

## Michael Ray Oliver

### Contact:

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**Citizenship:** USA

**Education:** PhD, Mathematics, June 2003, UCLA. Advisor Greg Hjorth. Dissertation on isomorphism types of Boolean algebras that are quotients of the powerset of the naturals by Borel ideals.

Attended Università degli Studi di Padova, 1992-93 academic year, studied intuitionistic type theory under Giovanni Sambin

On leave during 1989-90 academic year, attended seminars at the Logic Year at Mathematical Sciences Research Institute

Master of Arts in Mathematics, June, 1987, University of California, Los Angeles

Bachelor of Science in Mathematics, June, 1984, California Institute of Technology

Graduated June, 1980, Homestead High School, Cupertino, CA National Merit Finalist, California Scholarship Federation

### Research Interests:

Borel equivalence relations, ideals on the natural numbers and their quotient Boolean algebras, relationship to forcing.

### Teaching History:

Visiting Assistant Professor, UNT, Fall 2003 through Spring 2005.

Fall '03	Business Calculus
Spring '04	College Algebra
Summer '04	Discrete Math

Fall '04                      Descriptive Set Theory

Teaching assistant/associate at UCLA for 11 quarters, spanning Fall 1987 to Spring 1992, in the following subjects:

<b>Computing</b>	seven quarters (Pascal and C)
<b>Calculus</b>	five quarters (both basic courses and more advanced ones involving vector spaces and differential equations)
<b>Set theory</b>	one quarter
<b>Computability theory</b>	one quarter
<b>Linear Programming</b>	one quarter

**Employment history (other than teaching):**

1996–2003	Research assistant/Programmer-Analyst in the VLSI-CAD group at UCLA, developing software to solve optimization problems (chip floorplanning, asymmetric traveling salesman problem, partitioning) and the GTX inference engine to facilitate the prediction of physical design trends in VLSI. See < <a href="http://vlsicad.ucsd.edu/GTX">http://vlsicad.ucsd.edu/GTX</a> > for further information.
1995–2002	developer on nQuery Advisor versions 1.0 through 5.0 (sole programmer on versions 2.0 through 5.0), the premier software application for planning statistical studies in the life sciences (concentrating on the determination of necessary sample size in a great many contexts). See < <a href="http://www.statsol.ie/nquery/nquery.htm">http://www.statsol.ie/nquery/nquery.htm</a> > for further information.
1984–1986	Space Applications Corporation, Santa Clara/Sunnyvale, CA. Developed simulation and control software to support NASA's CRRES satellite.
1982, 1983	Summer positions at IBM Tucson using SAS to do statistical analyses of reliability and serviceability data

**Presentations:**

March 2005	Invited talk at ASL Annual Meeting (title to be announced).
May 2004	“Continuum-many Boolean algebras of the form $\mathcal{P}(\omega)/\mathcal{I}$ , $\mathcal{I}$ Borel”, talk at ASL Pittsburgh meeting.
Fall 2002	Set Theory Seminar lecture at UCLA on a proof that there are uncountably many Borel ideals with pairwise distinct quotients (up to isomorphism of Boolean algebras)

- 1998 Cabal Seminar lecture at Caltech on the Borel equireducibility between  $c_0$  and the ideal of density
- 1991 Cabal Seminar lecture at Caltech on models of the Boffa Anti-Foundation Axiom, 1991

**Publications:**

- [1] MICHAEL RAY OLIVER, *Borel cardinalities below  $c_0$* , **Proc. Amer. Math. Soc.**, (2004?), accepted subject to revisions.
- [2] ———, *Continuum-many Boolean algebras of the form  $\mathcal{P}(\omega)/\mathcal{I}$ ,  $\mathcal{I}$  Borel*, **J. Symbolic Logic**, vol. 69 (2004), no. 3, pp. 799–816.
- [3] ANDREW E. CALDWELL, YU CAO, ANDREW B. KAHNG, FARINAZ KOUSHANFAR, HUA LU, IGOR L. MARKOV, MICHAEL OLIVER, DIRK STROOBANDT, and DENNIS SYLVESTER, *GTX: The MARCO GSRC technology extrapolation system*, **Proc. DAC, 2000**, (2000), pp. 693–698.
- [4] Y. CAO, C. HU, X. HUANG, A. B. KAHNG, I. MARKOV, M. OLIVER, D. STROOBANDT, and D. SYLVESTER, *Improved a priori interconnect predictions and technology extrapolation in the GTX system*, **IEEE Transactions on Very Large Scale Integration Systems**, (2002).
- [5] MIKE OLIVER, *Three proposed additions to the Loglan prepositional system*, **The Loglanist**, vol. 3 (1979), no. 2, pp. 96–98.
- [6] ———, *On the restriction of the domain of universals in Loglan*, **The Loglanist**, vol. 2 (1978), pp. 50–51.