Association for Symbolic Logic

BUSINESS OFFICE: ASL, DEPT. OF MATHEMATICS, UNIV. OF CONNECTICUT 341 MANSFIELD ROAD, U-1009, STORRS, CT 06269-1009, USA PHONE: 1-860-486-3989; FAX: 1-860-486-4238; EMAIL: asl@uconn.edu WEB: http://www.aslonline.org

ASL NEWSLETTER ATTACHMENT

April 2025

IN MEMORIAM

This attachment to the ASL Newsletter offers memorial tributes to several recently deceased logicians. Normally such tributes appear in the Newsletter itself, but due to space limitations this month we must present them as an attachment instead.

• Zoé Chatzidakis (1955–2025)

The model theory community is very sad to announce the passing of Dr Zoé Chatzidakis, a brilliant mathematician, loyal friend, fierce advocate for her subject and strong supporter of women and young people. She died on January 22, 2025.

Zoé worked at the boundary between model theory and algebra. Having started her career with a dissertation on the model theory of profinite groups, she later made substantial contributions to the model theory of fields, on PAC fields and more specifically pseudofinite fields, constructing a well-behaved measure on definable sets in highly influential work with Lou van den Dries and Angus Macintyre. Yet, undoubtedly, Zoé's most important research contributions concern the model theory of difference fields, mainly the fruit of a 30 year long collaboration with Ehud Hrushovski. They showed a version of Zilber's Trichotomy Conjecture in existentially closed difference fields (also with Yaacov Peterzil) yielding many striking applications, in particular to algebraic dynamics, some obtained by Zoé and co-authors.

Zoé spent most of her career as Directeur de recherche of the CNRS. She was a speaker at the International Congress of Mathematicians in 2014, and she was awarded the 2013 Leconte Prize. In 2020, she was invited to deliver the Tarski Lectures at UC Berkeley, an event thwarted by the COVID-19 pandemic. Sadly, the lectures were never rescheduled, as her cancer diagnosis came not long afterwards.

As an advocate for the model theory community, she was an instigator on many grant proposals which brought funding and made opportunities for young model theorists. Of special note is Modnet, which was a European-funded network for four years, but Zoé maintained the website for many years afterwards, including job openings for young people and lists of preprints. She organized many workshops at Luminy and Oberwolfach, and thematic programs at MSRI, the Newton Institute and the Institut Henri Poincaré.

Well beyond her mathematical gifts, friends remember Zoé for her strong opinions, striking presence and a champion of doing the right thing. For those who didn't know her well, she could present an intimidating figure. Indeed, it could be quite scary to give a talk with her in the audience, as no oversimplification or incorrect definition would be allowed to slip by. She wasn't really aware of how she came across; for her it was just about understanding the mathematics and making sure that things were stated correctly.

Zoé's passing leaves a hole in the field and in the lives of those who knew her. She was a role model for generations of model theorists. Her vibrant presence will be sorely missed.

• Wolfram Pohlers (1943-2024)

The distinguished proof theorist and logician Wolfram Pohlers died on 19 December 2025 in Münster, Germany.

Born on 26 August 1943 in Leipzig, he grew up in Munich and studied there mathematics at the Ludwig-Maximilians-Universität. In 1971 he finished his Diploma studies with a thesis on a topic in proof theory under the guidance of Kurt Schütte. He then became one of Schütte's assistants for many years. In 1973 he received his

Ph.D. from Munich – again under the supervision of Schütte – with the thesis Eine Grenze für die Herleitbarkeit der transfiniten Induktion in einem schwachen Π_1^1 -Fragment der klassischen Analysis.

The next steps in his academic career were his Habilitation in 1978 and his subsequent appointment to Privatdozent. Then, in 1980, he was promoted to Professor at the Mathematical Institute of the University of Munich. Finally, in 1985, he was appointed to a chair at the University of Münster and moved there as successor of Dieter Rödding. Years later he was offered a chair at the University of Vienna, but decided to stay in Münster until his retirement in 2008. He has contributed a lot to making Münster one of the leading centers of mathematical logic worldwide.

He was an invited speaker at many international logic conferences and known for his lively yet substantial scientific lectures. He was often invited to spend longer periods of research at foreign logic centers (e.g. Berkeley, Freiburg, Bern, Lisbon).

Wolfram Pohlers has also rendered important services to the university's self-administration: He was Dean of the Department of Mathematics and Computer Science from 1990 to 1992 and a member of the Senate for fourteen years.

