Date Revised: 3/20/24

WAYNE STATE UNIVERSITY

Professional Record

JOHN R. KLEIN
Department of Mathematics
College of Liberal Arts and Sciences

AREA OF RESEARCH: Algebraic Topology

OFFICE ADDRESS:	1213 FAB Building Detroit, MI, 48202 (313) 577-2479	HOME ADDRESS:	14021 Balfour Oak Park, MI 48237 (248) 547-5703

PRESENT RANK & DATE OF RANK: Professor, 08/2003

WSU APPOINTMENT HISTORY

HIRED AS ASSOCIATE PROFESSOR:	1998
YEAR AWARDED TENURE:	2001
YEAR PROMOTED TO FULL PROFESSOR:	2003

CITIZEN OF: U.S.A.

EDUCATION:

B.A. *cum laude* in Mathematics,	Northwestern University, 1983
Ph.D. in Mathematics	Brandeis University, 1989

PROFESSIONAL SOCIETY MEMBERSHIPS

American Mathematical Society

HONORS/AWARDS

Alexander von Humboldt Fellowship 10/91-5/93
Wayne State University Career Development Chair 2002-2003
Wayne State University College of Science Teaching Award 2003-2004
Lady Davis Fellowship 2009
EURIAS Fellowship 2017-2018

OTHER APPOINTMENTS

Lecturer, Northeastern University, 9/89-9/90
Visiting Professor, Siegen University (Germany), 9/90-9/91
Visiting Associate Professor, Purdue University, 1/97-5/97
Visiting Associate Professor, Brown University, 9/97-12/98
Assistant Professor, Bielefeld University (Germany), 6/93-8/98
Visiting Scholar, Université Catholique de Louvain (Belgium), 11/02-12/02

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Visiting Scholar, Stanford University, 7/03-8/03
Visiting Scholar, Stanford University, 7/04-8/04
Visiting Scholar, Hebrew University (Jerusalem), 1/05-5/05
Visiting Scholar, University of Münster (Germany), 5/05-6/05
Visiting Scholar, Stanford University, 7/05
Visiting Scholar, Mittag-Leffler Institute (Stockholm), 5/06
Visiting Scholar, University of Bielefeld, 6/06
Visiting Scholar, Stanford University, 7/06-8/06
Visiting Scholar, Stanford University, 8/07
Visiting Scholar, University of Oslo (Norway), 5/08
Visiting Scholar, Stanford University, 7/08
Visiting Scholar, University of Bonn (Germany), 6/09
Visiting Scholar, University of Bonn (Germany), 7/10
Visiting Scholar, Stanford University, 8/10
Visiting Researcher, New Mexico Consortium, 6/11
Visiting Researcher, Los Alamos Center for Nonlinear Studies, 6/12-7/12
Visiting Researcher, Nagoya University, 3/4/13-3/13/13
Visiting Professor, University of Copenhagen, 5/24/13-7/24/13
Visiting Professor, University of Copenhagen, 6/27/14-7/31/14
Visiting Professor, University of Copenhagen, 5/1/16-6/30/16
Eurias Fellow, Israel Institute for Advanced Studies, 9/1/17-6/1/18

I. Teaching

A. Years at Wayne State

Professor, 2003–present
Associate Professor, 1998-2003
———— Sabbatical Leave, Fall 2001 ————
———— Career Development Chair Leave, Fall 2002 ————
———— Sabbatical Leave, Winter 2005 ————
———— Sabbatical Leave, Winter 2013 ————
———— Sabbatical Leave, Fall 2017 ————

B. Years at Other Colleges/Universities

Northeastern University 9/89-6/90
Siegen University 9/90-9/91
Bielefeld University 6/93-1/97, 6/97-8/98
Purdue University 1/97-5/97
Brown University 9/97-1/98

C. Courses Taught at Wayne State in Last Five Years

Undergraduate

2018 W MAT 2030 Calculus III
2018 F MAT2210 Elementary Probability and Statistics
2018 F MAT 2250 Elementary Linear Algebra
2019 W MAT 2250 Elementary Linear Algebra
2019 W MAT 2150 Differential Equations and Matrix Algebra

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2019 F MAT 5700 Introduction to Probability Theory
2020 W MAT 2030 Calculus III
2020 F MAT 5700 Introduction to Probability Theory
2020 F MAT 2020 Calculus II
2021 F MAT 2250 Elementary Linear Algebra
2021 F MAT 5700 Introduction to Probability Theory
2022 W MAT 2010 Calculus I
2023 W MAT 2010 Calculus I
2023 F MAT 2010 Calculus I
2024 W MAT 2010 Calculus II
2024 W MAT 2010 Calculus III

