



Curriculum vitae Europass

Informații personale

Nume / Prenume **Soós Anna**

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Naționalitate(-tăți) Română

Data nașterii 08.11.1959

Sex Feminin

Locul de muncă vizat / Domeniul ocupațional

Universitatea Babes Bolyai, Facultatea de Matematică și Informatică
Matematician

Experiența profesională

- 2012 – prorector responsabil de linia maghiară și de curriculum.
- 2008 – 2012 prodecan, Facultatea de Matematică și Informatică
- 2005 – conferentiar, Facultatea de Matematică și Informatică
- 1997 – 2005 - lector, Facultatea de Matematică și Informatică
- 1991 – 1997 - profesor de matematică – Colegiul Național Székely Mikó Sf. Gheorghe
- 1982 – 1991 -- profesor de matematică - Liceul Nr.1. Tg. Secuiesc.

Materii predate:

- Teoria probabilităților
- Statistică matematică
- Inteligență artificială
- Programare logică și funcțională
- Procese stocastice și fractali
- Metode de căutare stocastice
- Analiza fenomenelor stocastice

Domenii de cercetare

- fractali deterministici si stocastici,
- procese stocastice, mișcări browniene
- ecuații diferențiale stocastice
- omogenizare pe fractali
- analiză stocastică

Echipe de cercetare din care am făcut parte:

- FP7 programme, Primas, **2010-2013**, Promoting Inquiry in Mathematics and Science education Across Europe, coordinator University Freiburg
- Comenius programme, **2007-2010** Developing Quality in Mathematics Education II, 134312-DE-2007-CMP, coordinator
- CEEX programme, Viasan, **2006-2008**, Hatieganu Medical University, Babes-Bolyai University
- Bolyai Research Fellowship, **2003-2006**, Analysis on fractals and random fractals
- Sapientia Research Grant, **2003-2004**, Asymptotical analysis and variational problems, director prof. dr. Kolumbán József.
- Sapientia Research Grant, **2003-2004**, Fractal functions and applications, grant director.
- Sapientia Research Grant, **2002-2003**, Dynamical systems with applications, director prof. dr. Kolumbán József.
- Arany Janos Research Grant, **2001-2002**, Nonlinear analysis, director prof dr. Kolumbán József.
- Romanian Ministry of Education, T1/355, **2004,2005, 2006**, Approximation, numerical and probabilistic methods, director prof. dr. Octavian Agratini.
- Romanian Ministry of Education, T82/1072, **2001,2002,2003**, Approximation methods and numerical analysis, director prof. dr. Octavian Agratini.
- WorldBank Project Grant, cod 87, **2001-2003**, Approximations theory and numerical analysis director, prof. dr. Gheorghe Coman.
- Romanian Ministry of Education, T23/294, **1999, 2000**, Interpolatory, combinatorial, and probabilistic methods in approximation theory, director prof. dr. Gheorghe Coman.

Profesor invitat:

2008, 2009, 2010, 2011 AUST, Afrikan University of Science and Technology, Abuja, Nigeria

Societăți profesionale din care fac parte

- Romanian Mathematical Society.
- SIAM
- Gesellschaft fur Angewandte Mathematik und Mechanik.
- IMS Institute of Mathematical Statistics
- Bernoulli Society
- ISI
- INFORMS/Applied Probability Society
- Hungarian Operational Research Society
- Romanian Society for Probabilists and Statisticians
- The Society for Hungarian Technical Science in Transylvania EMT

Educație și formare

- a. 2002, - doctorat – universitatea Babes-Bolyai: Lucrarea:
Random fractals using contraction methods in probabilistic metric spaces
- b. 1994-1996 – Universitatea Eotvos Lorand, Budapesta, Facultatea de Științe ale Naturii,
sectia Profesor de informatică
- c. 1978-1982 – Universitatea Babes-Bolyai, Facultatea de Matematica - Cluj-
Napoca, Romania

Studii și cercetări în străinătate:

- 1998-99 Rényi Institute, Budapest, PhD fellowship of Hungarian Academy of Science, (10 months)
- 1999 Eötvös Lóránd University, Budapest, Domus Hungarica Scientiarum et Artium research grant, (1,5 month).
- 2000 XXX. International Probability School, Saint Flour, 2000.08.17.-09.02, the EMS fellowship
- 2000 Ernst Moritz Arndt University Greifswald, (1 month) grant of Numerical Analysis and Statistic Department of Babes-Bolyai University
- 2000/2001 Eötvös Lóránd University, Budapest, Domus Hungarica Scientiarum et Artium research grant, (2 months).
- 2001/2002 University of Szeged, research grant of the Hungarian Ministry of Education, (3 months)
- 2002 Eötvös Lóránd University, Budapest, CEEPUS grant (1 month)
- 2002 Constantine the Philosopher University, Nitra, CEEPUS grant, (1 month)
- 2003 Eötvös Lóránd University, Budapest, CEEPUS grant (1 month)
- 2004 Lisboa University, Erasmus fellowship, 2004, 01-07.05
- 2005 Technical University Wien, CEEPUS (1 month)
- 2006 Technical University Kosice, CEEPUS (1 month)
- 2006 Eötvös Lóránd University, Budapest, Domus Hungarica Scientiarum et Artium fellowship (2 months)
- 2007 Eötvös Lóránd University, Budapest, Erasmus teaching fellowship
- 2008 Eötvös Lóránd University, Budapest, Domus Hungarica Scientiarum et Artium fellowship (1 month)
- 2008 Debrecen University, Debrecen, ERASMUS teaching mobility
- 2009 Johannes Kepler University Linz, CEEPUS fellowship (1 month)

Aptitudini și competențe personale

Limba(i) maternă(e)

Limba(ile) maternă: maghiara

Limba(i) străină(e) cunoscută(e)

Autoevaluare

Nivel european (*)

Germana

Franceza

Engleza

Înțelegere		Vorbire		Scriere	
Ascultare	Citire	Participare la conversație	Discurs oral	Exprimare scrisă	
B	b	B	B	b	
B	b	B	B	b	
B	b	S	S	b	

(*) Nivelul Cadrelui European Comun de Referință Pentru Limbi Străine

Competențe și aptitudini organizatorice

Organizari de conferinte:

- International Symposium on Numerical Analysis and Approximation Theory, Cluj-Napoca, 9-11 May 2002
- 6th Joint Conference on Mathematics and Computer Science Pécs, 12-15 July 2006.
- XXVI. Seminar on Stability Problems for Stochastic Models, August 27 - September 2, 2006, Sovata-Bai, Romania, organized by Faculty of Informatics of the University of Debrecen, the Moscow State University, the Steklov Institute of Mathematics in Moscow and the Babes-Bolyai University
- NAAT2006, Numerical Analysis and Approximation Theory, Cluj- Napoca, July 5-8, 2006.
- 18th International Symposium on Implementation and Application of Functional Languages IFL'06 , September 4th-6th 2006, Budapest, Hungary
- Communication and information technology in mathematical education, joint masters programme of Constantine the Philosopher University in Nitra - Slovak Republic, Vienna University of Technology - Austria, