

## Biographical sketch of Clark Kimberling – fifty years at UE, August 2021

Clark Kimberling arrived at UE in August 1970, accompanied by his wife Margaret and three-year-old twins, Amy and David, and a poodle named Andy. Two important things happened that first winter. One was that Thornton Patberg, Director of Admissions at UE, dressed up as Santa Claus, drove over to the Kimberlings' apartment on Frederick Street, and entertained Amy and David. The other was that Clark received his Ph.D. from Illinois Institute of Technology in Chicago. (Margaret thereby finished a degree known as a PhT, which is short for "Put hubby Through".)

Clark's advisor at IIT, Abe Sklar, became famous for his discovery of "copulas"—a technical word in mathematical statistics. Along with Sklar's Theorem, there is also a related "Kimberling's Theorem" that Clark published during his first years at UE. You can find it on Google. The theorem caught on because of unexpected applications of copulas to the distribution of financial investments.

Clark remembers many people whose names take us far back into the history of UE. These include Coach Arad McCutchan, who lived next door to the Kimberlings on Boeke Road; Wallace Graves, who had become the UE president three years earlier when Evansville College became the University of Evansville; Dr. Dan Snively, who was on the faculty after retiring from Mead Johnson and who wrote a national best-seller, *The Sea of Life*; and Walt Wangerin, once in the UE English department, who went on to become one of America's leading writers on faith and spirituality. You may recall that Acenotes paid tribute to Walt earlier this month

On our campus there are several buildings and trees named for UE people, and one of those people has both a building and a tree. Clark remembers Ralph Olmsted well, especially several occasions when they chatted at length in the UE Archives room, where Ralph had written much of his book, *From Institute to University*. In case you've never seen it, the library has five copies available for circulation. Ralph graduated from Evansville College in 1923 and was the E. C. Business Manager for 42 years. It has been said that E. C. survived the Great Depression because of Ralph Olmsted's wisdom and guidance. Now, about Ralph's tree, in case you're not sure where the Olmsted maple is located, look for the bronze ground marker near the southeast entrance to Olmsted Administration Hall. The marker identifies the nearest tree as the Olmsted maple; indeed, inscribed across the top of the marker is the scientific name, *Acer platanoides Olmsted*. When Clark first saw this, he thought it was a gimmick, but he checked, and yes, this appearance of the name Olmsted is widely used by landscapers.

At the end of Clark and Margaret's second year here, their son Brian, now a novelist in England, was born. Ten years later, in 1982, the family of five moved into the Gardener's Cottage at Harlaxton Manor. Brian attended the Harlaxton village school. Amy went to Grantham Girls' School, where the British Prime Minister, Maggie Thatcher, had been a student. Mrs. Thatcher visited the school and gave a speech, and Amy was thrilled to be seated on a gym floor just a few feet away. David attended King's School in Grantham, where Isaac Newton, it is said, left his

initials carved on a desk. Amy is now a violinist, and Dave, a landscape gardener. Clark and Margaret have four grandchildren.

At Harlaxton, Clark taught Math 105, QBA 226, and English Composition 101. He observed that grading English papers was different from grading math. In math, the students all made the same mistakes, but in Comp 101, all the mistakes were different—which isn't too surprising for a class of 14 students from 11 countries.

During the 1980's Clark was on the board of the UE Press, which published several books, including Dan Snively's *Pageantry of the English Language* and Ralph Olmsted's *Evansville's Great Flood of 1937*. The UE Press published some of Clark's church music that has been sung at services in Neu Chapel, and also a series of math booklets and disks, which brought in more than \$100,000 with a profit of about 15%. When the UE Press closed, Clark was able to continue by starting a Mathematics Software Company, which lasted for several years. It was also during the 80's that he had 24 articles in *The Mathematics Teacher*, published by the National Council of Teachers of Mathematics.