Graduate

2018 W MAT 8000 Kan Seminar
2019 F MAT 7570 Geometry and Topology: Homological Algebra
2020 W MAT 7500 Topology II
2021 W MAT 7570 Sheaf Theory
2022 W MAT 5530 Elementary Differential Geometry
2022 W MAT 7570 Differential Forms in Algebraic Topology

D. Directed Studies/Essays/Theses/Dissertations Directed

Ph.D. Dissertations Directed

Mokhtar Aouina
The moduli space of thickenings, July, 2005

Lizhen Qin
Moduli spaces and CW structures arising from Morse theory, July, 2011

John Peter
Stabilization and classification of Poincaré duality embeddings, July, 2012

Michael Catanzaro
A Topological study of stochastic dynamics on CW complexes, May, 2016

Joshua Turner
The Hatcher-Quinn invariant and differential forms, May, 2021

Directed Studies

Algebraic Topology, Hung Tong Viet, Winter 2007
Algebraic Topology, Lizhen Qin, Fall 2008, Fall 2010,
Algebraic Topology, John Peter, Fall 2009, Winter 2010,
Combinatorics, James Wenson, Winter 2010
Differential Cohomology, Michael Catanzaro, Fall 2012
Group Cohomology, five Ph. D. Students, Fall 2013
Diffeology, Christian Frank, Winter 2015
Knot Theory, Giovanni Santia, Winter 2016

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II. Research

D. FUNDED RESEARCH

Spaces of Embeddings
National Science Foundation,
8/99-7/02 DMS-9971293. Amount: $69,000 (Awarded)

WSU Small Research Grant,
Awarded 4/27/00. Amount: $1,000

Disjunction Statements for Spaces of Embeddings
Wayne State University Research Grant,
Summer 2005. Amount: $10,000 (Awarded; declined to accept)

Embeddings and Group actions
National Science Foundation,
6/02-5/05 DMS-0201695. Amount: $96,383 (Awarded)

Career Development Chair Award
WSU Provost, 2002-2003.
Amount: $19,000

Embeddings, Intersections and Symmetries
National Science Foundation,
4/30/05-4/29/08 DMS-0503658. Amount: $107,073 (Awarded)

Homotopical Methods in Manifold Theory
National Science Foundation,
4/30/08-4/29/11 DMS-0803363. Amount: $127,450 (Awarded)

K-theory, Dynamics, and Intersection
National Science Foundation,
7/15/11-6/30/14 DMS-1104355. Amount: $133,153 (Awarded)

Algebraic Topology, Manifolds and Statistical Mechanics
Simons Foundation,
9/1/14-8/31/20 Award Nr. 317496. Amount: $35,000 (Awarded)

The Geometry of Poincare Spaces
National Science Foundation,
05/01/15-4/30/18 DMS-1506978. Amount: $184,880.00 (Not Funded)

RTG: Interactions between Topology and Algebra
(Co-PI) National Science Foundation,
08/17/15-08/16/20 DMS-1502420. Amount: $1,845,832.00 (Not Funded)

Topological Stochastics
National Science Foundation,
05/01/16-04/30/19 DMS-1607496 Amount: $172,145 (Not Funded)

The Algebraic Topology of Fluctuations
National Science Foundation,
06/01/18-05/30/21 DMS-1807133 Amount: $187,483 (Not Funded)

Stochastic dynamics and algebraic topology on manifolds

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Simons Foundation,
9/1/19-8/31/24 Identifier 630867. Amount: $42,000 (Not Funded)

The algebraic topology of fluctuations (LOI)
Simons Foundation,
9/1/19-8/31/24 Identifier 631820. Amount: $247,140 (Not Funded)

Topology and Combinatorics of Spaces of Matrices
US-Israel BSF,
10/1/21-9/30/25 Identifier 849607. Amount $66,000 (Not Funded)

Twisted Laplacians of simplicial complexes, higher zeta functions and Reidemeister torsion
Simons Foundation,
9/1/21-8/31/26 Identifier 849607. Amount $84,000 (Awarded)

Multi-component Cavity Polaritons for Tunable Intermolecular Entanglement and Controlled Photon-to-Electron Quantum Transduction
U.S. Department of Energy
9/1/21-8/31/24 Identifier DE-SC0022134. Amount $3,300,000 (Awarded)

III. Publications

D. JOURNAL ARTICLES PUBLISHED

Alphabetical listing of authors is the usual custom in mathematical publications. The order in which the names appear does not necessarily reflect the relative importance of each author's contributions.

