Curriculum Vitae
Kevin Iga
March, 2016

Education:

1992-1998	Stanford University	Ph.D., Mathematics	June 1998
1988-1992	Mass. Inst. of Technology	B.S. Mathematics	June 1992
		B.S. Physics	June 1992

Employment:

1998-present   Pepperdine University (received tenure 2004)
Current rank: Professor II (since 2014)

Professional society memberships:

2004–present	Philosophy of Mathematics Special Interest Group of the Mathematics Association of America
2009–2011	Chair, Phil. of Math. SIGMAA
2006–2008	Program director Phil. of Math. SIGMAA
2001–present	American Scientific Affiliation
2001–present	Association of Christians in the Mathematical Sciences
1998–present	American Mathematics Society
1998–present	Mathematics Association of America

Courses taught: Math 120, 140, 141, 150, 151, 250, 260, 316, 320, 350, 365, 370, 380, 450, 480 and numerous math 599 directed studies and seminars; BA 216, POSC 250, PSYC 250 (statistics overseas)

2012–2013 academic year: Pepperdine's Visiting Faculty to the Lausanne, Switzerland international program

Fall 2006: Pepperdine's Visiting Faculty to the Hong Kong international program

Student research supervised:

1. 2008: Adinrkas and supersymmetry (Alex White)
2. 2002: Points of finite order on elliptic curves (Leighton Cowart)
3. 2002: Mathematical modeling on water transport and cavitation in plants (Jason Fischer)
4. 2001: Knot classification using a computer network (Leighton Cowart, James Krumrei)
5. 1999: 2-dimensional Topological Quantum Field Theories (Jacob Chandler)

Papers published:

- K. Iga and Y.X. Zhang, *Structural Theory and Classification of 2D Adinkras,* Advances in High Energy Physics, vol. 2016, Article ID 3980613, 12 pages, 2016. doi:10.1155/2016/3980613.

- C.F. Doran, K. Iga, G. Landweber, S. Mendez–Diez, *Geometrization of N-Extended 1-Dimensional Supersymmetry Algebras*, Advances in Theoretical and Mathematical Physics, Vol. 19, No. 5 (2015), pp. 1043-1113.

- N. Fazio, K. Iga, A. Nicolosi, L. Perret, W. Skeith, *Hardness of Learning Problems over Burnside Groups of Exponent 3*, Designs, Codes and Cryptography: Volume 75, Issue 1 (2015), Page 59-70, DOI 10.1007/s10623-013-9892-6.

- C.F. Doran, T. Hübsch, K. Iga, G. Landweber, *On General Off-Shell Representations of World Line (1D) Supersymmetry*, Symmetry 2014, 6(1), 67–88 (2014).

- C.F. Doran, M.G. Faux, S.J. Gates, Jr., T. Hubsch, K.M. Iga, G.D. Landweber, R. Miller, *Codes and Supersymmetry in One Dimension*, Adv. Theor. Math. Phys. 15 (2011), 1909-1970.

- M. Faux, K. Iga, G. Landweber, *Dimensional Enhancement via Supersymmetry*, Advances in Mathematical Physics, (2011) Article ID 259089, 45 pages, doi:10.1155/2011/259089.

- C.F. Doran, M.G. Faux, S.J. Gates, Jr., T. Hubsch, K.M. Iga, G.D. Landweber, *A Superfield for Every Dash-Chromotopology*, Int.J.Mod.Phys., A24 (2009), 5681–5695.

- C.F. Doran, M.G. Faux, S.J. Gates, Jr., T. Hubsch, K.M. Iga, G.D. Landweber, R. Miller, *Topology Types of Adinkras and the Corresponding Representations of N-Extended Supersymmetry*, J. Phys. A42 (2009) 065402 (12pp)

- C.F. Doran, M.G. Faux, S.J. Gates Jr, T. Hubsch, K.M. Iga, G.D. Landweber, *Relating Doubly-Even Error-Correcting Codes, Graphs, and Irreducible Representations of N-Extended Supersymmetry*, in Discrete and Computational Mathematics, eds. F. Liu et al., (Nova Science Pub., Inc., Hauppage, 2008); arXiv/0806.0051.

- C.F. Doran, M.G. Faux, S.J. Gates, Jr., T. Hubsch, K.M. Iga, G.D. Landweber, *Adinkras and the Dynamics of Superspace Prepotentials*, Adv. S. Th. Phys. 2 (3) (2008), 113–164.

- C.F. Doran, M.G. Faux, S.J. Gates, Jr., T. Hubsch, K.M. Iga, G.D. Landweber, *A Counter-Example to a Putative Classification of 1-Dimensional, N-extended Supermultiplets*, Adv. S. Th. Phys. 2 (3) (2008), 99–111.

- C.F. Doran, M.G. Faux, S.J. Gates, Jr., T. Hubsch, K.M. Iga, G.D. Landweber, *On Graph-Theoretic Identifications of Adinkras, Supersymmetry Representations and Superfields*, Int. J. Mod. Phys., A22 (2007), 869–930.