From the beginning of his scientific work, Wolfram Pohlers was fascinated by proof theory and – in particular – by the ordinal analysis of formal theories. His first results provided proof-theoretic bounds for fragments of Π_1^1 -CA and *n*-times iterated inductive definitions – and the method of proof was a modification of the socalled Takeuti-method, however, with ordinal diagrams replaced by Schütte-style notation systems, which had a natural interpretation in the standard ZF-style theory of ordinals. Later Pohlers developed his method of local predicativity for the proof-theoretic analysis of iterated inductive definitions. Together with Wilfried Buchholz, he was able to provide a complete proof-theoretic analysis of transfinitely iterated inductive definitions – a central chapter in the history of proof theory.

Later Wolfram Pohlers extended and refined his method of local predicativity and applied it to subsystems of second order arithmetic and set theory. One of the central results in this context is the proof-theoretic analysis of the system Δ_2^1 -CA + (BI) of second order arithmetic by Jäger and Pohlers. Wolfram Pohlers had a strong Platonist view and saw the role of proof theory in the foundations of mathematics mainly from this perspective.

After Pohlers's move to Münster, the teaching of logic took on an important role for him. He wrote two influential textbooks on proof theory and one on the mathematical foundations of computer science. Pohlers also contributed the chapter *Subsystems of Set Theory and Second Order Number Theory* to the *Handbook of Proof Theory*, published by Elsevier in 1998.

Pohlers had twelve Ph.D. students: Michael Rathjen, Joachim Columbus, Andreas Weiermann, Thomas Glaß, Andreas Schlüter, Arnold Beckmann, Benjamin Blankertz, Michael Möllerfeld, Gunnar Wilken, Christoph Heinatsch, Christoph Duchhardt, and Jan-Carl Stegert.

Wolfram Pohlers is survived by his wife Renate, two sons and five grandchildren.

• Krister Segerberg (1936–2025)

Krister Segerberg, a prominent philosophical logician and one of the architects of modern modal logic, died on January 23, 2025.

Krister received his first PhD from Uppsala in 1968, supervised by Konrad Marc-Wogau, and in 1971, he received a second PhD from Stanford University, supervised by Dana Scott. In 1972 he was appointed as a professor of philosophy at the Åbo Akademi in Finland. Since 1980 he was a professor of philosophy at the University of Auckland in New Zealand, before taking up, in 1990, the Chair of Theoretical Philosophy at Uppsala, a position that he held until his retirement in 2001. At the 2018 spring conferment ceremony of the university he was honored as a jubilee doctor. His numerous further distinctions include a Fellowship at the Dutch National Institute for Advanced Studies (2006–2007).

Krister was one of the founding fathers of modern modal logic where he introduced influential methods for finding and presenting completeness proofs that are still standard in the field for their clarity, brevity, and elegance. His book "An Essay on Classical Modal Logic" (1971) is one of the pioneering works that helped bring the area to greater mathematical generality and maturity, and it has been a gateway to the field for a whole generation of researchers in both philosophical and mathematical logic. Another notable strand in Krister's work on modal logic was the exploration of new languages and semantics which pushed the boundaries of the classical agenda for the field. In particular, he introduced the systematic study of two-dimensional modal logics using 'double indexing,' a major technique in formal semantics and philosophy, and striking out in another direction, the 'Segerberg axioms' still testify to his contribution to the propositional dynamic logic of computer programs that started in the 1970's.

In tandem with these technical achievements, Krister was also a philosopher with a broad range of interests. His published papers run from deontic logic, default reasoning, and conditional logic to the logical foundations of action theory, imperatives, and metaphor. Perhaps best-known as a systematic program is his creation of a 'dynamic doxastic logic,' using modal techniques to describe the central epistemological phenomenon of the evolution of beliefs, a theme which he developed in a long sequence of papers. The volume "Krister Segerberg on Logic of Actions" (2014) in the series Outstanding Contributions to Logic documents this program and shows its resonance in the logical community. Krister's more general perspective on the logic-philosophy interface is illustrated in his chapter Modal Logic in Philosophy, co-authored with Sten Lindström, in the "Handbook of Modal Logic" (2006).

Krister's influence was felt worldwide by his colleagues and friends, from Europe to Australasia, the Soviet Union and the US, and in different disciplines, from philosophy to computer science and mathematics. And this influence arose not only through the strength of his ideas and clarity of presentation, but also by his universally acknowledged personal qualities of genuine interest in others, modesty, and charm. Statements testifying to this range, as well as further documentation, can be found at a memorial website created by the Department of Philosophy at Uppsala University: https://www.uu.se/institution/filosofiska/nyheter/arkiv/2025-02-05-in-memoriam---krister-segerberg.

Krister Segerberg is survived by four children (Nicanor, Kristofer, Ebba, Alexandra), nine grandchildren and one great-grandchild.