Refereed Journals

1. J.R. Klein
   Coordinate free Morse theory, *Manuscripta Math.* **71** (1991), 283–294.

2. J.R. Klein and A.I. Suciu
   Inequivalent fibred knots whose homotopy Seifert pairings are isometric, *Math. Ann.* **289** (1991), 683–701.

3. J.R. Klein
   A functional relation in stable knot theory, *Math. Ann.* **292** (1992), 103–109.

4. J.R. Klein
   Higher Franz-Reidemeister torsion: low-dimensional applications,
   Contemp. Math. **150** (1993), 195–204.

5. J.R. Klein
   Higher Reidemeister torsion and parametrized Morse theory, *Rend. Circ. Mat. Palermo (2) Suppl. No. 30* (1993), 15–20.

6. K. Igusa and J.R. Klein
   The Borel regulator map on pictures. II. An example from Morse theory. *K-Theory* **7** (1993), 225–267.

7. J.R. Klein

On the homotopy embeddability of complexes in Euclidean space. I. The weak thickening theorem, *Math. Z.* **213** (1993), 145–161.

8. J.R. Klein
   On two results about fibrations, *Manuscripta Math.* **92** (1997), 77–86.

9. J.R. Klein and J. Rognes
   The fiber of the linearization map $A(*) \to K(\mathbf{Z})$, *Topology* **36** (1997), 829–848.

10. J.R. Klein, R. Schwänzl and R.M. Vogt
    Comultiplication and suspension, *Topology Appl.* **77** (1997), 1–18.

11. J.R. Klein
    Structure theorems for homotopy pushouts. I. Contractible pushouts, *Math. Proc. Cambridge Philos. Soc.* **123** (1998), 301–324.

12. M. Golasinski and J.R. Klein
    On maps into a co-H-space, *Hiroshima Math. J.* **28** (1998), 321–327.

13. J.R. Klein
    Poincaré duality embeddings and fiberwise homotopy theory, *Topology,* **38** (1999), 597–620.

14. J.R. Klein
    Poincaré Immersions, *Forum Math.,* **11** (1999), 717–734.

15. J.R. Klein
    Poincaré duality spaces, in *Surveys on Surgery Theory: Volume 1. Papers Dedicated to C.T.C. Wall, Ann. of Math. Studies* **145** (2000), 135–165.

16. J.R. Klein
    Poincaré embeddings of spheres, *Contemp. Math.* **258** (2000), 263–274.

17. T. Goodwillie, J.R. Klein and M. Weiss
    Spaces of smooth embeddings, disjunction and surgery, *Surveys on Surgery Theory: Volume 2. Papers Dedicated to C.T.C. Wall, Ann. of Math. Studies.* **145** (2001), 221–284.

18. J.R. Klein
    The dualizing spectrum of a topological group, *Math. Annalen* **319** (2001), 421–456.

19. T. Hüttemann, J.R. Klein, F. Waldhausen and B. Williams
    The "fundamental theorem" for the algebraic K-theory of spaces I, *J. Pure Appl. Algebra,* **160** (2001), 21–52.

20. T. Hüttemann, J.R. Klein, F. Waldhausen and B. Williams
    The "fundamental theorem" for the algebraic K-theory of spaces: II. The canonical involution, *J. Pure Appl. Algebra* **167** (2002), 53–82.

21. J.R. Klein
    Axioms for generalized Farrell-Tate cohomology,
    J. Pure. Appl. Alg. **172** (2002), 225–238.

22. J.R. Klein
    Poincaré embeddings and fiberwise homotopy theory, II,

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Quart. Jour. Math. Oxford **53** (2002), 319–335.

23. J.R. Klein
Embedding, compression and fiberwise homotopy theory,
Algebraic & Geometric Topology **2** (2002), 311–336.

24. J.R. Klein and J. Rognes
A chain rule in the calculus of homotopy functors,
Geometry & Topology **6** (2002), 853–857.

25. T. Goodwillie, J.R. Klein and M. Weiss
A Haefliger style description of the embedding calculus tower,
Topology **42** (2003), 509–524.

26. J.R. Klein
On the derivative of the stable homotopy of mapping spaces,
Homology, Homotopy and Applications **5** (2003) 601–612.

27. J.R. Klein
Moduli of suspension spectra,
Trans. Amer. Math. Soc., **357** (2005), 489–507.

28. M. Aouina and J.R. Klein
On the homotopy invariance of configuration spaces,
Alg. & Geom. Topology **4** (2004), 813–827.

29. J.R. Klein
Poincaré submersions,
Alg. & Geom. Topology **5** (2005), 23–29.

30. J.R. Klein
On embeddings in the sphere,
Proc. Amer. Math. Soc., **133** (2005), 2783-2793.

31. J.R. Klein
Fiber products, Poincare duality and A_∞-ring spectra,
Proc. Amer. Math. Soc., **134** (2006), 1825-1833.

32. M. Aouina and J.R. Klein
On C.T.C. Wall's suspension theorem,
Forum Mathematicum, **18** (2006) 829-837.

33. J.R. Klein
The dualizing spectrum, II.,
Alg. & Geom. Topology **7** (2007), 109–133.

34. J. R. Klein and B. Williams
Homotopical intersection theory, I.,
Geometry & Topology **11** (2007), 939–977.

35. J. R. Klein
Poincaré complex diagonals
Math. Zeit., **258** (2008), 587–607.

36. J. Grunewald, J.R. Klein and T. Macko
Operations on A-theoretic nil-terms

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Jour. of Topology **1** (2008), 317–341.

37. J. R. Klein and B. Williams
The "fundamental theorem" in the algebraic K-theory of spaces III: the nil-term
Proc. Amer. Math. Soc. **136** (2008), 3025–3033.

38. R. Cohen, J. R. Klein and D. Sullivan
On the homotopy invariance of the string topology loop product and string bracket
Journal of Topology **1** (2008), 391–408

39. T.G. Goodwillie and J.R. Klein
Multiple disjunction for spaces of Poincaré embeddings
Jour. of Topology **1** (2008), 761–803

40. R. Cohen and J. R. Klein
Umkehr Maps
Homology Homotopy Appl. **11** (2009), 17–33

41. J. R. Klein, C. Schochet and S. Smith
Continuous trace C*-algebras, gauge groups and rationalization
Jour. of Topology and Analysis **1** (2009), 261–288

42. J. R. Klein and B. Williams
The refined transfer, bundle structures and algebraic K-theory
Jour. of Topology **2** (2009) 321–345

43. J. R. Klein and B. Williams
Homotopical intersection theory, II: Equivariance
Math Zeit. **264** (2010) 849–880

44. J. R. Klein and W. Richter
Poincaré duality and periodicity, II. James periodicity
Geom. Dedicata **148** (2010), 291-302

45. J. R. Klein, C. Schochet and S. Smith
From rational homotopy to K-theory for continuous trace algebras. Superstrings, geometry, topology, and C^*-algebras, 165-171,
Proc. Sympos. Pure Math. **81**, Amer. Math. Soc., Providence, RI, 2010

46. B. Badzioch, W. Dorabiala, J.R. Klein and B. Williams
Equivalence of higher torsion invariants
Advances in Math. **81**, (2011) 2192–2232

47. J. R. Klein and W. Richter
Poincaré Duality and Periodicity
Alg. & Geom. Topology **11** (2011), 1961-1985

48. V.Y. Chernyak, J.R. Klein and N.A. Sinitsyn
Quantization and Fractional Quantization of Currents in Periodically Driven Stochastic Systems I: Average Currents
Jour. Chem. Phys. **136**, 154107 (2012)

49. V.Y. Chernyak, J.R. Klein and N.A. Sinitsyn

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Quantization and Fractional Quantization of Currents in Periodically Driven Stochastic Systems II: full counting statistics
Jour. Chem. Phys. **136**, 154108 (2012)

50. V. Y. Chernyak, and J. R. Klein and N. A. Sinitsyn
Algebraic Topology and the Quantization of Fluctuating Currents
Adv. Math. **244** (2013), 791–822

51. J.R. Klein and J.W. Peter
Fake Wedges
Trans. Amer. Math. Soc. **366** (2014), 3771–3786

52. M. J. Catanzaro, V. Y. Chernyak, and J. R. Klein
On Kirchhoff's theorems with coefficients in a line bundle
Homology, Homotopy and Appl. **15** (2013) 267–280

53. J.R. Klein and J.W. Peter
Charged Spaces
Forum Math. **27** (2015), 2661–2689

54. M. J. Catanzaro, V. Y. Chernyak, and J. R. Klein
Kirchhoff's theorems in higher dimensions and Reidemeister torsion
Homology, Homotopy and Appl. **17** (2015), 165–189

55. T. G. Goodwillie and J. R. Klein
Multiple disjunction for space of smooth embeddings
Jour. Topol. **8** (2015), 651–674

56. J. R. Klein
Embeddings, Normal Invariants and Functor Calculus
Nagoya Math. J. **225** (2017), 152–184

57. J. R. Klein and S. Tilson
On the moduli space of A_∞ structures
Manifolds and K-Theory, Contemporary Mathematics vol. 682, pp. 141–160, 2017

58. M. J. Catanzaro, V. Y. Chernyak, and J. R. Klein
Stochastic dynamics of extended objects in driven systems: I. Higher-dimensional currents in the continuous setting.
Chemical Physics, **481**, (2016), Pages 5–18

59. M. J. Catanzaro, V. Y. Chernyak, and J. R. Klein
Stochastic dynamics of extended objects in driven systems II: Current quantization in the low-temperature limit
Chemical Physics, **481**, (2016), Pages 19–27

60. M. J. Catanzaro, V. Y. Chernyak, and J. R. Klein
A higher Boltzmann Distribution
J. Appl. Comp. Topol. **1**, (2017), 215–240

61. M. J. Catanzaro, V. Y. Chernyak, and J. R. Klein
Exciton scattering via algebraic topology
J. Topol. Anal. (2018) 1–22

62. J. R. Klein and C. Malkiewich
The transfer is functorial
Adv. Math. **338** (2018), 1119–1140.

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63. J. R. Klein and B. Williams
Homotopical Intersection Theory, III: multi-relative intersection problems.
Alg. & Geom. Topol. **19** (2019),v1079–1134.

64. J. R. Klein, L. Qin, and Y. Su
On the various notions of Poincaré duality space.
Trans. Amer. Math. Soc. **375** (2022), 4251–4283.

65. J. R. Klein and C. Malkiewich
K-theoretic torsion and the zeta function
Ann. K-theory **7** (2022), 77–118.

66. M. J. Catanzaro, V. Y. Chernyak, and J. R. Klein
Fluctuations of cycles in a finite CW complex
Israel Jour. Math. **248** (2022), 315–354

67. J. R. Klein, C. Malkiewich, M. Ramzi
On the Multiplicativity of the Euler Characteristic.
Proc. Amer. Math. Soc. (2023), no. 11, 4997–5006.

68. L. Candelori, V. I. Chernyak, J. R. Klein, N. Rekuski
Rational local unitary invariants of symmetrically mixed states of two qubits
Adv. in Appl. Math. **153** (2024), Paper No. 102613, 29 pp.

69. J. R. Klein
On finite domination and Poincaré duality
Homology Homotopy Appl. **26** (2024) 29–35.

70. J. R. Klein, F. Naef
Poincaré complex diagonals and the Bass trace conjecture.
Proc. Roy. Soc. Edinburgh Sect. A Mathematics
Published online 2023:1–22. doi:10.1017/prm.2023.65

<u>Refereed Journals – Accepted</u>

71. L. Candelori, V. I. Chernyak, J. R. Klein, N. Rekuski
Effective Rationality for Local Unitary Invariants of Mixed States of Two Qubits
To appear in *J. Phys. A: Math. Theor.*

<u>Refereed Journals – Submitted</u>

72. L. Candelori, V. I. Chernyak, J. R. Klein
On the variety of X-states
Submitted to *J. Math. Phys.*

73. L. Candelori, V. I. Chernyak, J. R. Klein
On the rational invariants of quantum systems of n-qubits
Submitted to *Adv. in Appl. Math.*

M. Invited Seminars or Lectures Presented in the Last Five Years

Poincaré Calculus
Workshop on Functor Calculus (plenary talk), Ohio State (March 16, 2019)

Hypercurrents
CUNY Topology Seminar (February 19, 2020)

Hypercurrents

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SUNY Binghamton Geometry and Topology Seminar (March 12, 2020)

A higher torsion invariant for families of discrete dynamical systems
New Developments in Four Dimensions University of Victoria (June 13, 2022)

Poincaré complex diagonals and the Bass trace conjecture
Workshop on the Algebraic K-theory of spaces (Regensburg, July 24–28, 2023)

Bundle lifting problems and the algebraic K-theory of spaces
Workshop on the Algebraic K-theory of spaces (Regensburg, July 24–28, 2023)

The Euler characteristic and the transfer
Workshop on String topology and connections to BV-quantization, symplectic topology and manifold topology (Dublin, August 22–24, 2023)

On a rationality problem in quantum information theory
Binghamton University Mathematics Colloquium (March 14, 2024)

