Ronald—mathematical giant and friend

Eulogy by Ralf Schindler, Oct 31, 2025

Dear Hilde, dear family, dear friends and colleagues, dear mourners,

I first saw Ronald Jensen at a conference in Kirchberg am Wechsel in Lower Austria, where the Wittgenstein Symposium takes place every summer. It was in 1991, I was just finishing my philosophy studies in Munich, and the conference organizers had decided to enhance the symposium by inviting the set theorists Ronald Jensen, Dieter Donder, John Steel, and Hugh Woodin. What a lasting impression these lectures made on me; they had a decisive influence on my future career choice!

While Donder, Steel, and Woodin appeared reasonably normal, Jensen, with his tall stature and long hair constantly hanging in his face, was something of an oddity—I had heard several lectures by Ronald since then and always wondered how anyone could give a lecture with their hair hanging in their eyes. When I visited Ronald in the hospital the weekend before his death, the nurse told me that she had asked Mr. Jensen if she should put his hair in a ponytail, an idea that was completely absurd to him and which he brusquely rejected.

I really got to know Ronald towards the end of my doctorate. Through the mediation of my supervisor Peter Koepke (a student and long-time assistant with Jensen), I was allowed to call Ronald at the end of 1995 to arrange a meeting and a lecture in Berlin. I called, had a warm conversation with Margret, his first wife, then had a brief, businesslike exchange with Ronald himself—and when I hung up, I said to my wife at the time, “I just spoke to God on the phone!”

That's exactly how we young scientists felt about him. What unimaginably fantastic theorems flowed from his pen, permanently revolutionizing the field of set theory—I usually don’t like to use superlatives. He could work magic where the rest of us got stuck. At a conference in Luminy, a colleague and I were stuck on a fine-structural question concerning a hoped-for new application of Jensen's covering argument – in the end we asked Ronald himself, and within half an hour he cracked the problem in a way we could never have managed. The result, incidentally, was my only joint publication with Ronald, “Stacking mice,” with Schimmerling and Steel as co-authors.

Otherwise, Ronald was not someone who presented his findings to the press as quickly as possible. He usually shared his results with us by mail—in copies of handwritten notes; later, scanned copies of his handwritten notes could be found on his homepage. For his 70th birthday, John Steel and I presented him with a DVD containing his collected handwritten works; he saw that we had also included “A modest remark” and commented: “This is my favorite paper!” and laughed in the way that only he could

laugh, a laugh that came from the heart, his piercing gaze fixed on his counterpart through his curtain of hair. More on the “Modest remark” later.

Ronald Björn Jensen was born on April 1, 1936, in Charlottesville, Virginia, USA. After completing a bachelor's degree in economics at the American University in Washington, DC, in 1959, he decided to move to Europe to become a logician. When asked by the Fulbright Commission why he wanted to go to Germany, he replied, “Because I want to be free!” (When he told me this anecdote, he laughed his laugh as well.)

Jensen received his Ph.D. in 1964 with Hasenjäger in Bonn with a thesis on subsystems of arithmetic, and in 1967 he habilitated, also in Bonn, with what would become his major topic: levels of Gödel's constructible universe.

After Paul Cohen discovered the method of forcing in 1963, a new era of set theory began. In the 1960s, Jensen showed that L has a Suslin line, which then led him to isolate his famous diamond principle. Continuing the research from his habilitation thesis, Jensen single-handedly developed the fine structure theory for L. According to legend, his work “The fine structure of the constructible hierarchy” (Ann. Math. Logic 1971) could only be published because someone stole the handwritten manuscript from his desk. In the introduction to this work, he writes that the questions addressed and the methods used therein are somewhat remote from the usual scope of set theory—but today there is no doubt that his groundbreaking work on L and the theory of inner models has led to precisely his questions and methods becoming part of the set-theoretical canon.

Following what Jensen described as a “shocking discovery” by Jack Silver in the early 1970s regarding the behavior of the continuum function at singular cardinal numbers with uncountable cofinality, Jensen quickly produced what is probably his most famous theorem, the covering theorem for L. This “appeared” (in quotation marks!) in a series of handwritten notes entitled “Marginalia to a Theorem of Silver.” When I compiled the DVD of collected writings with John Steel in 2006, I found copies of these and many other notes by Ronald in the library of the Philosophy Institute on Lennéstraße in Bonn, where, according to legend, they were originally stored in an old bathtub, which they had filled.

At the latest with his covering theorem, Jensen became a star (or “God,” see above) in set theory, yet he was completely devoid of any pretentiousness. After his colleague Kreisel had solemnly declared in his talk at a conference: “The following can only be said in German!”, Ronald ironically responded in his subsequent talk by incorporating the statement: “The following can only be said in Norwegian.”

Together with Tony Dodd, Jensen constructed the first core model, K, in the early 1980s and proved an L-like covering theorem for K. The first work to present K was to be the aforementioned paper “A modest remark”; for a short period of time, it looked as if the theory of K could be used to show that measurable cardinals are inconsistent, Ronald's most famous mistake, which he took with great humor, see above.

But Jensen and Dodd's pioneering work on K developed into a separate branch of set theory which is absolutely central, yet because of its technical difficulty is regarded by some as a field only for “insiders.” Core model theory was further developed by W. Mitchell, J. Steel, H. Woodin, and others. One culmination point is the joint work with Steel (actually published in a journal) “K without the measurable,” for which Jensen and Steel received the Hausdorff Medal from the European Set Theory Society in 2015.

We mostly associate Ronald with his fine structure theory and the theory of inner models, but he has made equally fundamental contributions to the field of the method of forcing, even though he often downplayed his own achievements and spoke of the experts in this field without including himself—which was complete nonsense, see “coding the universe,” see L-forcing.

When he developed his iteration theory for “subproper” and “subcomplete” forcings not too long ago, he almost apologized to me for it—he had taken a break from the theory of inner models because he was so excited about this theory of forcing.

Almost until his last day, Ronald worked on a book project about the core model below a Woodin cardinal. Two anonymous donors generously supported the typing of his handwritten notes, which resulted in a 580-page document spanning the beginnings of fine structure theory to the construction of K^c. In the end, Ronald knew that he would not be able to complete the final corrections to the existing manuscript.

Jensen worked at Rockefeller University in New York, UC Berkeley, the University of Bonn, the University of Oslo, the University of Freiburg, the University of Oxford, and HU Berlin, where he retired in 2001.

Jensen gave the first Gödel Lecture of the Association of Symbolic Logic in 1990. In 2001, he gave the Tarski Lectures at UC Berkeley, and in 2003, he received the Steele Prize.

Ronald's hobbies were politics and economics, and he told us last year that he would like to study aspects of Japan's historical economic policy in greater depth.

“I seek my work!” Nietzsche has his Zarathustra say on the last page. That was also true for you, Ronald. A person like you does not leave, your work remains, for decades and longer. Just as we study Georg Cantor and Kurt Gödel today, our successors in the year 2100 will process your thoughts. You have left us as a colleague, as a friend, as a husband. You cared for your first wife, Margret, for many years until her death. With your second wife, Hilde, you found love again, a love that should have lasted longer. Hilde was always there for you, caring, sympathetic, respectful. There is a book that is Hilde's declaration of love to you.

Ronald, your death has left a deep hole in Hilde’s life in particular, but also in all of our lives. It was a privilege for all of us to be by your side in so many different ways. The day

before you died, you reached for my hand on your sickbed. For decades before that, you were the energizing morning sun in our lives and in our thoughts. Rest in peace, Ronald.