

## Gerhard Ringel (1920-2008)



Summer never ends at his house on the Westside, where the sundial shows daylight savings time all year around. By installing a rod parallel to the axis of the earth at the southern wall he indirectly taught numerous tourists and locals how a sundial works. For those of you who don't know, the shadow of the rod marks the hour. He was a teacher at heart and loved to share whatever knowledge he was excited about. A young boy in school, he explained mathematical theories to his classmates guided by his teacher. Needless to say it was his job to do the math home work for those a grade above him. He became a famous mathematician, a pioneer in the field of graph theory who created a breakthrough to solve the four color map theorem. If you want to know more about his research you can check out the article in [wikipedia.com](http://wikipedia.com). His popularity with the students at various universities in Germany and the United States was based on his excellent ability to explain the subject while telling stories and jokes during his lectures. Once a year he took his Santa Cruz students surfing, a sport that he taught himself when middle aged. He used to ride a unicycle and walk on his hands, at seventy his staff took a picture of him standing on his head. When his granddaughter told him that math and sports were her favorite subjects, he was pleased. Dr. Ringel was a survivor who endured nine years of serving in Hitler's army and in Stalin's POW camps. His way to avoid depression and illness was to focus on studying math while a soldier and learning Russian as a prisoner of war. When he returned from Russia, all he owned was the used Red Army uniform he wore. He had lost his home and possessions in Czechoslovakia, where the German minority had been forced to leave the country. He joined his wife, who was a refugee in West Germany, went back to school, got his PhD and started a family. For many years he taught at the universities of Bonn and Berlin before he was invited to continue his research at UCSC. Even though he was fluent in English and wrote his books and articles in this language he liked to joke that the best part about teaching math was that the students taught him English at the same time. Besides being a professor he was an avid butterfly collector who at one time raised, to the dismay of his wife, seven generations of moths in the kitchen. He donated his world-class collection of butterflies to the Natural History Museum of UCSC. His love for life did not diminish when old and ill. Bedridden, without being able to talk he still enjoyed the warm sun, a bowl of strawberries or his favorite chocolates. Family and friends were blessed with his contagious smile of serenity and gratitude whenever they visited. He died peacefully in his home on June 24th in 2008. He outlived both of his wives and is survived by his three children Gerhard and Ingrid Ringel and Renate Ringel-Preuschoft and his four grandchildren Stephanie Ringel, Kirsten, Max and Anika Preuschoft.

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Administrative Message  
June 30, 2008

To: Department of Mathematics

From: Richard Montgomery, Chair

Re: Gerhard Ringel, professor emeritus of mathematics, dies at age 88

Gerhard Ringel

It is with sadness that I inform you of the death of Professor Gerhard Ringel. Gerhard came to UCSC as Professor in 1970. He was one of the world leaders in the fields of Combinatorics and Graph Theory and was much honored for his seminal work including the solution (with J.W.T. Youngs) of the famous Heawood Conjecture in genus  $p$  greater than one. This conjecture gave a formula for the minimum number of colors  $H(p)$  needed to color a map on a surface of genus  $p$ , namely

$$H(p) = \lceil \frac{1}{2}(7 + \sqrt{48p + 1}) \rceil$$

The only exceptions in their proof were the Sphere, Plane and Klein Bottle.

He was awarded two honorary degrees, one from Karlsruhe and the other from Berlin, and served on several distinguished editorial boards. In 1988, he was honored by the Santa Cruz Division of the Academic Senate by his selection as Faculty Research Lecturer.

Gerhard served as our Chair for thirteen years and was admired and liked by his colleagues. A memorial service is being planned for the Fall.

Editor's note: The Fall 2006 issue of UC Santa Cruz Review magazine featured an article about Ringel's butterfly collection, which he donated to the UCSC Museum of Natural History Collections.

The Santa Cruz Sentinel of 7/1/2008 has a remembrance of Gerhard Ringel that includes a notice of a Memorial service: Family and friends are invited to a memorial service on Thursday, July 3rd 5pm at Pacific Gardens Chapel 1050 Cayuga St, Santa Cruz.

Professor Dr. Drs. H.C. Gerhard Ringel

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