

# Outside Reading Suggestions

Spring Quarter, 2009,

Wil Clarke—April 8, 2009,

*The following articles are all available at the periodical desk of the La Sierra University Library.*

## General Interest

- Jones, Michael "The geometry behind paradoxes of voting power," *Math Mag* Apr 2009, p103
- Kalish, Arthur "Extending the classical geometry problem," *Math Teach* Apr 2009, p634
- Feist, Curtis "Topology explains why automobile sunshades fold oddly," *Coll Math J* Apr 2009, p93
- Sultan, Alan "CORDIC: how hand calculators calculate," *Coll Math J* Apr 2009, p87
- Kaplan, Gail "Playing with dominos," *Math Teach* Feb 2009, p426
- Grabiner, Judith "Why did Lagrange 'prove' the parallel postulate?" *Monthly* Jan 2009, p3
- Dence, Thomas, "Sums of simple rearrangements of the alternating harmonic series," *Math Gaz* Nov 2008, p511
- Rauff, James "The way back from anywhere: exploring the road coloring conjecture," *Math & Comp Ed* Winter 2009, p6
- Rice, Blake "The Elgamal cryptosystem on the TI-83," *Math & Comp Ed* Winter 2009, p29
- Munakata, Mika "Mathematical representations at the National Art Gallery," *Math & Comp Ed* Winter 2009, p47
- Geddes, John "The dynamic force table," *Primus* May 2008, p221
- Simoson, Andrew "Solomon's sea and  $\pi$ ," *Coll Math J* Jan 2009, p22
- Paterson, Mike "Overhang," *Monthly* Jan 2009, p3
- Bosveld, Jane "A tribe without numbers," *Discover* Jan 2009, p44
- Miatello, L. "The difference  $5\frac{1}{2}$  in a problem of rations from the Rhind mathematical papyrus," *Hist Math* Nov 2008, p277
- Martinez-Conde, Susana "Magic and the Brain," *Sc Amer* Dec 2008, p72
- Geddesw, John "The dynamic force table," *Primus* May 2008, p221
- Vajiac, A. "Areas and the fundamental theorem of calculus," *Int J Math Ed* Dec 2008, p1023
- Apostol, Tom "The method of sweeping tangents," *Math Gaz* Nov 2008, p396
- Cunningham, Clifton "Report from the ambassador to Cida-2," *Coll Math J* Nov 2008, p337
- Rapke, Tina "Thoughts on why  $(-1)(-1) = +1$ ," *Math Teach* Dec 2008, p374
- Swetz, Frank "The mystery of Robert Adrain," *Math Mag* Dec. 2008, p332
- Fraboni, Michael "Fractals in the classroom," *Math Teach* Oct. 2008, p197
- Bookman, Jack "Developing assessment methodologies for quantitative literacy: a formative study," *Monthly* Dec. 2008, p911
- Pickett, Thomas "Another continued fraction for  $\pi$ ," *Monthly* Dec. 2008, p930
- Wax, Heather "Outcalculating the competition," *Sci Amer* Oct. 2008 p96
- MacDonald, Joanne "DNA computers for work and play," *Sc Amer* Nov. 2008, p84
- Mirsky, Steve "Tabula non rasa," *Sci Amer* Dec. 2008, p50
- Bachelor, Andrew "Enumerative algebraic geometry of conics," *Monthly* Oct. 2008, p701
- Foster, Drew "Diving in head first: finding the volume of Norris Lake," *Math Teach* Sep. 2008, p90
- Horton, Robert "Squaring matrices: connecting mathematics and science," *Math Teach* Sep. 2008, p102
- Loe, Melissa "The mathematics of Helaman Ferguson's *Four Canoes*," *Math Mag* June 2008, p167
- Kreminski, Rick " $\pi$  to thousands of digits from Vieta's formula," *Math Mag* June 2008, p201
- Baxter, Andrew "Periodic orbits for billiards on an equilateral triangle," *Monthly* June 2008, p479
- Arcavi, Abraham "Generating problems from problems and solutions from solutions," *Math Teach* Aug. 2008, p10
- Haunsperger, Deanna "A Break for mathematics: and interview with Joe Gallian," *Coll Math J* May 2008, p174
- Douthett, Jack "Dinner tables and concentric circles: a harmony of mathematics, music, and physics," *Coll Math J* May 2008, p203
- Bailey, R.A. "Sudoku, gerechte designs, resolutions affine space, spreads, reguli, and Hamming codes," *Monthly* May 2008, p383
- Nguyen, Hieu "Rearing its ugly head: the cosmological constant and Newton's greatest blunder," *Monthly* May 2008, p415
- Ji, Kathy "Extreme palindromes," *Monthly* May 2008, p447
- Lin, Cheng-Yao "Preservice teachers' beliefs about using technology in the mathematics classroom," *J Comp Math* v27 #3 2008, p341
- Navarro-Loidi, Juan "The introduction of logarithms into Spain," *Hist Math* May 2008, p83
- Canada, Dan "Deep thoughts on the river crossing game," *Math Teach* May 2008, p632
- Polo-Blanco, Irene "Aliia Boole Stott, a geometer in higher dimension," *Hist Math* May 2008, p123

