

Professor of Mathematics Juha Heinonen passed away on October 30, 2007, after a courageous battle with kidney cancer. Born July 23, 1960 in the small town of Toivakka in central Finland, Juha was raised in the village's old-age home where his mother served as the sole staff member. His father Vilho was a lumberjack and well-respected socialist politician for the tiny town. After graduating high school, Juha served one year as an officer in the Finnish army, and then enrolled as a student of mathematics at the University of Jyväskylä. His 1987 Ph.D. thesis, directed by Olli Martio, was in non-linear potential theory.

Juha first came to the University of Michigan for a semester as a visiting graduate student in 1985. His first appointment in the Department of Mathematics began in 1988, when he returned as a three year post-doctoral assistant professor. In 1992 he accepted a tenure track assistant professorship, and in 2000 he was promoted to professor. He served as Associate Chair for Graduate Studies in the Department of Mathematics from 2004 to 2007.

Considered a scholar of high professional standards, Juha was a leading figure in geometric function theory, his main research area. His two books "Nonlinear Potential Theory of Degenerate Elliptic Equations" (co-authored with T. Kilpeläinen and O. Martio) and "Analysis on Metric Spaces" have become standard references in their fields. He co-authored more than 60 research papers, many of which contributed to the creation of a new branch of mathematics, now called analysis on metric spaces. Juha was a generous and enthusiastic collaborator who was proud of the fact that nearly all of his research publications were joint works. His collaborators admired him for his erudition, his deep mathematical insights, and his never-ending scientific curiosity.

Juha's expertise was recognized with many awards and fellowships, including a Sloan Fellowship, numerous NSF grants, several visiting appointments, and an Excellence in Research Award from the University of Michigan. For seven years he was an editor of the Proceedings of the American Mathematical Society. In 2002, he was invited to give a talk at the International Congress of Mathematicians in Beijing. Juha became a member of the Finnish Academy of Science and Letters in 2004.

A dedicated thesis advisor, Juha directed eight doctoral students. Many students, junior faculty, and young researchers greatly benefited from his patient mentorship and wise tutelage. Juha was very grateful for the excellent mentoring he himself received as a young mathematician, and was happy to repay in kind. In addition to his advisor, he especially acknowledged U-M Professor Emeritus Fred Gehring whom he met in 1985, and Jose Fernandez, to whom Fred introduced him later that academic year at the Mathematical Sciences Research Institute in Berkeley. Later he was deeply influenced by Dennis Sullivan who directed his attention to analysis in more abstract settings.

When Juha originally came to the United States, his intention was to stay for only a short period. His plans changed when he met his future wife, Karen Smith, a first-year graduate student of mathematics, who also arrived in Ann Arbor in the fall of 1988. They were married in 1991. Juha put his own career on hold to follow his wife to Boston when she obtained a post-doctoral position at MIT. The couple came back to Ann Arbor as tenured professors in 1996, settling into a satisfying marriage and productive careers. They welcomed their daughter Sanelma in 1998, and their boy-girl twins, Tapio and Helena, in 2003.

A gifted athlete, Juha was the 1976 Finnish national champion in his class for 5 km cross-country skiing. Although he gave up professional sports to pursue a career in mathematics in the early 1980s, Juha's love of competitive sports never waned. He participated in many running, cross-

country skiing and orienteering events around the country. In his class he won both the U.S. and the North American gold medal in orienteering in 2000.

Juha was a vibrant, balanced, satisfied person who enjoyed many things in life besides mathematics and sports. He spent his free time studying foreign languages, or reading history, biographies, and political commentary. He loved the outdoors, particularly Michigan autumns and Finnish winters. A devoted husband and father, Juha enjoyed the company of his children and was often spotted on errands around town with a child on the bus, on his bike-seat, or in his arms. Each time he spoke of his family, the pride was evident through the twinkle in his eye and his broad grin.

His Finnish origins remained deeply important to him throughout his life. Juha maintained close contacts with his Finnish friends and colleagues, and traveled to Finland at least once a year. He taught his children and his wife to speak Finnish and to share his love of his native land.

Juha was widely loved for his positive attitude, sparkling sense of humor, and genuine kindness towards others, traits that he maintained throughout the difficult trials of his illness. He is deeply mourned by his family, friends and colleagues. Besides his wife and children, Juha is survived by his mother Liisa Heinonen and his sister Maritta Nukarinen. A memorial service will be held at the Michigan League Ballroom on December 9 at 2 pm. The Department of Mathematics has established the Juha Heinonen Memorial Graduate Student Fellowship. Information is available at <http://www.math.lsa.umich.edu/events/juhaMem.html>