Citation

George Berzsenyi

The Gung and Hu Award Committee recommends that the 2016 award go to **George Berzsenyi** for his remarkable career empowering generations of high school students to pursue their mathematical and scientific passions by promoting the art of problem solving, creating national and international mathematical talent searches, and supporting mathematical competitions.

George is a native of Hungary and came to the United States as a high school student in 1957 following the end of the Hungarian Revolution of 1956. He completed his education in Texas, including a Ph. D. in mathematics at Texas Christian University. He taught at universities in Texas and Louisiana prior to moving to Indiana to chair the Department of Mathematics at Rose-Hulman Institute of Technology (RHIT), where he is now Professor Emeritus.

Being brought up in the Hungarian tradition, George enjoyed *KöMaL*, the high school mathematics journal dedicated to creative mathematical problem solving. In order to provide similar challenges to students in the United States, he spent his professional career writing problems and solutions accessible to high school students in a variety of venues:

- "Competition Corner" in NCTM's *Mathematics Student* (1978-1981, 20 columns),
- "Kürschák Corner" in *Arbelos* (1982-1987, 17 columns),
- "The USA Mathematical Talent Search" in *Consortium* (1989-1996, quarterly),
- "Problems, Puzzles, and Paradoxes" in *Consortium* (1985-1996, 41 columns),
- "Happenings" in *Quantum* (1989-1997, 4 columns),
- "International Mathematical Talent Search" in *Mathematics and Informatics Quarterly* (1991-1999, quarterly),
- "Math Investigations" in *Quantum* (1989-1997, 41 columns), and
- "Problem Section" in *Math Horizons* (1993-1995, 6 sets of problems/solutions).

Most notably, in cooperation with the Rose-Hulman Institute for Technology (RHIT) and the Consortium for Mathematics and Its Applications (COMAP), he founded the USA Mathematical Talent Search (USAMTS). Unlike other mathematics competitions, the USAMTS is about talent identification and development rather than competition. Begun in 1989, problems were printed quarterly in the COMAP publication *Consortium*. Students had a full month to work on problems and submit carefully written solutions. USAMTS continues to this day as a program of the Art of Problem Solving Foundation, though the delivery method of the problems is now electronic. Now, as then, solutions are graded by mathematicians and comments returned to the students with the goal "to help all students develop their problem solving skills, improve their technical writing abilities, and mature mathematically while having fun."

George maintained an extensive correspondence with scores of students, guiding them with respect to their reading, their selection of problems, and their scientific aesthetic. He crafted kind, thoughtful and deliberate letters, invariably with the invitational closing "Yours in problem solving." He presented competitors with prizes of rare mathematics books and puzzles instead of trophies: a thoughtful and humbling reminder to winners that there was always more to learn. He made mathematics personal, by sharing colorful vignettes of the lives of mathematicians and former protégés and the Hungarian

mathematical tradition. Many of his protégés have never actually met him in person, but rather, forged long-distance relationships dedicated to problem solving and discovery—in a pre-Internet era when such correspondence was carried on via the US postal service.

George has an international problem-writing reputation. He served on the MAA's mathematical competitions committees for many years (USAMO 12 years; AIME 6 years as chair; AHSME 15 years). He also served as a member of the Problems Committee at the 2001 IMO in Washington, DC; was a member of the Problems Committee of the Australian Mathematics Competitions four times (a record for non-Australians); and was the Chief Coordinator of 'Topic Area 3: Mathematical Competitions' at the 6th International Congress on Mathematics Education (ICME-6) in Budapest, Hungary in 1988. He has edited and enhanced four collections of competition problems:

- *The Contest Problem Book V: American High School Mathematics Examination and American Invitational Mathematics Examination (1983-1988)* with Steve Maurer, MAA, Washington, DC, 1997,
- *C2K – Century 2 of KöMaL (1994-1997)* with Vera Olah, Roland Eötvös Physical Society, Budapest, 1999,
- *International Mathematical Talent Search Part I,* Australian Mathematics Trust Publishing, Canberra, 2010, and
- *International Mathematical Talent Search Part II,* Australian Mathematics Trust Publishing, Canberra, 2011.

In 1996, George received the Paul Erdös Award from the World Federation of National Mathematics Competitions in recognition of his significant contributions to the development of mathematical challenges as a means to enrich mathematical learning.

Throughout his career, George created opportunities and supported students in many ways including the Young Scholars Program at RHIT (1990-1995), the Texas Mathematical Olympiad (forerunner of AIME), Lamar Mathematics Day (1977-1982), Texas in ARML – American Regional Mathematics League, and International Science and Engineering Fairs. George mentored students for the Westinghouse (now Intel) Science Talent Search and has been recognized as "the one person who has been most influential in the development of my career" by six scholarship winners. George's nomination letter, co-signed by ten former students, attests to his lasting and undeniable impact:

> Though our life trajectories have taken us to very different directions, each one of us benefitted from George's mentorship. Some of us, for example, are now professional mathematicians, while others chose disciplines in neuroscience, medicine, and finance, and continue to utilize quantitative approaches. Yet others work in very diverse disciplines, such as entrepreneurship and law, and acknowledge the valuable impact high school mathematics training had on us. George encouraged us and believed that high school students could excel. He helped to nurture confidence in ourselves that would serve us a lifetime.

George Berzsenyi has played an instrumental role promoting creative problem solving to enrich and inspire mathematical learning, whether through the creation of the USAMTS, posing problems and solutions for worldwide competitions, or individual mentoring of generations of talented high school students.

Biographical Note

George Berzsenyi's biographical information is included in the citation above.

Response from George Berzsenyi

I am most thankful to the members of the Committee in charge of this Award and of the Board of Governors of the MAA for their recognition of the importance of my work with talented high school students. It is my hope that this recognition will encourage other mathematicians as well to devote their efforts to talent search and, just as importantly, to talent development. I am also grateful to my wife, Kay, who was an equal partner in all of my mathematical endeavors for the past 50 years and to the thousands of students, whose enthusiasm for my programs kept me going throughout the years. Among my close co-workers I must also single out my colleagues at Rose-Hulman, as well as Steve Maurer, Peter Taylor, Vera Oláh, Andy Liu, Sol Garfunkel, Stan Rabinowitz and Willie Yong, who are still active in the field. Moreover, I remember fondly the late Dave Logothetti, Peter O'Halloran, Erzsébet Fried, Endre Hódi, Walter Mientka, Henry Alder and my dissertation advisor, Charlie Deeter for their support.

The co-signers of the recommendation:

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