

A NEW NAME FOR AN OLD JOURNAL

In 1972, the great Romanian mathematician Tiberiu Popoviciu founded the journal *Revue d'analyse numérique et de la théorie de l'approximation* (AMS abbreviated title *Rev. Anal. Numér. Théorie Approximation*), which has published numerous and important results in Numerical Analysis and Approximation Theory since then.

Let us briefly review the context.

The scientist. Tiberiu Popoviciu is the most influential mathematician who lived and worked in Cluj-Napoca. As acknowledged by authoritative personalities¹ "he is the greatest mathematician given by Transylvania[/Ardeal], after J. Bolyai".

Below is a sketch of selective moments in his biography before he came to this city:

- 1906, february 16: T. Popoviciu is born in Arad, Romania.
- 1927: graduates the University of Bucharest;
- 1927-1930: courses of École Normale Supérieure (Paris);
- 1933: the PhD thesis defended at Université de Paris (Sorbonne);
- 1933-1936: librarian and then assistant lecturer at Faculty of Sciences of the University of Cluj (the later *Babeş-Bolyai* University);
- 1936-1940: lecturer at the Faculty of Sciences in Cernăuți (at present in Ukraine);
- 1940-1942: assistant professor at the University of Bucharest;
- 1942-1946: professor of Functions Theory at the Faculty of Sciences of the University of Iași (the later *Al.I. Cuza* University);
- 1946: appointed professor of Algebra and Number Theory at the University of Cluj. He spent all the rest of his life (almost 30 years - until 1975), in this city.

We do not present here in detail the mathematical results he obtained; this will soon be posted on his website, <http://ictp.acad.ro/popoviciu> (under construction). We only mention the fact that he obtained numerous and deep results, pioneering some directions of research, active even at this time: spline functions theory, the use of modulus of continuity in evaluating the remainder in the approximation of continuous functions, convergence results in approximating the continuous functions by linear positive operators, higher order convexity of functions, extension to divided differences of the Leibniz formula, quadrature rules, various inequalities (on variance, etc.), and many more. In

¹C. Iacob, *Academician Professor Tiberiu Popoviciu (1906–1975)*. *Gaz. Mat.*, **80** (1975) no. 12, 451–453 (in Romanian).

1937 he wrote the first Romanian monograph on Numerical Analysis and Approximation Theory.² Due to the results he obtained, the courses he taught and the team he gathered and developed around him, it is largely recognized that he has laid the foundations of Numerical Analysis in our country.²

Founding an Institute. After coming in 1946 to Cluj-Napoca, together with his collaborators and with gifted disciples following him, he developed a strong team. In 1951, he founded the Mathematical Section of the Cluj-Napoca branch of the Romanian Academy (located in the building from no. 37, Republicii st.) which, in 1957, became the Institute of Computing ("Institutul de Calcul", in Romanian) of the Romanian Academy.

The team gathered and developed around him obtained important results, recognized by mathematicians from our country and from abroad. This team, which continues to develop to this day, called in Romanian "Școala Clujeană de analiză numerică și teoria aproximării", has a website which is under construction: <http://ictp.acad.ro/Cluj-School-of-NAAT>.

Computers. As a visionary scientist, he foresaw the importance of computers and created a hardware&software section within the Institute. Two competitive computers were made there from scratch. DACICC-1 (1963) was the third computer made in our country, but the first one containing transistors, and with internal memory made by ferrites; at that time Romania was among the only eighth countries in the world making computers. DACICC-200 (1968) was the most competitive Romanian computer before the seventies. The mathematicians from the Institute and from the *Babeș-Bolyai* University learned Numerical Analysis (and Computer Science as well) by programming those computers.

The software and hardware domains have tremendously evolved since then. The professors from the *Babeș-Bolyai* University, most of them working/instructed on the computers of the Institute, started to teach courses on Computer Science (e.g., D.D. Stancu, Gr. Moldovan, and others); T. Popoviciu himself taught the first course on Computing Machines and Programming Languages.³ The hardware section of the Institute was transferred and formed the newly founded (in 1968) Institute for Computing Techniques (in Romanian "Institutul de Tehnică de Calcul" - ITC Cluj), and also the Regional Center for Electronic Computing (in Romanian "Centrul Teritorial de Calcul Electronic" - CTCE Cluj).

