

Publication list

Oliver Knill

- 2024 O. Knill, **Eigenvalue Bounds of the Kirchhoff Laplacian**, Linear Algebra and Its Applications, August, 2024
- 2021 O. Knill, **About Humor in the Classroom**, in "Teach Mathematics with a sense of Humor", Kindle, 2021
- 2021 O. Knill, **On Parameters for Communicating Mathematics**, In "A Conversation on Professional Norms in Mathematics", AMS, 2021
- 2021 O. Knill, **Teaching and Understanding**, In response to the "The unity of Partial differential equations", Inference Volume 5, No 1, June 2021.
- 2020 O. Knill, **The energy of a simplicial complex**, Linear Algebra and its Applications 600 (2020) 96-129
- 2020 O. Knill, **Finite Abstract Simplicial Complexes**, Wolfram Community, 11/19/2020
- 2014 O. Knill, **Cauchy Binet for pseudo-determinants**, Linear Algebra and its Applications 459, 522-547, 2014
- 2013 O. Knill and E. Slavkovsky, **Visualizing Mathematics using 3D printers**, O. Knill and E. Slavkovsky, in "Low-Cost 3D Printing for science, education and Sustainable Development", Editors: E. Canessa, C. Fonda and M. Zennaro, ICTP, ISBN-92-95003-48-9, 2013
- 2013 O. Knill, **A Brouwer fixed point theorem for graph endomorphism**, "Fixed Point Theory and Applications", 85, (1) 2013
- 2012 O. Knill, **A discrete Gauss-Bonnet type theorem**, "Elemente der Mathematik", 67, p. 1-17, 2012
- 2011 O. Knill and F. Tangerman, **Selfsimilarity and growth in Birkhoff sums for the golden rotation**, "Nonlinearity" 24 (2011) p. 3115-3127
- 2012 O. Knill and J. Lesieutre, **Analytic continuation of Dirichlet series with almost periodic coefficients**, "Complex Analysis and Operator Theory", Volume 6(1), p.237-255, 2012
- 2009 O. Knill, **Probability Theory and Stochastic Processes with Applications**, Overseas Press, 2009
- 2008 O. Knill, **Hunting for Perfect Euler Bricks**, Harvard College Math. Review, Vol.2, No.2, p. 102, 2008
- 2007 O. Knill, Four Biographical encyclopedia articles about Jost Bürgi, Max Wolf, Arthur Schuster and Fritz Zwicky, BEA, Springer, 2007, Editor-in-Chief: Thomas Hockey. 4 Book sections.
- 2003 J. Moser (Notes by O. Knill), **Selected chapters in the calculus of variations**, Series: Lectures in Mathematics ETH Zürich, Birkhäuser, 2003, 140 pages.
- 1999 O. Knill, **Random Schrödinger operators arising from lattice gauge fields I: existence and examples** J. of Math. Phys., 40, p. 5495-5510, 1999 u
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- 1998 O. Knill, **On nonconvex caustics of convex billiards**. Elemente der Mathematik, 53(3), p. 89-106, 1998
- 1998 O. Knill, **Singular continuous spectrum and quantitative rates of weakly mixing**. Discrete and Continuous dynamical systems, 4, 1998, p. 33-42
- 1997 O. Knill, **On the dynamics of a general unitary operator**. Reports on Mathematical Physics, 40: 91-95, 1997
- 1996 O. Knill, E.Reed. **Complexity growth in almost periodic fluids in the case of lattice gas cellular automata and Vlasov systems**. Complex Systems, 10, 219-227, 1996
- 1996 O. Knill, **Nonlinear dynamics from the Wilson Lagrangian**. J Physics A, 29, L595-600, 1996
- 1996 O. Knill, **Maximizing the packing density on a class of almost periodic sphere packings**. Expositiones Mathematicae, 14 (1996), p. 227-246, 1996
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- 1996 M. Jeng, O. Knill, **Billiards in the l^p unit balls of the plane**. Chaos, Fractals and Solitons, Vol. 7, p. 543-554, 1996
- 1995 E. Gutkin, O. Knill, **Billiards that share a triangular caustic**. in "New trends in Hamiltonian systems and Celestial Mechanics", "Second International symposium on Hamiltonian Systems and Celestial Mechanics", Advanced Series in Nonlinear Dynamics, Vol. 8 World Scientific, Singapore, 1996.
- 1995 A. Hof, O. Knill, B.Simon. **Singular Continuous Spectrum for Palindromic Schrödinger Operators**. Comm. Math. Phys., 174, 149-159, 1995.
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- 1993 O. Knill, **'Spectral, ergodic and cohomological problems in dynamical systems'**, PhD theses under supervision of Prof. O.E. Lanford III, Diss. ETH Nr. 10189, 1993
- 1993 O. Knill, R.Dgani, M.Vogel. **Wind Tomography in Binary systems** Annals of the Israel Physical Society 10:134-137, 1993
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- 1987 O. Knill, '**Über eine verkettete Twistabbildung im Störmerproblem**', Diploma Thesis under supervision of Prof. J. Moser, ETH 1987
- 1983 O. Knill, '**Anschauliche Additive Zahlentheorie**' Swiss Competition 'Schweizer Jugend Forscht', 150 p., short version published in "SJF Jahrbuch 1983, Ed. B.Röthlin, Schweizer Jugend Forscht Verlag, Winterthur, 1983.