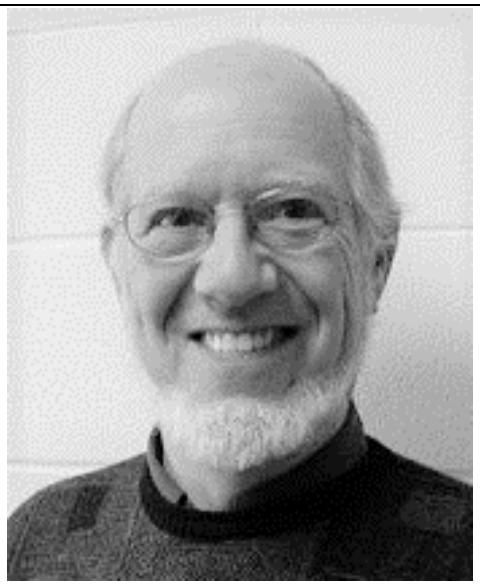

Clifford Earle

November 3, 1935 – June 12, 2017

Professor of Mathematics Clifford John Earle, Jr., died on June 12, 2017 at the Hospicare Residence in Ithaca, his wife of 56 years, Elizabeth D. Earle ("Lisa"), at his side. In addition to Lisa, he leaves two daughters, Rebecca (Royal Leamington Spa, UK) and Susan (Cambridge, MA), two grandsons, Gabriel and Isaac, and a first cousin, Ed (Bobbie) Griffith.

Cliff was born in Racine, Wisconsin on November 3, 1935, and soon moved to Chicago. His mother, Anne Griffith Earle, was a high school mathematics teacher; his father, Clifford John Earle, was a Presbyterian minister. In Cliff's grade school years the family moved to Philadelphia, where Cliff's father assumed a position in the church's national office of Science and Society. Cliff's high school education was at the venerable and selective Central High School in Philadelphia, from which he graduated in 1953 as class valedictorian. He attended Swarthmore College, graduating in 1957 *summa cum laude* as a physics major. He pursued his graduate studies in mathematics at Harvard University under Lars Ahlfors, the first Fields Medalist, receiving his Ph.D. in 1962. Cliff's thesis on Teichmüller spaces established him as one of a handful of leading experts in the theory. He remained at Harvard for an additional year as an instructor and research associate and then spent two years as a postdoc at the Institute for Advanced Study before being hired by the Cornell Mathematics Department in the fall of 1965 when he assumed the position of assistant professor.

Cliff had a distinguished research career at Cornell. Shortly after arriving he teamed up with James Eells to start a project, which led to one of his most notable papers. They used the theory of Teichmüller Spaces and the theory of fiber bundles to give a striking analysis of the topological structure of the diffeomorphism group of a surface. Not only did this give a very nice answer to a well-known difficult question, it also provided an alternative and much more

elegant description of Teichmüller spaces. This and other work led to rapid promotions, first to associate professor in 1966 and then to full professor in 1969. Another notable contribution to the field was his joint work with Adrien Douady in which they showed the contractibility of all Teichmüller spaces. Cliff retired in 2005 as Professor Emeritus, but continued his scholarly output at a brisk pace until his final days when he was still putting finishing touches on a long-term collaboration with Al Marden. A colleague of Cliff's and a former graduate student plan to complete the paper and have it published.

During his years on the active faculty of the department, Cliff received a number of distinguished awards. He was a Guggenheim Fellow, an Inaugural Fellow of the American Mathematical Society, a Distinguished Ordway Visitor at the University of Minnesota, and an Honorary Professor at the University of Warwick in the UK. He spent leaves at Harvard, the Mittag-Leffler Institute in Sweden, the Mathematical Sciences Research Institute (MSRI) in Berkeley, and at the Mathematics Department of the University of California at Davis.

He served as department chair from 1976 to 1979. During this time, he successfully engaged in the difficult negotiations that brought the renowned Soviet émigré mathematician Eugene Dynkin to our department. In addition to his departmental committee service, Cliff served on many college and university committees and has served on the Faculty Council of Representatives and the University Senate.

Cliff served as an editor for the *Proceedings of the American Mathematical Society* for eight years and then as Managing Editor for several more. As was characteristic of all his professional activity, he took his editing work very seriously. A colleague recalls many conversations with Cliff concerning difficult journal submissions that did not meet the standards of the *Proceedings*. Cliff had certainly decided to reject these but he deliberated long and hard about how to make the rejections into positive learning experiences for the authors.

Cliff brought the same dedication and kindness to his teaching. He frequently volunteered to become the so-called "czar" of large multi-section freshman courses because he felt he could have an important impact. In this position, which included teaching as well as supervising other instructors, he was a valuable mentor and thoughtful group leader. Of course, he also taught his share of graduate courses, but because of his dedication to the freshman courses, he rarely thought to request advanced courses for math majors. In a reminiscence, he wrote, "I like freshmen and get along with them reasonably well, so I do not regret these choices, but the 400 level courses are also rewarding…and if I could do [it] over again, I might try to slip a few more of those into my teaching assignments."

Cliff was an extremely talented classical musician, playing piano and singing bass. He started piano lessons as a child, giving many performances at an early age and continued playing throughout his life. His favorite composers were Schubert, Scarlatti and Chopin. Schubert requires great technical skill to make the difficult piano part sound simple, and great emotional depth to make the simple music sound profound. Cliff brought this skill and depth to his numerous solo performances in Ithaca, which one musically knowledgeable colleague called "truly memorable." He was also an accomplished accompanist, for example, performing with the Cornell Savoyards and students in the Ithaca College music program. According to Cliff two

highlights of his musical career in Ithaca were accompanying Doug Alfors in Die Schoene Mullerin (in May, 1991) and Thom Baker in Schubert's *Winterreise* (around 2015). The first of these recitals, which was performed for the Mathematics Department in the A.D. White House, led to the creation of the department Spring Concerts. This is a tradition which has continued for 27 years and is still going strong. These concerts featured many performers associated with the Mathematics Department, including occasionally Cliff. The Spring Concert pioneered by Cliff and Doug is an important part of the exceptional ambience of collegiality enjoyed by the department.

Cliff liked a variety of types of music. His music collection, while very heavy in the standard classics, also included albums from contemporary opera composers as well as the Beach Boys and the Beatles. It also included the works of P.D.Q. Bach (a.k.a. Peter Schickele), who was one of Cliff's closest friends dating back to their Swarthmore days together. Schickele wrote a number of pieces dedicated to Cliff.

He also enjoyed a range of entertainment including British sitcoms and "Buffy and the Vampire Slayer". He would occasionally repeat bits from Fawlty Towers or The Vicar of Dibley. One of the jokes that he told relied on the fact that some mathematicians, while perhaps relishing thinking outside the box in their research, tend to be conservative in areas such as teaching and departmental procedure. Cliff would ask: "How many mathematicians does it take to change a light bulb?" When no one would respond, Cliff would cringe in mock horror and exclaim, "Mathematicians?! Change?!"

To conclude, Cliff Earle was a valued colleague. He was a brilliant mathematician and a charming person. He was a dedicated teacher who also had a deep understanding of and appreciation for the human side of his vocation. He cared about his students and was thoughtful and kind to all those many who relied on his judgment. The Mathematics Department has been diminished by his passing.

Written by John Hubbard, Peter Kahn (Chair), John Smillie and Robert Strichartz