IN MEMORIAM

Prof. ANTAL BEGE (1962–2012)

Professor Antal Bege, an Associate Editor of Journal *Notes in Number Theory and Discrete Mathematics* died unexpectedly on March 22, 2012. He was only 50 years old.

After graduating the Mathematics Faculty of the Babeş-Bolyai University of Cluj, Romania, he became a teacher in his former middle school at Miercurea-Ciuc. In 1991, he joined the Mathematics and Informatics Department of the Babeş-Bolyai University, firstly as an assistant professor, lecturer, and then as an associate professor between 2003 and 2008. In the same year, 2008, he went over to Sapientia Hungarian University of Transylvania, Department of Mathematics and Informatics in Târgu-Mureş, as an associate professor. This is where he became the Head of department, and Editor-in-chief of the Journal *Acta Universitatis Sapientiae*. He did his best in all these qualities.

His mathematical interests ran from Number theory to Discrete mathematics and Fixed point theory, or Differential equations; but he remained all his life a lover of numbers and functions connected with these numbers (especially perfect numbers and arithmetical functions). Even some of his Discrete mathematics papers (or Discrete fixed point ones) are related or connected with some arithmetical problems , which were an inspiration for him.

His fields of interest were the following:
- I.   Number theory and related fields:
       Papers: [1], [2], [3], [7], [10], [11], [12], [14], [18], [20], [21], [24], [25], [26], [27], [28], [29], [32], [33], [34]. Books: [35], [36], [40], [41], [44].
- II. Fixed point theory:
       Papers: [5], [9], [10], [12], [13], [15], [22], [23]. Book: [37].
- III. Combinatorics:
       Papers: [17], [24], [30]. Books: [40], [42].
- IV. Difference and differential equations:
       Papers: [14], [16]. Books: [38], [39], [45], [46].
- V.   Recurrence sequences:
       Book: [43].
- VI. Inequalities:
       Papers: [2], [6], [8], [31].
- VII. History of mathematics:
       Papers: [19], [33], [34].
- VIII. Algebra and applications:
       Book: [35].

LIST OF PUBLICATIONS OF ANTAL BEGE

Scientific Papers

1. A note on a sum of one arithmetic function, *Bull. Number Theory Rel. Topics, 12(1988), 116-120.*

2. Recent advances in triangle inequalities (with D.M. Milosevic), *Studia Univ. Babes-Bolyai, Math., 35(1990), no. 2, 61-67.*

3. A note on a generalization of an arithmetic function, *Bull. Number Theory Rel. Topics, 14(1990), 68-70.*

4. A generalization of von Mangold's function, *Bull. Number Theort Rel. Topics, 14(1990), 73-78.*

5. Some generalized contraction in metric spaces, *Seminar on Fixed Point Theory, 91-3, 1-6*

6. Some inequalities for a triangle (with D.M. Milosevic), *Mathematica (Cluj), 34(57) (1992), no. 2, 99-105.*

7. Triunitary divisor functions, *Studia Univ. Babes-Bolyai, Math.37(1992), no.2, 3-7*

8. An inequality for Stolarsky's generalized mean (Romanian), *Lucr. Semin. Did. Mat. 8(1992), 17-22.*

9. Some remarks concerning fixed points in partially ordered sets, *Notes Number Theory Discr. Math. 1(1995), no. 3, 142-145.*

10. Fixed points of certain divisor functions, *Notes Number Theory Discr. Math. 1(1995), no. 1, 43-44.*

11. Two asymptotic formulas related to bi-unitary divisors, *Notes Number Theor. Discr. Math. 2(1996), no. 1, 7-14.*

12. The generalization of fixed point theorems in ultrametric spaces, *Studia Unib. Babes-Bolyai, Math., 41(1996), 17-21.*

13. Some discrete fixed point theorems, *Studia Univ.Babes-Bolyai, Math., 45(2000), 31-37.*

14. About difference-differential equations which appear in number theory, *Seminar on Fixed Point Theory, 1(2000), 9-13.*

15. Fixed Point Theorems and Applications (PhD Thesis), *Babes-Bolyai Univ., 2000.*

16. Existence and uniqueness of the solution of a boundary values problem, *Proc. "Tiberiu Popoviciu" itinerant seminar on functional equations, approximations and convexity, 2000, 29-36.*

