanu, 2010, Mathematics – Chair.

George Turcu, 2010, Mathematics – Chair.

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.

Rebecca Sanders, 2004, Mathematics – Chair.

Bill Rolli, 2004, Mathematics.

Bernie Elec, 2002, Mathematics.  
Daria Filippova, 2001, Mathematics.  
Ronald Taylor Jr, 2000, Mathematics – Chair.  
Shengrong Tan, 1999, Mathematics.  
Igor Tretiakov, 1998, Photochemistry.  
James Lesko, 1997, Mathematics.  
Dan Green, 1996, Mathematics.

## **CURRICULUM DEVELOPMENT**

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

Weak Topologies II, 8 students, 2007.  
Weak Topologies I, 9 students, 2006.  
Spectral Theory, 8 students, 2005.  
Fredholm Theorey, 8 students, 2004.  
Operator Theory, 11 students, 2003.  
Inequalities, 16 students, 2002.  
Fourier Series, 17 students, 2001.  
Weak Topologies II, 13 students, 2000.  
Weak Topologies I, 14 students, 1999.  
Operator Theory, 10 students, 1998.  
Inequalities, 16 students, 1997.  
Riemann Surfaces, 8 students, 1996.  
Operator Theory, 8 students, 1995.  
Fourier Series, 17 students, 1994.  
Inequalities, 17 students, 1993.

### **B. Reading Courses Taught at BGSU: Fall 92 - Spring 12**

Basic Calculus Theory, Math 670, 1 semester.  
Riemann Integration and Power Series, Math 670, 1 semester.  
Hypercyclicity, Math 670, 15 semesters.  
Operator Theory, Math 670, 1 semester.  
Topology, Math 670, 2 semesters.  
Weak Topologies, Math 670, 1 semester.  
Optimization, Math 670, 1 semester.  
Problems in Analysis, Math 680, 3 semesters.  
Elementary Analysis, Math 470, 2 semesters.

## **PROFESSIONAL DEVELOPMENT**

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

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.  
 On-line Employment Discrimination Course, December, 2008.  
 BGSU Retreat for Chairs/Directors, August, 2008.  
 On-line 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**

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, Perrysburg, 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. Faculty Improvement Leave**

BGSU, Spring 2000.

#### **F. Mathematics Conferences Attended**

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, Univeristy 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 Michgan, 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**

2007: 11 students.  
2006: 11 students.  
2005: 12 students.  
2004: 8 students.  
2003: 11 students.  
2002: 9 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**

1999: 2 students.  
1998: 2 students.  
1997: 2 students.

## **RESEARCH INTERESTS**

### **Functional Analysis and Function Theory**

Hardy space, Bergman space, Dirichlet space, entire functions, meromorphic functions, operator theory, cyclic operators, hypercyclic operators, multiplication operators, differentiation and translation operators, weak topologies.

## **RESEARCH PROJECTS AND GRANTS**

### **A. National Science Foundation Grant, BGSU**

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

### **B. 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.

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

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

### **D. FRC Basic Grants, BGSU**

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

### **E. New Faculty Start-Up Grant, BGSU**

Computer Equipment, \$2600, 1992.

### **F. 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**

*Restrictions of an invertible chaotic operator to its invariant subspaces*, (with Kadel), submitted, November 2012.

*Dual hypercyclic extension for an operator on a Hilbert subspace*, (with Kadel), submitted, September 2012.



*Prescribed behaviors of compressions of dual hypercyclic operators*, Proceedings of the American Mathematical Society, Volume 140 (9) (2012), 3133-3143.

*Hypercyclicity of shifts as a zero-one law of orbital limit points*, (with Seceleanu), Journal of Operator Theory, Volume 67 (2012), 257 – 277.

*Common hypercyclic vectors for the unitary orbit of a hypercyclic operator*, (with Sanders), Journal of Mathematical Analysis and Applications., Volume 387 (2012), 17-23.

*An SOT-dense path of operators with same hypercyclic vectors*, (with Sanders), Journal of Operator Theory, Volume 66 (1) (2011), 107-124.

*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.

*Common hypercyclic vectors for the conjugate class of a hypercyclic operator*, (with Sanders), Journal of Mathematical Analysis and Applications, Volume 375 (2011), 139-148.

*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.

*Two criteria for a path of operators to have common hypercyclic vectors*, (with Sanders), Journal of Operator Theory, Volume 61 (2009), 191-223.