During the 1990's, Clark was active in the Fibonacci Association, and he published many articles in *The Fibonacci Quarterly*. The Association holds international conferences every two years, and Clark and Margaret have attended conferences in Scotland, Germany, Luxembourg, Austria, Greece, Hungary, Mexico, and France. He served as vice-president of the Association for several years, led problem sessions at conferences, and was editor of the problems sections in the conference *Proceedings*.

In the *American Mathematical Monthly*, Clark once posed a problem that involves both the Fibonacci sequence and triangles. One of the co-founders of the Fibonacci Association wrote, "I love this problem" and he speculated that its limit point was a "new triangle center". This comment got Clark to wondering just what could be meant by a "triangle center". In high school geometry, you may have learned about the centroid of a triangle, and the circumcenter, so it's not surprising that, unlike a circle or a square, a triangle has more than one point that deserves to be called a center. In 1994, Clark published an article in which the term "triangle center" is given a definite meaning. The article includes 100 triangle centers, each with its own name, construction, and formula. A few years later he published a book, *Triangle Centers and Central Triangles*, called TCCT, which became the origin of the UE-based online *Encyclopedia of Triangle Centers*, called ETC (pun intended). The Encyclopedia remains active, as new triangle centers from around the world arrive daily in Clark's inbox. Last month, the number of triangle centers in ETC passed 44,000. ETC has its own Wikipedia page and has been ranked "outstanding" by a reviewer for the American Library Association.

One day Clark's Math 221 class was studying ellipses, including the planetary orbits. A student asked if the Ellipse near the White House is really an ellipse. Clark didn't know the answer, but he told the class he'd find out. This led to a great deal of correspondence with the National Park Service, which maintains the Ellipse. Eventually, Clark received a huge detailed map of the Ellipse, occupying 17 sheets – enough to cover the floor of a 10x10 room. With the help of his student J. B. Brown, he was able to establish that the Ellipse is, essentially, truly an ellipse,

probably the world's largest, enclosing just over 16 acres. During the summer, J. B. worked with Clark on an undergraduate research project that was eventually published in a standard research journal. The project had nothing to do with the Ellipse, but there's a story about J. B. that can be retold here. J. B. was in Washington D.C. and drove over to the Ellipse to take some pictures – which, by the way, you can see if you go to the Wikipedia article on President's Park South. At one point, J. B. was holding his camera close to the ground to get a close-up of a marker. Suddenly a shadow appeared over his shoulder. At exactly the same time, Clark was in his office working on ETC, and his phone rang. He picked it up, and J. B. explained that he was standing on the Ellipse. A big guard had tapped him on the shoulder and asked what he was doing. Of course, nothing bad happened. J. B. graduated from UE and got his Ph.D. at the University of Kyoto, where he is now a research scientist.

Late one afternoon, Clark was in the backyard at home, and Margaret called out that he had a phone call. He hurried into the house and picked up the phone and said hello. The voice on the other end said, "Hello, this is Doug Hofstadter at I.U." It turned out that Professor Hofstadter, who had won a Pulitzer Prize for his book *Gödel, Escher, Bach: the Eternal Golden Braid*, had just got "unexpectedly sucked into an intellectual vortex ...called 'triangle geometry' ...I can pretty much pinpoint the moment," he wrote later, "when my mild interest turned into a craze: it was when I found out that all triangles have not just one or two claimants to the throne of centrality, but many – indeed, many, many. To me, this was weird". Doug and Clark soon became friends, and eventually, Doug wrote the 12-page Foreword to Clark's book previously mentioned book, TCCT. When asked if Clark has a favorite point in ETC, he is quick to respond, "Sure, it's point number 360, named the Hofstadter zero-point" – his favorite because of its beautiful construction and extremely short barycentric coordinates.