17. Coding objects related to Catalan numbers (with Z. Kása), *Studia Univ. Babes-Bolyai, Inf., 46(2001), 31-40.*

18. On multiplicatively unitary perfect numbers, *Seminar on Fixed Point Theory, 2(2001), 59-64.*

19. C. Iancu, D.V. Ionescu and "Gazeta matematica", Mathematical contributions of D.V. Ionescu, *Edited by Ioan A. Rus, Babes-Bolyai Univ., 2001, 95-100.*

20. A generalization of Apostol's Möbius function of order k, *Publ.Math.Debrecen, 58(2001), 293-301.*

21. On multiplicatively bi-unitary perfect numbers, *Notes Number Theory Discr. Math. 8(2002), 28-36.*

22. Fixed point theorems in ordered sets and applications, *Seminar on Fixed Point Theory, 3(2002), 129-136.*

23. Fixed points of *R*-contractions, *Studia Univ. Babes-Bolyai, Math., 47(2002), 19-25.*

24. The Möbius function: generalizations and extensions (with J.Sándor), *Adv. Studies Contemp. Math. 6(2003), no. 2, 77-128.*

25. Generalized perfect numbers (with K. Fogarasi), *Acta Univ. Sapientiae Math. 1(2009), 73-82.*

26. Hadamard product of GCD matrices, *Acta Univ. Sapientiae Math., 1(2009), 43-49.*

27. Generalized Möbius-type functions and special sets of *k*-free numbers, *Acta Univ. Sapientiae Math., 1(2009), 143-150.*

28. Generalized LCM matrices, *Publ. Math. Debrecen, 79(2011), 309-331.*

29. Hyperperfect numbers and generalizations (with Zs. Bartha), 8th *Joint Conf.on math. And Comp. Sci. MACS 2010, July 14-17, 2010, Komárno, Selected papers, Novadat (Budapest), 15-22.*

Methodical-Scientific Papers

30. Following the false bags (Hungarian), *KÖMAL, 38(1988), 97-99.*

31. On a geometric inequality (Romanian) , *Didactica Matematicii , 9(1994), 39-40.*

32. Exponential perfect numbers (Romanian), *Didactica Matematicii, 9(1994), 35-38.*

33. From perfect to amicable numbers (Hunagarian), *Matlap 4(2000), 87-89.*

34. Paul Erdős and the BOOK(Hungarian), *Matlap 5(2001), 326-329.*

Books

35. Relations and Their Applications (with Z. Kása and L. Tóth), Ed. "Műegyetemi", *Budapest, 1999.*

36. Problem Book in Number Theory (Hungarian) (with A. Demeter and A. Lukács), *Ed. Scientia, Cluj, 2002 (Romania).*

37. Introduction to the Theory of Numbers (Hungarian), *Ed. Scientia, Cluj, 2002 (Romania).*

38. The Discrete Theory of Fixed Points (Romanian), *Presa Univ. Clujeana, Cluj, 2002 (Romania).*

39. Discrete Mathematics (Romanian) (with Z. Kása), *Babes-Bolyai Univ., Cluj, 2002 (Romania).*

40. Difference Equations (Hungarian), *Presa Univ. Clujeana, Cluj, 2005 (Romania).*

41. Algorithmic Combinatorics and Number Theory (Hungarian) (with Z. Kása), *Presa Univ. Clujeana, Cluj, 2006 (Romania).*

42. Old and New Number Theoretical Functions (Hungarian), *Ed. Scientia, Cluj, 2006 (Romania)*

43. A Selection of Problems with the Dirichlet principle (Hungarian), *Presa Univ. Clujeana, Cluj, 2007 (Romania).*

44. Problems with Recurrence Sequences (Hungarian), *Presa Univ. Clujeana, Cluj, 2007 (Romania).*

45. 238 Selected Problems of Number Theory (Hungarian), *Presa Univ. Clujeana, Cluj, 2008 (Romania).*

46. Differential Equations, a Selection of Exercises and Problems (Hungarian), *Presa Univ. Clujeana, Cluj, 2008 (Romania).*

47. Discrete Mathematics (Hungarian), *Presa Univ. Clujeana, Cluj, 2009 (Romania).*

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