

CURRICULUM VITAE: AVIV CENSOR

April 2010

1 Contact

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2 Academic Positions

August 2007 - Present Visiting Assistant Professor, Department of Mathematics,
University of California, Riverside, CA 92521, USA

3 Higher Education

- 2007 Ph.D. in Mathematics, Technion - Israel Institute of Technology, Haifa, Israel.
Advisors: Prof. Baruch Solel and Prof. Eli Aljadeff.
- 2001 M.Sc. in Mathematics, Technion - Israel Institute of Technology, Haifa, Israel.
Advisor: Prof. Baruch Solel.
- 1998 B.A. in Mathematics, Technion - Israel Institute of Technology, Haifa, Israel.

4 Research Interests

- **Operator Algebras.** My main research area is C^* -algebras, which is a subfield of Functional Analysis. In the past few years I have been focusing on groupoids and their C^* -algebras. In my Ph.D. work I studied groupoids for open covers, their C^* -algebras and limits. This research, which is in part joint work with Daniel Markiewicz, is part of a more ambitious project I hope to pursue: Study the Brauer theory of continuous trace C^* -algebras, via carrying out classical results and phenomena from the well developed Brauer theory for fields.

In recent work in progress, I started exploring various connections between groupoid C^* -algebras and fractal geometry, in collaboration with Michel Lapidus at UCR.

Simultaneously, I have been working lately with a group led by John Baez at UCR, on a project titled “groupoidification”. More specifically, I am working with Daniele Grandini and Christopher Walker on extending the ideas of groupoidification from the discrete setting to the realm of topology and measure theory.

I have also been looking into certain roles of groupoids in von-Neumann algebra theory.

Previously, in my M.Sc. thesis, I investigated Lie ideals in nest subalgebras of von-Neumann algebras.

- **Mathematical Physics.** I have been working together with Guy Tsabary, as a side interest, on developing an idea for 3 time dimensions in Special Relativity. This evolved into a published paper titled “An alternative mathematical model for special relativity”, see below.

5 Publications

- A. Censor, D. Grandini and C. Walker, “Topological and Measure-Theoretic De-groupoidification”, in preparation.
- A. Censor and D. Grandini, “Weak Pull-Backs of Topological Groupoids”, in preparation.
- A. Censor and D. Grandini, “Borel and Continuous Systems of Measures”, e-print: arXiv:1004.3750v1[math.FA].
- A. Censor and D. Markiewicz, “Limits of Groupoid C*-algebras arising from Open Covers”, *Houston Journal of Mathematics*, Vol. 35 (2009), no. 2, pp. 591–618.
- A. Censor and D. Markiewicz, “A note about a certain Groupoid C*-algebra Map”, preprint.
- A. Censor, “Taking Groupoid C*-algebras to the Limit”, Ph.D. Thesis, English, Department of Mathematics, Technion, Haifa, Israel, June 2007.
- G. Tsabary and A. Censor, “An alternative mathematical model for special relativity”, *Il Nuovo Cimento B*, Vol. 120 (2005), pp. 179–196.
- A. Censor, “Lie Ideals in Nest Subalgebras of von-Neumann Algebras”, M.Sc. Thesis, English, Department of Mathematics, Technion, Haifa, Israel, March 2001.

6 Conference Organization

- *Special session on Operator Algebras* (with Marta Asaeda and Adrian Ioana), Fall 2009 Western section meeting of the AMS, University of California, Riverside, November 7-8, 2009. Conference homepage: http://math.ucr.edu/~avivc/ams_talks.html
- *Groupoidfest 2008*, University of California, Riverside, November 22-23, 2008. Conference homepage: <http://math.ucr.edu/~avivc/groupoidfest.html>

7 Participation in International Conferences

2010

- *Fields Institute Workshop on Semigroups and Categories* at the University of Ottawa, May 2–4, 2010.

2009

- *AMS Western Section Meeting - Special Session on Operator Algebras* at the University of California, Riverside, November 7–8, 2009.
- *Groupoidfest 2009* at the University of Colorado, Boulder, October 24–25, 2009.
- *West Coast Operator Algebra Seminar (WCOAS) 2009* at the University of Nevada, Reno, October 17–18, 2009.
- *GPOTS 2009* (Great Plains Operator Theory Symposium) at the University of Colorado, Boulder, June 2–6, 2009.
- *Von-Neumann Algebras and Ergodic Theory* at UCLA, March 15–18, 2009.

2008

- *Groupoidfest 2008* at the University of California, Riverside, November 22–23, 2008.
- *AMS Western Section Meeting - Special Session on C^* -algebras, Subfactors and Free Probability* at Claremont McKenna College, May 3–4, 2008.
- *Topics in Von Neumann Algebras* 5-day workshop at the Banff International Research Station (BIRS), March 23–28, 2008.
- *West Coast Operator Algebra Seminar (WCOAS)* at the California State University, Long Beach, February 2–3, 2008.
- *C^* -Algebras Associated to Discrete and Dynamical Systems* 5-day workshop at the Banff International Research Station (BIRS), January 27–February 1, 2008.