- Frederickson, Greg "Designing a table both swinging and stable," *Coll Math J* Sep. 2008, p258
- Dziabenko, Dimitri "Centaur: here, there everywhere," *Coll Math J* Sep. 2008, p267
- Farmer, Tom "A helical stairway project," *Coll Math J* Sep. 2008, p291
- Rinaldi, Simone "Indecomposibility: polyominoes and polyomino tilings," *Math Gaz* July 2008, p193
- Routledge, Norman "Summing Euler's  $\phi$ -function," *Math Gaz* July 2008, p242
- Ormell, Christopher "Can we understand uncountability," *Math Gaz* July 2008, p252
- Abramovich, Sergei "Diophantine equations as a context for technology-enhanced training in conjecturing and proving," *Primus* May 2008, p257
- Stickles, Paula "A Markov chain analysis of the three strikes game," *Math & Comp Ed* Spring 2008, p84
- Skurnick, Ronald "A classroom note on a formula made famous by a gifted elementary school student (Carl Friedrich Gauss)," *Math & Comp Ed* Spring 2008, p153
- Gargano, Michael "Identification numbers and the mathematics of check digit schemes for computer scientists – II (ISBN and EANS)," *Math & Comp Ed* Spring 2008, p157
- Ventress, Andy "Digital images + interactive software = enjoyable, real mathematics modeling," *Math Teach* Apr 2008, p568
- Bossé, Michael "Investigating the mathematical process with nonlinear asymptotes," *Math Teach* Apr 2008, p574
- Phy, Lyn "Using technology to promote mathematical discourse concerning women in mathematics," *Math Teach* Apr 2008, p582
- Granville, Andrew Prime number patterns," *Monthly* Apr 2008 p279
- Agnew, Robert "Optimal congressional apportionment," *Monthly* Apr 2008 p297

### Geometry

- Fink, Alex "Rick's tricky six puzzle:  $S_5$  sits specially in  $S_6$ ," *Math Mag* Apr 2009, p83
- Jones, Michael "The geometry behind paradoxes of voting power," *Math Mag* Apr 2009, p103
- Norton, Anderson "Eighty-eight thousand, four hundred and eighteen (more) ways to fill space," *Coll Math J* Apr 2009, p108
- Kocik, Jerzy "Disentangling a triangle," *Monthly* Mar 2009, p228
- Kalish, Arthur "Extending the classical geometry problem," *Math Teach* Apr 2009, p634
- Fox, Michael "The Soddy spheres of a 4-ball tetrahedron, Part 2," *Math Gaz* Nov 2008, p418
- Grabiner, Judith "Why did Lagrange 'prove' the parallel postulate?" *Monthly* Jan 2009, p3
- Mammana, Maria "Quadrilaterals of triangle centres," *Math Gaz* Nov 2008, p466
- Pratt, Vaughn "Factoring Heron," *Coll Math J* Jan 2009, p15
- Simoson, Andrew "Solomon's sea and  $\pi$ ," *Coll Math J* Jan 2009, p22
- Chandrupatla, Tirupathi "Approximating an ellipse with four circular arcs," *Math Comp Ed* Fall 2008, p220
- Fox, Michael "The Soddy spheres of a 4-ball tetrahedron," *Math Gaz* Nov 2008, p418
- Slowbe, Jason "What if Archimedes had met Taylor?" *Math Mag* Oct 2008 p285
- Blatter, Christian "Four shots for a convex quadrilateral," *Monthly* Nov. 008, p837
- Madden Seán "Spatial reasoning and Pólya's five plane problem," *Math Teach* Sep. 2008, p83
- Ueno, Carlos "Matrices and tilings with right trominoes," *Math Mag* Dec. 2008, p319
- Loe, Melissa "The mathematics of Helaman Ferguson's *Four Canoes*," *Math Mag* June 2008, p167
- Baxter, Andrew "Periodic orbits for billiards on an equilateral triangle," *Monthly* June 2008, p479
- Arcavi, Abraham "Generating problems from problems and solutions from solutions," *Math Teach* Aug. 2008, p10
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- Farmer, Tom "A helical stairway project," *Coll Math J* Sep. 2008, p291
- Larcher, Gerhard "The sum of distances between vertices of a convex polygon with unit perimeter," *Monthly* Apr 2008 p350
- MacFarlane, Cayanne "Dynamical systems and irrational angle construction by paper-folding," *Monthly* Apr 2008 p355

### Abstract Algebra

- Fejzic, H. "Descartes' rule of signs, alternations of data sets, and balanced differences," *Monthly* Apr 2009, p316
- Mercer, Idris "On Furstenberg's proof of the infinitude of primes," *Monthly* Apr 2009, p355
- Oman, Greg "An independent axiom system for the real numbers," *Coll Math J* Mar 2009, p78
- Bullyncck, M. "Modular arithmetic before C.F. Gauss," *Hist Math* Feb 2009, p48
- Ferreño, Natalia "Yet another proof of the irrationality of  $\sqrt{2}$ ," *Monthly* Jan 2009, p68