*Common supercyclic vectors for a path of operators*, (with Sanders), Journal of Mathematical Analysis and Applications, Volume 377 (2008), 646-658.

*Weak \* hypercyclicity and supercyclicity of shifts on  $\ell^\infty$* , (with Bes and Sanders), Integral Equations and Operator Theory, Volume 55 (2006), 363-376.

*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.

*A weakly hypercyclic operators that is not norm hypercyclic*, (with Sanders), Journal of Operator Theory, Volume 52 (2004) 39-59.

*Approximation by chaotic operators and by conjugate classes*, (with Bes), Journal of Mathematical Analysis and Applications, Volume 284 (2003) 206-212.

*Denseness of hypercyclic operators on a Frechet space*, (with Bes), Houston Journal of Mathematics, Volume 29 (2003) 195-206.

*The density of hypercyclic operators on a Hilbert space*, Journal of Operator Theory, Volume 47 (2002), 131-143.

*Universal meromorphic functions*, Complex Variables, Volume 46 (2002), 307-314.

*Hypercyclic subspaces of a Banach space*, (with Taylor), Integral Equations and Operator Theory, Volume 41 (2001), 381-388.

*Chaotic unbounded differentiation operators*, (with Bes and Seubert),  
Integral Equations and Operator Theory, Volume 40 (2001), 257-267.

*Hypercyclicity of the operator algebra for a separable Hilbert space*,  
Journal of Operator Theory, Volume 42 (1999), 231-244.

*C\*-algebra generated by a subnormal operator*, (with Cuckovic),  
Transactions of the American Mathematical Society, Volume 351 (1999), 1445-1460.

*Reducing subspaces of compressed analytic Toeplitz operators on the Hardy space*,  
(with Seubert), Integral Equations and Operator Theory, Volume 28 (1997), 147-157.

*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.

*Starlikeness of certain analytic functions*, (with Al-Amiri, Gresser, Mocanu, Seubert),  
Mathematica, Volume 36(59) (1994), 73-79.

*Approximation by bounded functions in the Dirichlet space*,  
Journal of London Mathematical Society, Volume 43 (1993), 341-348.

*Zero sets, interpolating sequences and cyclic vectors for Dirichlet spaces*, (with Shields),  
Michigan Mathematical Journal, Volume 39 (1992), 289-307.

*The cyclic behavior of translation operators on Hilbert spaces of entire functions*,  
(with Shapiro), Indiana University Mathematics Journal, Volume 40 (1991), 1421-1449.

*On the Dirichlet space for finitely connected regions*,  
Transactions of the American Mathematical Society, Volume 319 (1990), 711-728.

*Common cyclic entire functions for partial differential operators*,  
Integral Equations and Operator Theory, Volume 13 (1990), 132-137.

*Common cyclic vectors for operator algebras on spaces of analytic functions*,  
Indiana University Mathematics Journal, Volume 37 (1988), 919-928.

## **INVITED PUBLICATION: Nonrefereed Article**

*Cyclic vectors for the commutant of a generalized backward shift operator*,  
to appear in a book containing research articles dedicated to Professor MK Siu on  
the occasion of his retirement, Hong Kong University Press, to appear.

## **PAPERS READ TO PROFESSIONAL SOCIETIES**

### **Plenary Lecture**

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

### **Invited Presentations**

*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.

*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: Fall 2007 to present**

1. Conducted Tenure-Track Faculty Searches.  
One position starting Fall 2013: Computational Mathematics.  
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 Full-Time Instructor Searches.  
Positions starting Fall 2012, 2011, 2010, 2009, 2008.
4. Conducted an Administrative Assistant Search.  
Position starting September 2011.
5. Managed department's budgets and development accounts.  
Four budgets: operating, overhead return, student fee, academic challenge.  
Few Foundational Accounts: development, scholarships, endowed professorship.
6. Service/Space assignment:  
Assign service to all faculty every semester.  
Assign office spaces to faculty and graduate students.
7. 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).  
 Renewal Review – Blok(09, 10), Diesl (08, 09), Irmak(09, 10), Ning (07, 10, 11),  
 Rizzo(09), Shang(09, 10), Staic (12), Wang (12).
8. Chaired the weekly Advisory Committee meetings:
    - Fall 2007 to present.
    - 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.
  9. Chaired the Personnel Committee meetings:
    - Fall 2007 to present.
    - Determined faculty's ratings, and resolved faculty's appeals.
  10. Wrote faculty success plans:
    - First-year faculty – Diesl (2007).
  11. Wrote reports to the College:
    - Science and Math Strategic Plan for 2013-2018 (with 5 Science Chairs), Fall 12.
    - 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.
  12. Wrote Policy/Procedures Manual:
    - Outlining the operations of the department secretaries: Spring 10.
  13. Wrote endorsements for faculty's leave applications:
    - Blok (12), Darke (12), Grant (12), Ning (12), Rizzo (12), Shang (12), Zirbel (12),  
 Irmak (11), Izzo (11), Miller (11), Burns (11), Darke (10), Haubert (10), Bes (09),  
 J. Chen (09), Sun (09), Chou (08), Nguyen (08), Szekely (08), Hoffman (07), Izzo (07).
  14. Approved faculty's grant proposals.
    - About 10 times per year.
  15. Invited speakers to the department:
    - Spring 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.

