

WILLIAM ZIEMER

William (Bill) Ziemer joined the IU Mathematics Department in 1961. The 1960's were a time of great expansion and change for the department and Bill was at the center of it as soon as he arrived. Along with colleague Maynard Thompson, he undertook a drastic overhaul of curriculum and departmental protocol that put the Department on a steady course for the future. Then in the 1970's and again in the 1980's, Bill was elected Chair of the Department. He also served a stint as Associate Dean of the Graduate School.

Bill also played a crucial role in the rise to prominence of our in-house journal, the Indiana University Mathematics Journal. During his years as managing editor, he greatly enhanced the refereeing process, and together with former assistant editor Elena Fraboschi, began to computerize the journal. The IUMJ now enjoys international prominence thanks in no small part to Bill's innovative and steady leadership.

As a researcher, Bill had a stellar international reputation as an expert in the area of geometric measure theory (GMT). He got his PhD in 1961 under the direction of Wendell Fleming at Brown University when GMT was a burgeoning young field, two of its founding developers being Fleming and Herbert Federer, also at Brown. Bill emerged as a leader in the application of GMT techniques to elliptic regularity theory, showing that various classes of nonlinear partial differential equations possessed smooth solutions. In addition to dozens of highly regarded papers in this area, Bill wrote two graduate texts on the subject: "*Weakly Differentiable Functions*," which sits on the shelf of nearly every researcher in regularity theory, and "*Fine Regularity of Solutions of Elliptic Differential Equations*," the latter co-authored with Jan Maly.



He also wrote two analysis textbooks, one at the introductory undergraduate level and the other at the introductory graduate level.

As a teacher, Bill was a master in his craft. He constructed lectures meticulously, taking the utmost care to stress key points and present illuminating examples. Outside the classroom, he was known as a warm mentor whose door was always open— and whose office hours were always full. He also directed eleven PhD students. In recognition of his great contributions in the classroom, for his research contributions and for his administrative skills, he was awarded the Indiana University Distinguished Faculty Award in 1996.

Born: Manitowoc, Wisconsin March 26, 1934
Died: Waupaca, Wisconsin August 5, 2017
Years at IU: 1961-2003

See also the William P. Ziemer Student Assistance Fund