TBA
Conference on the Topology of Moduli Spaces: Ulrike Tillmann's 60th Birthday (Copenhagen, August 19-23, 2024)

IV. Service

  C. Committee Assignments

    University

       1999 Global Grant Review Committee

       2000 Global Grant Review Committee

       2001 Global Grant Review Committee

       2003 General Education Implementation Committee

       2003 General Education Math Competency Subcommittee

       2010 Internal evaluator for the WSU Dept. of Economics APR

       2011-12 CLAS Dean's Search Committee

    College

       1999 College of Science Retreat
          — Recruitment and Student Outreach Committee

       College Faculty Council 2002-2013, 2015-2019, 2021-24

       CLAS Curriculum Committee 2013-2014, 2015-2016

       CLAS Recruitment Committee 2022-24

       Research/Ranking Strategic Planning Committee 2004

       Dean's appointee to evaluate Mathematics Department Chair 2003-2004, 2022

       CLAS Research and Scholarship Committee 2006-07

       CLAS Dean's Advisory Committees for:
          1. Implementing Technology Instruction Fees 2006-07

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      2. Centers and Institutes 2005-07, 2019-20

Department

    Attended Commencement, F 2000

    Graduate Committee, 2000-F12, 2013-2022 (Chair 03-05,06-11)

    Graduate Recruitment Committee, 2001-2002, F12, 2013-2022 (Chair 17-24)

    Planning and Advisory Board 2018-20

    Personnel Committee, 2002-03, 2007-08, F08, F11, 2021-23

    Salary Committee, 2002-04, 2007-08, 2020-21, 2021-23

    German Language Examiner 2003-2013

    Colloquium Cochair 1999-00, 2005-06

    Topology Seminar Chair 1999-02, 2005-06, F07, 2013-2014

    Owens Committee Chair 2020-24

G. JOURNAL/EDITORIAL ACTIVITY

1. Editorships

Editor for the Bruce Williams Sixtieth Birthday Festschrift (*Geometriae Dedicata* **148** (2010), 1-2.).

Editor for the *Manifold Atlas* project (www.map.mpim-bonn.mpg.de)

Editor for *Homology, Homotopy and Applications*

3. Referee/Review activities:

<u>Books:</u>

Annals of Mathematics Studies.

<u>Journals:</u>

Topology (2005)
Annals of Mathematics (2005, 2009)
K-theory (2005, 2006, 2007)
J. Pure Appl. Algebra. (2007)
Proc. AMS (2003, 2005)
Ann. Sci. École Norm. Sup. (2002)
Forum Mathematicum
Glasgow Mathematical Journal (2002-2003, 2016-2017)
Math. Zeitschrift (2002, 2003, 2005, 2007, 2008, 2010, 2012)
Geometry & Topology (2003, 2007-08)
Algebraic & Geometric Topology (2008)
Adv. Math. (2003)
Jour. of London Math. Soc. (2006, 2010)
Proc. of Edinburgh Math. Soc. (2006)
Jour. of Topology (2007, 2008, 2009)
Jour. of Edinburgh Math. Soc. (2012, 2014-15)
Jour. of Pure and Appl. Alg. (2015)

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Homol. Homotopy. Appl. (2015, 2018)

Conferences:

Organizer of Midwest Topology Seminar (April 28-29, 2007, October 23, 2010)

Organizer of AIM Workshop on Higher Reidemeister Torsion (October, 2009)

Scientific Organizer of WCATSS 2012 (July, 2012)

H. OTHER PROFESSIONALLY RELATED SERVICE

Dissertation committee served

Dept. of Mechanical Engineering, April, 2000, Ph.D. Candidate: Joon-Ho Yoo

Dept. of Computer Science, October, 2002, Ph.D. Candidate: Milos Besta

Dept. of Physics, August 2009, Ph.D. Candidate: Nagesh Kulkarni

Dept. of Chemistry (2009), Ph.D. Candidate: Chao Wu

Dept. of Mathematics (2017), Ph.D. Candidate: Gabriel Angellini-Knoll

Proposal Evaluator for German Academic Exchange Service (DAAD), 2004-2011, 2013-2017, 2020

NSF Topology Panel Reviewer 2006, 2007, 2010

Mathematics Curriculum Consultant, Akiva Hebrew Day School, 2004-07

Mathematics liaison for Hillel Day School 2010-2015 (Farmington, MI)

Mathematics consultant for Frankel Academy 2016 (West Bloomfield, MI)

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