16. Organized department meeting on Tuesdays. Issues Discussed:  
 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.
17. 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.
18. 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.  
 Mini-Faculty Retreats at Union: October 2007 & September 2008.  
 Classified Staff Retreat: Spring 10.
19. Organized job recruitment for students:  
 National Security Agency: March 2008.  
 Allstate Insurance Company: November 2007.
20. Organized peer teaching evaluations:  
 Evaluating tenure-track faculty and full-time instructors.
21. Installed new on-line master's program:  
 A new on-line program for the Master's of Arts in Teaching.
22. 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.

23. Initiated a new computer component in Intermediate Algebra:  
Worked with Course Coordinator to improve success rates.
24. Conducted exit interviews for every graduate student:  
Discussed the strengths and weaknesses of graduate programs and the student's career outlook.
25. Special projects:  
2013 – 2015: Design new Moseley Hall for the Department.  
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.
26. Weekly meetings with the Assistant Chair:  
Discussed departmental issues.
27. Program Assessments:  
Evaluated other department's program assessment, and submitted our own.
28. Nominated faculty to university standing committees and awards:
29. Math Emporium:  
Attended Math Emporium Meeting, Kent State University, Kent, Ohio, April, 2012.  
Attended Math Emporium Meeting, University of Alabama, Tuscaloosa, February, 2012.  
Initiated emporium style of teaching in Intermediate Algebra.  
Designed a Math Emporium in Mathematical Sciences Building.
30. Design new building for department:  
New Building for department: Moseley Hall.  
Designed New Building. Visited John Carroll University for a reference.  
Planned moving for faculty, staff and graduate students.
31. 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.
32. College meetings attended as a department chair:  
Math Emporium: a floor plan, March 2012.  
Search Meetings: College Budget Director Search, Spring 2011.  
Search Meetings: SPAR Director Search, Budget Administrator Search, 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.

33. University meetings attended as a department chair:
- Student retention meetings, Spring, 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.

34. Hosted visiting researchers:  
Iskander Kapshayev, Fulbright scholar from Kazakstan, Fall 2008.
  
35. Hosted a full-day visit of a prospective donor:  
Tom Hileman, February, 2012.  
Josef Blass, April, 2011.
  
36. Graduate Students Recruiting:  
Graduate Panelist, Miami University, Oxford, Ohio, Summer, 2010, 2011, 2012.
  
37. Acting Chair for Computer Science Department:  
May 21 - 31, 2011.

#### • Department Committees

Advisory Committee: Fall 1997 - Spring 1998, Fall 2006 - present.  
Personnel Committee: Fall 1998 - 2006, Fall 2007 - present.  
Promotion/Tenure Committee: Fall 2005, Fall 2007 - present.  
Algebra Search Committee: Spring 2007.  
Instructors Search Committee: Spring semesters of 2006, 2007.  
Chair Selection Committee: Fall and Spring 2002.  
Problem Solver's Club: Fall 2000 - Spring 2004.  
Alumni Newsletter Committee: Fall 2000 - Spring 2001.  
Analysis Search Committee: Spring semesters of 1994, 2000, 2001, 2002.  
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 1995 - Spring 1997, and Fall 2003 - Spring 2007.  
Curriculum Committee: Fall 1994 - Spring 1995.  
Graduate Student Advising Committee: Fall 1992 - Spring 2007.  
Colloquium Committee: Fall 1992 - Spring 1994.