## Outside Reading Suggestions

- Pulver, Sandra “Quaternions: The hypercomplex number system,” *Math Gaz* Nov 2008, p431
- Schep, Anton “A simple complex analysis and an advanced calculus proof of the Fundamental Theorem of Algebra,” *Monthly* Jan 2009, p67
- Esteve, Rosa “Symbolic language in early modern mathematics: the *Algebra* of Pierre Hérigone (1580-1643),” *Hist Math* Nov 2008, p285
- Pulver, Sandra “Quaternions: the hypercomplex number system,” *Math Gaz* Nov 2008, p431
- Rich, Andrew “Leftist numbers,” *Coll Math J* Nov 2008, p330
- Eggleton, Roger “Consecutive integers with equally many principal divisors,” *Math Mag* Oct 2008, p235
- Passare, Mikael “How to compute  $\sum 1/n^2$  by solving triangles,” *Monthly* Oct 2008, p745
- Birmajer, Daniel “Arithmetic in the ring of formal power series with Integer coefficients,” *Monthly* June 2008, p541
- Routledge, Norman “Summing Euler’s  $\phi$ -function,” *Math Gaz* July 2008, p242
- Hicks, Kenneth “A polynomial analogue of the  $3n + 1$  problem,” *Monthly* Aug. 2008, p615
- Granville, Andrew “Prime number patterns,” *Monthly* Apr 2008 p279

### Linear Algebra

- Liu, Andy “Two applications of a Hamming Code,” *Coll Math J* Jan. 2009, p2
- Beslin, Scott “On range and reflecting functions about the line  $y = mx$ ,” *Primus* May 2008, p247
- Jonasku, Eugen “ $k$ -Dependence and domination in king’s graphs,” *Monthly* Nov.2008, p820
- Rich, Andrew “Leftist numbers,” *Coll Math J* Nov 2008, p330
- Ueno, Carlos “Matrices and tilings with right trominoes,” *Math Mag* Dec. 2008, p319
- Stojanoska, Vesna “Touching  $\mathbb{Z}_2$  in three-dimensional rotations,” *Math Mag* Dec. 2008, p345
- Bachelor, Andrew “Enumerative algebraic geometry of conics,” *Monthly* Oct. 2008, p701
- Passare, Mikael “How to compute  $\sum 1/n^2$  by solving triangles,” *Monthly* Oct 2008, p745
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- Hicks, Kenneth “A polynomial analogue of the  $3n + 1$  problem,” *Monthly* Aug. 2008, p615
- Granville, Andrew “Prime number patterns,” *Monthly* Apr 2008 p279

### Analysis and Sets & Numbers

- Barnsley, Michael “Transformations between self-referential sets,” *Monthly* Apr 2009, p291
- Gordon, Russell “Some integrals involving the Cantor function,” *Monthly* Mar 2009, p228
- Apostol, Tom “The method of sweeping tangents,” *Math Gaz* Nov 2008, p396
- Ferreño, Natalia “Yet another proof of the irrationality of  $\sqrt{2}$ ,” *Monthly* Jan 2009, p68
- Vajiac, A. “Areas and the fundamental theorem of calculus,” *Int J Math Ed* Dec 2008, p1023
- Apostol, Tom “The method of sweeping tangents,” *Math Gaz* Nov 2008, p396
- Ormeil, Christopher “Can we understand uncountability,” *Math Gaz* July 2008, p252

### History of Math

- Bullyneck, M. “Modular arithmetic before C.F. Gauss,” *Hist Math* Feb 2009, p48
- Grabiner, Judith “Why did Lagrange ‘prove’ the parallel postulate?” *Monthly* Jan 2009, p3
- Esteve, Rosa “Symbolic language in early modern mathematics: the *Algebra* of Pierre Hérigone (1580-1643),” *Hist Math* Nov 2008, p285
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- Polo-Blanco, Irene “Alia Boole Stott, a geometer in higher dimension,” *Hist Math* May 2008, p123

### Key

*Coll Math J* = The College Mathematics Journal

*Discover* = Discover

*Hist Math* = Historia Mathematica

*Int J Math Ed* = International Journal of Mathematical Education in Science and Technology

*J Comp Math* = Journal of Computers in Mathematics and Science Teaching

*J Research Math Ed* = Journal for Research in Mathematics Education

## Outside Reading Suggestions

*Math & Comp Ed* = Mathematics and Computer Education

*Math Gaz* = Mathematical Gazette

*Math Horiz* = Math Horizons

*Math Mag* = Mathematics Magazine

*Math Teacher* = Mathematics Teacher

*Monthly* = The American Mathematical Monthly

*Primus* = Primus

*Quantum* = Quantum

*Sch Sci & Math* = School Science and Mathematics

*Sc Amer* = Scientific American