Therefore, T. Popoviciu may be recognized as the founder of the Cluj-Napoca IT community; a website is being set up at <http://ictp.acad.ro/Cluj-IT-foundation>.

²M. Nicolescu, G. Pic, D.V. Ionescu, E. Gergely, L. Némethi, L. Bal, F. Radó, *The mathematical activity of Professor Tiberiu Popoviciu - on his 50-th birthday anniversary*, Stud. Cerc. Mat. (Cluj), Acad. RPR Filiala Cluj, **VIII** (1957) nos. 1-2, pp. 7-19 (in Romanian).

³P. Mocanu, E. Munteanu, *To the memory of Tiberiu Popoviciu, on the occasion of his 80th birthday anniversary*, Gaz. Mat., Perfect. Metod. Metodol. Mat. Inf. 7 (1986) no. 3, 135-137 (in Romanian).

International recognition. The results obtained at the Institute have been highly appreciated by the international community. Six international conferences were organized here between 1957-1972, which were attended by some of the most prominent mathematicians of the moment (e.g., Paul Erdős, I. Schoenberg, S.M. Nikolskii, J. Dieudonné, A.M. Ostrowski).

Founding this journal (edited at the Institute) was a natural step. Numerous and important mathematicians started to publish here - and still do.

The name of the journal changed several times.

- In 1975, in “a momentary lapse of reason”, the communist president N. Ceaușescu dissolved all the three mathematical institutes of the Romanian Academy (at Bucharest, Iași and Cluj-Napoca). Apart of this journal, two other mathematical journals were edited at that time in Cluj-Napoca: *Mathematica* (edited under the auspices of the Romanian Mathematical Society) and *Revista de Analiză Numerică și Teoria Aproximației* (edited by the Institute, having title and containing papers published in Romanian; its contents has recently been digitized, being freely available at <http://ictp.acad.ro/ranta-ro-72-74>). Out of the three journals, the communist regime allowed only one. Curiously enough, the request of the mathematicians that the journals *Rev. Anal. Numér. Théorie Approximation* and *Mathematica* to merge into a single one, with merged titles (but different subtitles, and with unchanged number of issues per year), was approved (sic!). In this way, the results in Numerical Analysis and Approximation Theory continued to be published in a journal with a rather long name: *Mathematica - Revue d'analyse numérique et de théorie de l'approximation. L'analyse numérique et la théorie de l'approximation* (AMS abbreviated title: *Anal. Numér. Théor. Approx.*). Unfortunately, these tragic events caused the death of Popoviciu.
- In 1992, two years after the communist regime was abolished, the journal took back its name (with a slight modification) *Revue d'analyse numérique et de théorie de l'approximation* (AMS abbreviated title *Rev. Anal. Numér. Théor. Approx.*) and continued to appear with this name until 2014.
- Finally, its name was changed this year (2015), by translating the previous name into English: *Journal of Numerical Analysis and Approximation Theory* (AMS abbreviated title: *J. Numer. Anal. Approx. Theory*). A modernizing management of the journal has been set up, by a new website system, taking into account the actual trends (such as search engine optimization). We acknowledge the effort of the two young researchers at the Institute, Mihai Nechita and Boros Imre (who set up the website system), as well as of our secretary Rodica Iușan, our librarian Mihai Georgia, and our colleagues dr. Diana Otrocol,

dr. Flavius Pătrulescu, and dr. Maria Crăciun, who made a long and sustained effort in digitizing the contents of the journal.

As a historical note, we present below the Editors-in-Chief of the journal:

- 1972-1975: acad. Tiberiu Popoviciu (not on paper but behind) - the founder (Cluj-Napoca, Romania);
- 1972-1977: prof. Elena Popoviciu (Cluj-Napoca); (1977-2001: Deputy Editor-in-Chief);
- 1977-1991: acad. Caius Iacob (Bucharest and Cluj-Napoca);
- 1992: acad. Caius Iacob - director;
- 1993-2001: acad. Nicolae Teodorescu (Bucharest): director;
- 1992-2001: prof. Ion Păvăloiu (Cluj-Napoca); (since 2001 - Deputy Editor-in-Chief);
- 2002-2014: acad. Dimitrie D. Stancu (Cluj-Napoca).

At present, the Editors-in-Chief are prof. Octavian Agratini and dr. Emil Cătinaș.

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