At UE, Clark has taught a total of 22 different math courses: Math 105, 106, 110, 121, 134, 211, 221, 222, 310, 323, 324, 336, 341, 342, 355, 360, 365, 370, 420, 466, 510, and 515. He has enjoyed teaching every one of them, although Math 134 has sometimes been a challenge. Among his favorites is Math 420, formerly called Advanced Calculus, now called Introduction to Analysis. The content is about as close to graduate level as any at UE, and at least five of Clark's Math 420 students have gone on to pursue advanced degrees. In addition to J. B. Brown, already mentioned, there were Michael Lachance, who is now Professor of Mathematics at University of Michigan-Dearborn; Amanda (Watkins) Niedzialomski, until recently on the faculty of the University of Tennessee at Martinsville; Cody Baker (Notre Dame University), and Matthew Harris, who got his Ph.D. in applied mathematics last year from the University of Waterloo.

Clark's research interests lie in geometry, number theory, combinatorics, history, and hymnology. His résumé shows 123 publications in 22 mathematics research journals, in addition to several chapters in books. There are also several history articles, including "David Dale Owen and Joseph Granville Norword: Pioneer Geologists in Indiana and Illinois" in the *Indiana Magazine of History*, and one this spring in *The American Harp Journal*, entitled "Myrtle Hart (Louise Kavanaugh), Harpist; A Documentary History". The first tells about a fossil that was found in 1854 near the mouth of Pigeon Creek along the Ohio River – about three miles from UE, and how the fossil became the type specimen for an extinct species of wolf, called the dire

wolf. The second article tells about Myrtle Hart, who was born in Evansville in 1877 and became known as the world's first professional African-American harpist. Her father, Henry Hart, described in a local history book as the "king of music" in Evansville, along with other family members, were buried in Oak Hill Cemetery, just over one mile from the UE campus.

Clark is interested in the history of hymns. His earliest publication in this area was a series of three articles in the journal of The American Hymn Society about twelve lost hymn tunes that were originally published by John Wesley, the founder of the Methodist denomination. In 2003, he researched the surprisingly recent origins of hymn-tune descants. His article was published in the *Journal of the Ralph Vaughan Williams Society*, and as a result, he was asked to write a related entry for the online subscription-based *Canterbury Dictionary of Hymnology*. He then mentioned to the American editor that he would like to write more articles for that dictionary. More than 100 have now been published, and he is still working on new ones.

Decades ago, UE had an Institute for the Fine and Performing Arts, directed by Dr. Eulalie Blesch (now Wilson). One of Eulalie's faculty members was Margaret Kimberling, and among Margaret's piano students were Sadelle Berger, in whose honor the UE Berger Awards are given, and another of Margaret's students was Julie Graves, daughter of President Graves. Eulalie and Margaret have been strong supporters of UE music for more than 50 years. Eulalie, who recently celebrated her ninetieth birthday, founded a group of retired pianists, including Margaret, who have, within the past two years, performed several times under the name "The Fabulous Five". Margaret, who has a Master of Music degree from North Texas State University, is now in her sixty-seventh year as a church organist.

As a composer, Clark has a number of anthems for church choir published by G.I.A., Inc., of Chicago. Since 2010, G.I.A. has also published his six books of Introits for SATB Choir and Two Handbells. These are innovative short pieces sung from the rear of a church just before the processional. The bells set the pitch for the choir, provide a background rhythm, and fill in between phrases, when it is natural for the singers to catch a breath. Clark is a recorder player, having performed with the Evansville Philharmonic Chorus, and many of his compositions and arrangements for recorder and other instruments are published by the Mel Bay Company.

Clark especially likes to teach international students, and he wishes to close this account with memories of two particular groups of students. At the end of one semester, several students from Senegal, Ethiopia, and the Republic of the Congo came to Clark's office and asked if he could spend some time off campus with them. They met at Mesker Zoo, and there, among the lions and elephants and giraffes, while they were walking, the African students more-or-less encircled their professor and asked him about the deep subjects of life. The other treasured memory was in Math 105, a semester when the roll sheet started with 24 surnames beginning with the same two letters: A and L. Most of the class were pre-engineering majors from Saudi Arabia. For a number of reasons, this class was special, in part because they were struggling and trying to do their best, but also for a number of exceptional incidents that had occurred during the semester. Not many days before their final exam, near the end of a class period, there was a pause, and the professor looked into the eyes of the class and said, "You have no idea how valuable you are to this university."