

**CURRICULUM VITAE**  
for  
**John Alexander Rock**

**PROFESSIONAL ADDRESS**

Department of Mathematics  
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**INTERNET**

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**EDUCATION**

- Ph.D. in Mathematics, University of California, Riverside, expected date: June 2007  
(defended March 2007)  
Dissertation Advisor: Michel L. Lapidus  
Dissertation Topic: *Zeta Functions, Complex Dimensions of Fractal Strings and Multifractal Analysis of Mass Distributions*
- M.S. in Mathematics, University of California, Riverside, April 2003
- B.A. in Mathematics, University of California, Riverside, June 2001

**CURRENT POSITION**

- Associate In Mathematics, UC Riverside, April 2007 – present

**PREVIOUS POSITIONS**

- Graduate Teaching Assistant, UC Riverside, September 2001 – March 2007
- Associate in Mathematics, UC Riverside – Summers 2001–2004, 2006
- Research Assistant, Middle School Academy, Mathematics Achievement Partnerships –  
Summers 2000 and 2001
- Lab Leader, UC Riverside Learning Center – Fall 1999 to Spring 2001

**HONORS**

- Outstanding Teaching Assistant, UC Riverside Mathematics Department, 2004–2005
- Dean's Fellowship Award, UC Riverside, Fall 2001 to Spring 2003
- Outstanding Lab Leader, UC Riverside Learning Center, 2001

## PUBLICATIONS

- M. L. Lapidus, J. Lévy Véhel, J. A. Rock, *Fractal Strings and Multifractal Zeta Functions*, submitted to *Advances in Mathematics* in October 2006.

## PRESENTATIONS

- “Multifractal Analysis of Mass Distributions,” Parts I and II, Mathematical Physics and Dynamical Systems Seminar (MPDS), UC Riverside, November and December 2006.
- “Fractal Strings and Multifractal Zeta Functions,” International Conference on Stochastic Analysis, University of Washington, August 2006.
- “Multifractal Strings and Zeta Functions,” AMS Western Section Meeting, Fractal Geometry Special Session, San Francisco State University, April 2006.
- “Fractal Strings and Multifractal Zeta Functions,” MPDS, UC Riverside, April 2006.
- “Multifractal Zeta Functions,” MPDS, UC Riverside, February 2006.
- “Derivatives of Arbitrary Order,” MPDS, UC Riverside, October 2005.
- “Value for the Finite and Continuum Games,” Mathematical Game Theory Seminar, UC Riverside, March 2005.
- “Wavelets and Multifractal Analysis,” Parts I and II, MPDS, UC Riverside, November 2004.
- “Multifractals: Probabilities with Fractal Support,” Parts I and II, MPDS, January and February 2004.

## COURSES TAUGHT AS PRIMARY INSTRUCTOR

*Note: All of these courses were taught at UC Riverside.*

- MATH 9C: First-Year Calculus, Summer 2006
- Complex Analysis Qualifying Exam Preparatory Course, Spring 2006
- Real Analysis Qualifying Exam Preparatory Course, Summer 2005
- MATH 46: Introduction to Ordinary Differential Equations, Summer 2004
- MATH 9A: First-Year Calculus, Summer 2004
- MATH 3: Basic Algebra, Fall 2001, Fall and Winter 2002

## COURSES TAUGHT AS TEACHING ASSISTANT

*Note: All of these courses were taught at UC Riverside from Fall 2001 to Spring 2006.*

- MATH 5: Introduction to College Mathematics
- MATH 22: Calculus for Business
- MATH 9A,B: First-Year Calculus
- MATH 46: Introduction to Ordinary Differential Equations
- MATH 145A: Introduction to Topology
- MATH 146A,B,C: Ordinary and Partial Differential Equations

## SERVICE

- Mentor Teaching Assistant, UC Riverside, 2004 – present

## CONFERENCES

- International Conference on Stochastic Analysis, University of Washington, August 2006
- Western Section Meeting of the AMS, San Francisco State University, April 2006
- 2nd Annual Conference on Analysis and Probability on Fractals, Cornell University, June 2005
- MGA Workshop V: Math Analysis and Multiscale Geometric Analysis, Institute of Pure and Applied Mathematics, University of California, Los Angeles, November 2004
- Joint Mathematics Meetings, Phoenix, Arizona, January 2004

## TRAVEL GRANTS

- University of Washington, UC Riverside Mathematics Department and UC Riverside Graduate Association for attending the International Conference on Stochastic Analysis, University of Washington, August 2006.
- UC Riverside Mathematics Department and UC Riverside Graduate Association for attending the Western Section Meeting of the American Mathematical Society, San Francisco State University, April 2006.
- UC Riverside Mathematics Department and UC Riverside Graduate Association for attending the 2nd Annual Conference on Analysis and Probability on Fractals, Cornell University, June 2005.
- UC Riverside Mathematics Department and UC Riverside Graduate Association for attending the Joint Mathematics Meetings, Phoenix, Arizona, January 2004.

## PROFESSIONAL AFFILIATIONS

- American Mathematical Society
- Mathematical Association of America

## REFERENCES AND E-MAIL ADDRESSES

- Dr. Cristina Antonescu, [antonescu@math.uni-hannover.de](mailto:antonescu@math.uni-hannover.de)
- Dr. Stéphane Jaffard, [jaffard@univ-paris12.fr](mailto:jaffard@univ-paris12.fr)
- Dr. Michel L. Lapidus (advisor), [lapidus@math.ucr.edu](mailto:lapidus@math.ucr.edu)
- Dr. Albert Stralka (teaching), [stralka@math.ucr.edu](mailto:stralka@math.ucr.edu)
- Dr. Qi Zhang, [qizhang@math.ucr.edu](mailto:qizhang@math.ucr.edu)