

**PROFESSOR
WOLFGANG W. BRECKNER
AT HIS 60th ANNIVERSARY**

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The north-western part of Romania - known from the Middle Ages as Transylvania — is marked by an intricate history. Over the centuries, a lot of peoples passed through this region surrounded by the chains of the Carpathian and Western Mountains. For some other peoples this territory became a home. To these peoples belong the Germans who were settled in Transylvania in the 12th–13th century. In their new home they set up a stable ethnic community known as that of the Transylvanian Saxons. Wolfgang Werner Breckner is a member of this community which has played a main role in both the economic and cultural development of Transylvania.

Professor Breckner was born on the 6th of October 1942 in Sibiu (Hermannstadt). He went to school in this old city of the Transylvanian Saxons and distinguished himself by his learning as well as his excellent marks. Between 1960 and 1965 he was studying Mathematics at the Babeş-Bolyai University in Cluj-Napoca* (Klausenburg), the spiritual capital of Transylvania. He specialized in Analysis. In 1971 he accomplished his education receiving a Ph.D. in Mathematics from the Babeş-Bolyai University with a thesis on the characterization of the solutions of optimization problems, written under the direction of Tiberiu Popoviciu.

*Before 1974, the Romanian name for the city of Cluj-Napoca was simply Cluj.

In 1965 Wolfgang W. Breckner married his former fellow-student Maria Erzsébet Corvin. Their two daughters Brigitte Erika (born in 1970) and Hannelore Inge (born in 1971) studied Mathematics, as well, and were also granted a Ph.D. in this field.

In 1965, soon after his graduation, Wolfgang W. Breckner was appointed to the Department of Analysis of the Babeş-Bolyai University. He never left this department for another place of employment, but during the years the name of the department was changed into Department of Analysis and Optimization. The main periods of his professional career were: 1972–1990 Lecturer, 1990–1993 Associate Professor, since 1993 Full Professor. His current lectures and seminars are Mathematical Analysis, Functional Analysis, Optimization Theory, Mathematical Programming, Operations Research and Convex Analysis. He is highly appreciated by the students in spite of being demanding.

Professor Breckner is a devoted researcher. The list of his numerous publications is attached. It reveals the areas of research in which he has made significant contributions: Functional Analysis (condensation of the singularities of families of nonlinear functions, uniform boundedness principles, Hahn-Banach type theorems for modules), Applications of Functional Analysis in Optimization and Approximation (characterizations of the solutions of convex optimization problems in ordered topological linear spaces, nonlinear best approximation in normed linear spaces, generalizations of the Lagrange multiplier rule), Applications of Functional Analysis in Convex Analysis (continuity of generalized convex functions, equicontinuity of families of generalized convex functions, continuity of set-valued functions, quasiconvex functions). His publications deal most of all with up to date issues and are highly appreciated by specialists. There have been about 200 references to his papers and books. As a coordinating professor of doctoral studies, he opened the students' mind to current research problems in Applied Functional Analysis.

The fall of the Communist régime in Romania in December 1989 rid Professor Breckner of the obstructions that blocked his collaborations with mathematicians from abroad. At last, fortunately, he had the opportunity for longer research stays in other countries, e.g. at the Gerhard Mercator University Duisburg (1991), the Technical University Munich (1994, 1998) and the Martin Luther University Halle (1995, 2001), as well as to accept invitations to lecture at foreign universities

and to attend international conferences. In addition, the reorganization and democratization of the Romanian universities after 1989 opened him the access to leading positions within the Babeş-Bolyai University. Since 1992 he is the head of the Department of Analysis and Optimization of the Faculty of Mathematics and Computer Science, since 1996 he is a member of the Senate and since 1997 a vice-rector of the Babeş-Bolyai University. Convinced that teaching in several languages is an enrichment of the academic environment and an absolute necessity in Transylvania, where Romanians, Hungarians and Germans have lived together for centuries, he has continuously sustained the efforts made by the Babeş-Bolyai University to become a multilingual university by offering study programmes in Romanian, Hungarian and German.

The 60th anniversary of Professor Wolfgang W. Breckner allows us to wish him, on behalf of the entire community of mathematicians in Cluj-Napoca, good health, happiness and ever-growing creative force.

List of publications

I. Articles

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- [4] Bemerkungen über die Existenz von Minimallösungen in normierten linearen Räumen, *Mathematica* **10/33** (1968), 223–228.
- [5] Dualität bei Optimierungsaufgaben in topologischen Vektorräumen, *Mathematica* **10/33** (1968), 229–244 (with I. Kolumbán).
- [6] Konvexe Optimierungsaufgaben in topologischen Vektorräumen, *Math. Scand.* **25** (1969), 227–247 (with I. Kolumbán).
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- [10] Ein Kriterium zur Charakterisierung von Sonnen, *Mathematica* **13/36** (1971), 181–188 (with B. Brosowski).

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II. Books, monographs, proceedings

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- [3] *Introduction to the Theory of Convex Constrained Optimization Problems*, Editura Dacia, Cluj, 1974, 220 pages (Romanian).
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III. Textbooks

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IV. Miscellanea

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