

# Andre and the early days of Penn's Logic and Computation Group

Dale Miller

Inria & LIX, École Polytechnique

I first met Andre Scedrov in the Fall of 1983 when I joined the Computer and Information Science Department faculty at the University of Pennsylvania. Andre had started in the Mathematics Department at Penn the year earlier. As was apparent even then, Andre's approach to doing research lead him to seek out colleagues. In 1983, he crossed the divide between the Mathematics Department and the Computer and Information Science Departments—that is, he crossed 33rd Street in West Philadelphia—in search of joint research projects with computer scientists.

At that time, Andre and Peter Freyd were holding a weekly *Geometric Logic Seminar* in the Mathematics Department. Andre and Peter invited me to speak there twice in 1984. Around that time, it was decided to expand the seminar's scope and to rename it as the *Penn Logic Seminar*. In a proposal that Andre and I submitted to the NSF in December 1986, we described the three-year-old seminar by saying that it was “held jointly between the Mathematics and Computer Science Departments. There is also substantial involvement from the Philosophy and Linguistics Departments at Penn as well as from various departments of local universities. The attendees for this seminar include the following Penn faculty: Peter Freyd and Scedrov of the Mathematics Department, Peter Bune-man, Jean Gallier, Saul Gorn, Aravind Joshi and Miller of the Computer and Information Science Department, Scott Weinstein and Zoltan Domotor of the Philosophy Department, and Henry Hiz of the Linguistics Department.” Eventually, we renamed the seminar once more to be the Logic and Computation Seminar.

In 1986, Albert Meyer organized the first IEEE Symposium on Logic in Computer Science (LICS) at MIT in Cambridge. The establishment of that conference series played a major role in shaping how many of us at Penn understood the core of our research goals. LICS 1986 brought together a large number of famous logicians, mathematicians, and computer scientists, and it helped us see ourselves as being involved in a new and vital topic. It is notable, however, that no one from Penn was involved in the organization of LICS 1986, nor did we have any accepted papers there.

The first couple of years of this seminar were used to educate ourselves on several topics, including polymorphic  $\lambda$ -calculus, category theory, linear logic, logic programming, denotational semantics, and automated deduction. As I remember it, Andre was instrumental in organizing many the faculty, postdocs, graduate students, and visitors into a steady stream of lectures on foundational topics. The seminar was usually held on the second floor of the David Rittenhouse Laboratory, which hosted the Mathematics Department. Attendance was typically

strong: we all had the sense that there was a great deal of dynamism in this topic. The appearance in the late 1980s of both linear logic and the  $\pi$ -calculus helped to convince us that this topic was open to fresh and important shifts in perspectives. No longer were we only attempting to apply well known and mature logic techniques to computing, computing itself was influencing foundations, even the foundations of logic.

This education phase for the Logic and Computation Group was very successful. For example, people from Penn started to have papers appearing in LICS. In the second LICS meeting in 1987, three accepted papers were authored by attendees of this seminar, and Andre co-authored two of those papers. In fact, during the five years 1987-1991, Andre authored six papers accepted at LICS for which he had 12 co-authors. Andre also served as the PC Chair for LICS 1992.

In 1987, the Logic and Computation Group grew with the hiring of Carl Gunter and Val Tannen by the Computer and Information Science Department. Around that time, we had posters printed and mailed that advertised our interdisciplinary approach to Logic and Computation. We felt at that time that our main competitor was the Laboratory for Foundations of Computer Science (LFCS) at the University of Edinburgh. A year or so after we distributed our poster, Carnegie Mellon University formed a similar interdisciplinary group and distributed their poster, an event that we referred to as “The Empire Strikes Back.”

Andre was always well connected to many other researchers. For example, the group had a series of visitors who were collaborators of Andre: Harvey Friedman, Jean-Yves Girard, Andreas Blass, Max Kanovich, Phil Scott, Mitsuhiro Okada, Jim Lipton, etc. In addition, Andre’s Erdős number is 2 and, as a result, many people at Penn have an Erdős number of 3.

I owe a big thanks to Andre. It was immensely valuable for me in 1983, as a beginning researcher in an interdisciplinary setting, to meet and collaborate with Andre. He was warm and willing to help me, my students, and our colleagues. His assistance also extended to providing sage advice and guidance with maneuvering the professional and academic world of universities and funding agencies.

Thank you, Andre, for having been there at the beginning of my professional life. You have helped me find and develop an enthusiasm for the interdisciplinary research that has been with me my full career.