- K. Iga, R. Maddox, *Pebble Sets in Convex Polygons*, Journal of Discrete and Computational Geometry, Vol. 38 (2007), 4, 680–700.

- K. Iga, *A Truck Driver's Straw Problem and Cantor Sets*, College Mathematics Journal, 39 (2008), 4, 280–290.

- K. Iga, K. Killpatrick, *Truck Drivers, Straws, and Sharing a glass of water*, College Mathematics Journal, March 2006, vol. 37, no. 2, 82–92.

- K. Iga, *A Dynamical Systems proof of Fermat's Little theorem*, Mathematics Magazine, Vol. 76, No. 1 (2003), 48–51.

- H. Bray, K. Iga, *Superharmonic functions in R^n and the Penrose Inequality in General Relativity*, Communications in Analysis and Geometry, Vol. 10, No. 5, (2002), 999–1016.

- K. Iga, *What do Topologists want from Seiberg–Witten theory?*, International Journal of Modern Physics A, 17, No. 30 (2002), 4463–4514.

Papers completed:

- C.F. Doran, K.M. Iga, G.D. Landweber, *An Application of Cubical Cohomology to Adinkras*, submitted, AIHPD, European Mathematical Society, arXiv:1207.6806.

- C.F. Doran, M.G. Faux, S.J. Gates, Jr., T. Hubsch, K.M. Iga, G.D. Landweber, *Off-shell supersymmetry and filtered Clifford supermodules*, submitted, Algebras and Representation Theory, arXiv:math-ph/0603012.

- K. Iga, *The Straw Problem, Erdös, and Bernoulli Convolutions*

Colloquia talks given:

Pacific Undergraduate Workshop in Supersymmetry, May 2014: PIMS at University of British Columbia

Supersymmetric Quantum Mechanics and Codes, October 2011: Centro Brasileiro de Pesquisas Físicas (joint seminar with IMPA), Rio de Janeiro, Brazil

Supersymmetric Quantum Mechanics and Codes, August 2011: Quantum Theory and Symmetries 7, Prague, Czech Republic

Adinkras: Diagrams for Supersymmetry, December 2010: Anacapa Conference, Cal Poly Pomona

D-modules and the Riemann-Hilbert Correspondence, August 2010: UCLA

Rational homotopy theory–the non-simply connected case, November 2009: UCLA

Four dimensional manifolds and Kirby calculus, March 2009: UCLA

Adinkras: Supersymmetry using graphs and codes, March 2009, CSU Channel Islands Math colloquium

Adinkras: Supersymmetry using graphs and codes, May 2007, Cal Poly Pomona

A symmetry that solves three problems, May 2007, University of Washington

A truck driver problem: Sharing a glass of water and an unusual probability distribution, November 2006, Hong Kong Baptist University

When Adinkras are not enough: $R[d/dt]$-modules, July 26, 2006: BIRS focused research group: Off-shell supersymmetry through graph theory and superspace (Banff International Research Station)

Topological aspects of Adinkra Diagrams, November 2005, AMS Northwest Section meeting, University of Oregon

Mathematical and Physical approaches to Clifford Algebras and Supersymmetry, February 2005, University of Washington

The Straw Problem: A truckdriver's question, Cantor sets, and an interesting probability distribution, January 8, 2005, AMS/MAA Joint meetings in Atlanta, GA

The Semigroup of equitable distribution of points in a polygon, January 5, 2005, AMS/MAA Joint meetings in Atlanta, GA

Genetics, computers, and the Greek text of the New Testament, Oct. 8, 2004, Pepperdine University Faculty conference

All about G_2, May 31, 2002, University of Oregon Basic Notions seminar

Introduction to Seiberg–Witten theory, June 11, 2001, UCLA Topology seminar

To infinity and beyond! On the limitations of human reason. October 2000, Pepperdine University Natural Science seminar

Algebra, A French Revolution, and Other Problems Solved by Radicals. October 1999, Pepperdine University Natural Science seminar

Morse Theory and Compactness in Seiberg–Witten Flows. April 1999, U.C. Santa Barbara Geometric Analysis seminar

The Topology of Manifolds. October 1998, Pepperdine University Natural Science seminar

University service (selected):

Seaver Rank, Tenure, and Promotion Committee (9/13–present)
Talk at University of Alberta ASMI program for high school students (7/11, 7/14)
Talk on bubbles and math at Mark Keppel High School (5/11, 5/12, 5/13, 5/15)
Seaver Faculty Association president (8/09–8/10)
Math dept. hiring committee (8/07–4/08, 8/10–4/11, 8/11–4/12), chair (8/07–4/08, 8/10–4/11)
Academic Support committee (8/07–5/08), chair
Seaver Faculty Association Executive committee (8/05–7/06)
Physics major development committee (8/04–12/04)