

Andrew R. Booker 385

Artin's Conjecture, Turing's Method, and the Riemann Hypothesis

Jesús Guillera 409

A Class of Conjectured Series Representations for $1/\pi$

Bjorn Poonen 415

Heuristics for the Brauer-Manin Obstruction for Curves

Janko Gravner and David Griffeath 421

Modeling Snow Crystal Growth I: Rigorous Results for Packard's Digital Snowflakes

I. R. Hentzel and L. A. Peresi 445

The Nucleus of the Free Alternative Algebra

Steven Glenn Jackson and Alfred G. Noël 455

Prehomogeneous Spaces Associated with Nilpotent Orbits in Simple Real Lie Algebras $E_{6(6)}$ and $E_{6(-26)}$ and Their Relative Invariants

Irene García-Selfa and José M. Tornero 471

On Simultaneous Arithmetic Progressions on Elliptic Curves

P. M. H. Wilson 479

Some Geometry and Combinatorics for the S-Invariant of Ternary Cubics

D. Hacon, C. Mendes de Jesus, and M. C. Romero Fuster 491

Fold Maps from the Sphere to the Plane

Pablo Shmerkin and Boris Solomyak 499

Zeros of $\{-1,0,1\}$ Power Series and Connectedness Loci for Self-Affine Sets

Cover art: The occupied set of *Hex 134* at time 218, started from $\{0\}$. See page 424. (Gravner, Griffeath.)



A K PETERS, LTD
888 Worcester St.
Suite 230
Wellesley, MA 02482
(781) 416-2888

PRSR STD
US POSTAGE
PAID
WELLESLEY, MA
PERMIT # 50394

Chief Editor

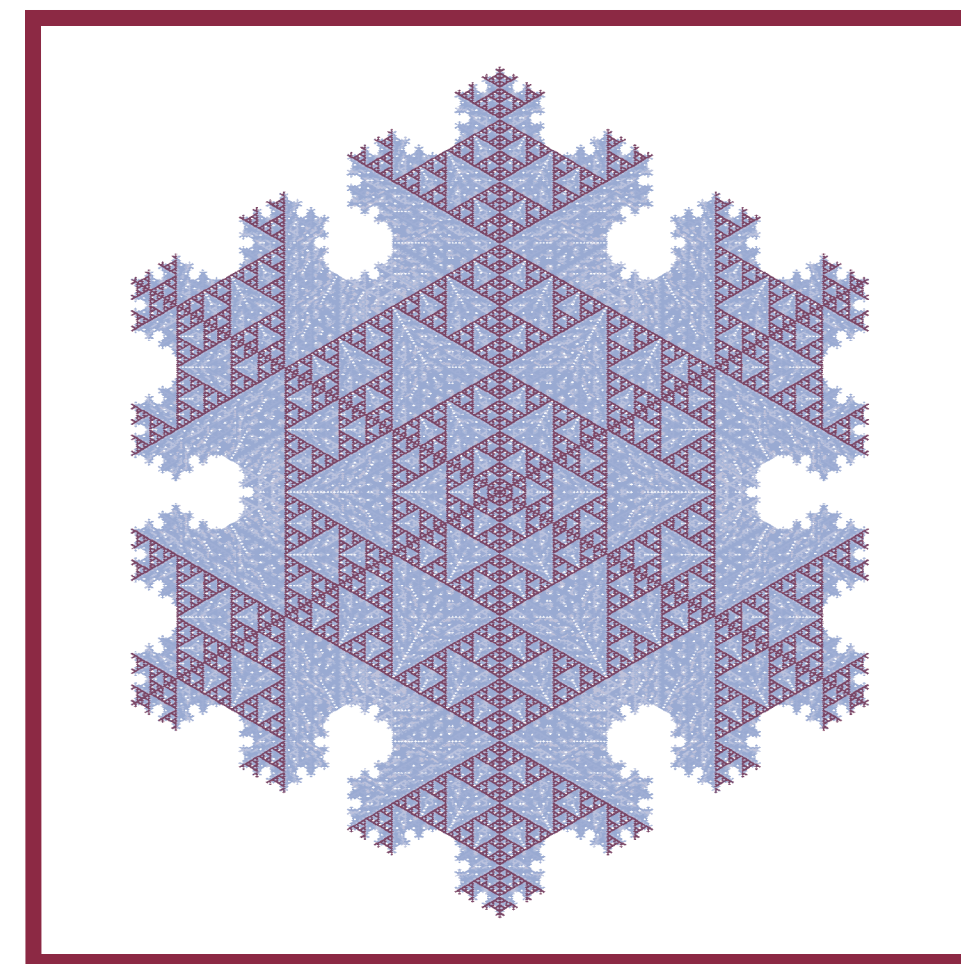
Rafael de la Llave

Founding Editor

D. B. A. Epstein

Associate Editors

Marcel Berger
Jonathan Borwein
Joe P. Buhler
Ronald L. Graham
John Guckenheimer
Derek Holt
Sadayoshi Kojima
Robert Kusner
Tan Lei
Hendrik W. Lenstra, Jr.
Albert Marden
David Mumford
Walter Neumann
Wilhelm Plesken
Michael Pohst
Peter C. Sarnak
Bernd Sturmfels
Jean Taylor
Roderick Wong



A K PETERS, LTD