#### • Peer Teaching Evaluations

Evaluated classes of colleagues:

Elmas Irmak (2007)  
Diem Nguyen (2006)  
Bethany Seto (2005)  
Ann Darke (2004)  
Jonathan Dunlap (2004)  
Dale Winter (2004)  
Juan Bes (2003)  
Warren McGovern (2003)  
Corneliu Hoffman (2003)  
Tong Sun (2001)  
Pamela Warton (1998)  
Craig Zirbel (1996)

• **Seminar Presentations at BGSU**

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 – IV, January-February, 2007.  
Construction of operators with prescribed behavior (Grivaux) I – IV , September, 2005.  
Cyclic properties of Volterra operators (Leon & Piquera) I – IV , October, 2003.  
Rotations of hypercyclic operators (Leon & Muller) I – 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 – 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 (8):  
 April 1994, November 1994, April 1995, July 1995, April 1996,  
 July 1996, November 2001, April 2002, November 2011.
2. Applied Mathematics (3):  
 April 1995, July 1995, April 2007.
3. Master's of Arts in Teaching (2)  
 July 1996, July, 2001.

• **Writing and Grading PhD Preliminary Exams (number of times)**

1. Real Analysis (17) :  
 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.
2. Complex Analysis (9):  
 September 1994, January 1995, September 1996, September 1997, January 1998,  
 September 2000, January 2001, September 2001, September 2001, September 2002.

**B. University Service**

- **Faculty Senate**  
 Senator, College Division Representative: Fall, 2002.
- **College Diversity Committee – Chair**  
 College of Arts and Sciences Diversity Committee: Spring, Fall 2011 & Spring 2012.

Formed subcommittees to work on different projects.  
Wrote two proposals to the Dean.

- **Committees – Members**

Building Committee for Moseley Hall: Fall 2012 - present.  
College of Arts and Sciences Program Assessments Committee: Fall 2010.  
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 - present.  
Faculty Senate Budget Committee: Fall 2004 - Spring 2005.  
International Students Committee: Fall, 2000 - Spring, 2001.  
Telecommunications Advisory Committee: Fall, 1993 – Spring, 1994.

- **Initiate 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.

- **Volunteer, Summer Orientation and Registration**

Summer 2008.

- **Volunteer, Alumni & Friends Weekend**

Department Representative, June 2008.

- **Presentations Attended.**

Value Commitments, April 2008.  
Distinguished faculty lecture, March 2008.

## C. Professional Service

- **Refereeing Papers for Journals**

Refereed 39 articles for the following 24 journals:

*Abstract and Applied Analysis*  
*Acta Mathematica Sinica*  
*Acta Mathematica Universitatis Comenianae*  
*Applied Mathematics Letters*  
*Archiv der Mathematik*  
*Bulletin of Iranian Mathematical Society*  
*Complex Analysis and Operator Theory*  
*Complex Variables*  
*Houston Journal of Mathematics*

*Indian Journal of Pure and Applied Mathematics*  
*International Journal of Mathematics and Mathematical Sciences*  
*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 the Franklin Institute*  
*Michigan Mathematical Journal*  
*Monatshefte für Mathematik*  
*Proceedings of the American Mathematical Society*  
*Proceedings of the Conference in Complex and Harmonic Analysis*  
*Proceedings of the Edinburgh Mathematical Society*  
*Revista de la Real Academia de Ciencias: Serie A, Mathematics*  
*Taiwanese Journal of Mathematics*

- **Editorial Board**

Journal of Operators, November 2012 – present.

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

Reviewed 3 journal articles in 2012.  
 Reviewed 3 journal articles in 2011.  
 Reviewed 3 journal articles in 2010.  
 Reviewed 2 journal articles in 2009.  
 Reviewed 1 journal article in 2008.  
 Reviewed 1 journal article in 2006.  
 Reviewed 2 journal articles in 2005.

- **Reviewing Textbook Manuscript**

*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 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.

## MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- A. The American Mathematical Society**  
 Member (1984 – present).
- B. The Mathematical Association of America**  
 Member (1988 – 1992, 2007 - present).

## HONORS AND AWARDS

- A. 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.
- B. Dr. Hollis A. Moore University Service Award**  
 Presented by the Undergraduate Student Body, BGSU, April 1998.
- C. KME Excellence in Teaching Mathematics Award**  
 KME Mathematical Society, BGSU, April 1997.
- D. Nominations for Teaching Award**  
 Michigan State University, 1991 and 1992
- E. Merit Undergraduate Scholarship**  
 University of Hong Kong, 1981 – 1983.