

## The Legacy of Vasil A. Popov Teacher, Colleague and Friend

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This is our personal account of Vasil Popov - a distinguished Bulgarian mathematician who have made major contributions to Approximation theory. Even 23 years after his death we still vividly remember Vasil from the good old times, especially when over a mug of beer we recall some events from our youth with Vasil in the mix, which we so much cherish. In this short note we would like to recall the main point in Vasil Popov's life and career as well as to share some of our personal memories of Vasil.

**Biographical sketch.** Vasil Popov was born in Sofia on January 14, 1942. His father was a Doctor of Philosophy and his mother, a leading French translator, was a Chevalier of the Order of Arts and Literature. He was married to Alexandra (Sashka is a physicist) and they have two sons: Alexandar (Alek Popov is a famous Bulgarian writer) and Atanas (Nasko graduated from the international NBA program at the University of South Carolina. He is now a successful businessman in New York.). The young Vasil grew up smart and outgoing with a broad range of interests and a great potential for mathematics. He took the full university courses in physics and in mathematics simultaneously in only three and half years. In 1965 Vasil Popov graduated from the Department of Mathematics, Sofia University, and took a permanent position at the Institute of Mathematics of the Bulgarian Academy of Sciences. He became Senior Fellow in the Institute in 1974, Full Professor in 1981, and Corresponding Member of the Bulgarian Academy of Sciences in 1984. Throughout his career he taught mathematics at the Sofia University. He had collaborated with a number of outstanding mathematicians from all over the world and visited for extended periods of time the Steklov Institute in Moscow, the University of South Carolina in Columbia, and Temple University in Philadelphia. Vasil Popov died in Philadelphia on May 31, 1990.

**Research.** Vasil Popov's primarily contributions are to Approximation theory. His PhD thesis "Convex Approximation" was written under the supervision of Blagovest Sendov and defended in 1971. He received Doctor of Sciences degree in 1977 with a dissertation titled "Direct and Converse Theorems in Approximation Theory". His main achievements were to Nonlinear approximation theory, in particular, to rational and free knots spline approximation, Hausdorff approximations and averaged moduli of smoothness. Popov's work included numerous publications and books. He was internationally recognized and with a strong record of invited presentations to major conferences. Vasil Popov helped establish Bulgaria as an international scientific center by organizing multiple conferences and seminars. Vasil Popov's talent and creative energy made him a burning star that set so early. His death was a great loss

for the Bulgarian mathematics community, but his achievements and ideas still continue to inspire many followers.

**Students.** Vasil Popov had 11 PhD students. We were lucky to be two of his students. Vasil was extremely generous and at the same time demanding, sometimes even hard on us. He liked to challenge his students and colleagues with problems and questions. On several occasions and usually after a few shots of vodka Vasil would ask a person who wanted to join his circle “Can you give the definition for a (uniformly) continuous function?” and after receiving unsatisfactory answer he would say “You are not a mathematician, you go away now.” On a different occasion, after a heated argument one of us was “fired” by Vasil. It was always interesting and inspiring to be around him. Vasil had a strong personality and was physically strong as well. At the same time he was sensitive and passionate, generous and highly intelligent. He was a multitasking and multidimensional individual with many interests in different areas inside and outside mathematics. He played the piano and was an excellent writer. He could grasp quickly new ideas and develop them to the next level.

**The Popov Prize.** The Vasil A. Popov Prize was established in 1995 in memory of the late Vasil Popov and in recognition of his outstanding contributions to mathematics. Ron DeVore and Ed Saff were two of the founders of the Popov Prize. Many others also helped, including Carl de Boor, Dave Donoho and Gilles Pisier. The First Popov Prize Selection Committee consisted of Charles Chui, Ron DeVore, Paul Nevai, Pencho Petrushev, Allan Pinkus, and Ed Saff. The Prize has been maintained solely by contributions from colleagues, friends, and those who support the existence of such a prize. It is awarded every third year to young mathematicians removed at most 6 years from their doctoral degree. The Prize, which consists of an engraved marble trophy and a cash award, recognizes distinguished research accomplishments in Approximation Theory and other fields in mathematics related to Vasil Popov's work. Seven Popov Prizes have already been awarded. The recipients of the Prize are Albert Cohen (1995), Arno Kuijlaars (1998), Emmanuel Candes (2001), Serguei Denisov (2004), Mauro Maggioni (2007), Joel A. Tropp (2010), Andriy Bondarenko (2013). The Popov Prize is currently hosted by the Interdisciplinary Mathematics Institute, University of South Carolina. For more information about the Popov Prize, please visit <http://imi.cas.sc.edu/popov-prize-winner/>.

In concluding, we think that Vasil Popov belongs to the hall of fame of the Bulgarian mathematics and we are hoping that he will be remembered and the Popov Prize will remain for many-many years to come.