2007

- *Barcelona Conference on C^* -Algebras and their Invariants* at the Centre de Recerca Matemàtica, Universitat Autònoma de Barcelona, June 11–15, 2007.
- *35th Canadian Operator Symposium (COSy)* at the University of Guelph, June 5–9, 2007.
- *Groupoids in Operator Algebras and Noncommutative Geometry* at the Institut Henri Poincaré, Paris, February 26–March 2, 2007.

2004

- *CBMS Conference on Graph C^* -Algebras* at the University of Iowa, May 31–June 4, 2004.
- *GPOTS 2004* (Great Plains Operator Theory Symposium) at Texas A&M University, May 26–May 30, 2004.

8 Colloquium and Seminar Talks

- University of California, Riverside - Mathematical Physics and Dynamical Systems Seminar, title: *First steps towards topological groupoidification*, January 28, 2010.
- Tel-Aviv University, Ben-Gurion University and Technion joint seminar on Operator Algebras and Operator Theory, title: *How to measure a groupoid*, July 5, 2009.
- Technion Algebra Seminar, title: *How to measure a groupoid*, July 2, 2009.
- University of California, Riverside - Groupoids Seminar, ongoing series of talks since September 2008.
- University of Haifa, Mathematics Colloquium, title: *Taking groupoid C^* -algebras to the limit*, July 1, 2008.
- University of California, Los-Angeles (UCLA) - Functional Analysis Seminar, title: *Taking groupoid C^* -algebras to the limit*, April 30, 2008.
- University of California, Riverside - Operator Algebras Seminar, title: *Limits of groupoid C^* -algebras*, (series of 2 talks) 4.3.2008, 11.3.2008.
- University of California, Riverside - Mathematical Physics and Dynamical Systems Seminar, title: *An alternative mathematical model for special relativity*, February 14, 2008.
- University of California, Riverside - Operator Algebras Seminar, title: *Introduction to groupoid C^* -algebras*, (series of 4 talks) 22.1.2008, 5.2.2008, 19.2.2008, 26.2.2008.
- University of California, Riverside - Fractal Research Seminar, title: *Introduction to groupoids*, November 8, 2007.
- Technion Functional Analysis Seminar, title: *Limits of groupoid C^* -algebras* (Ph.D. talk), April 26, 2007.
- Tel-Aviv University, Ben-Gurion University and Technion joint seminar on Operator Algebras and Operator Theory, title: *Taking groupoid C^* -algebras to the limit*, April 4, 2006.
- Technion Algebra Seminar, title: *An alternative mathematical model for special relativity*, June 23, 2005.

- Technion Operator Algebras Seminar, title: *Brauer theory and continuous trace C^* -algebras* (series of 3 talks), 21.3.2002, 11.4.2002, 25.4.2002.
- Technion Functional Analysis Seminar, title: *Lie Ideals in Operator Algebras* (M.Sc. talk), January 4, 2001.

9 Teaching Experience and Honors

- 2008–Present Organizing (and primary speaker of) the Groupoids Seminar at the Department of Mathematics, University of California, Riverside.
- Spring 2008 Organizing the Mathematical Physics and Dynamical Systems Seminar at the Department of Mathematics, University of California, Riverside.
- 2007–Present Lecturing, Department of Mathematics, University of California, Riverside. Courses: Calculus, Multivariable Calculus, Advanced Calculus, Set Theory, Ordinary Differential Equations.
- 2006–2007 ***Technion Excellent Lecturer Award*** (3 semesters).
- 2006–2007 Lecturing, Department of Mathematics, Technion, Haifa, Israel. Courses: Calculus, Multivariable Calculus.
- 2000–2005 ***Technion Excellent T.A. Award*** (Six consecutive years).
- 1997–2005 Teaching Assistant, Dept. of Mathematics, Technion, Haifa, Israel. Courses: Calculus, Linear Algebra, Group Theory, Complex Analysis, Real Analysis, Functional Analysis.

My courses have been selected twice and recorded for the Technion Video Library.

10 Additional Information

I was born in Haifa, Israel. As a child I lived in the United States for four years, and thus speak fluent English. I served as an officer in the Israeli Defense Forces (rank: Major) between the years 1990–1995, after which I started my undergraduate studies at the Technion.

I am married to Efrat, who received her Ph.D. in Developmental Psychology from the University of Haifa, Israel, in 2007. She is currently working with professor Ross Parke at the department of Psychology at UCR. We have 3 children.

11 Recommenders

- Prof. Eli Aljadeff, Department of Mathematics, Technion-Israel Institute of Technology, Technion City, Haifa 32000, Israel.

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- Prof. John Baez, Department of Mathematics, University of California, Riverside, CA 92521, USA.
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- Prof. Michel Lapidus, Department of Mathematics, University of California, Riverside, CA 92521, USA.
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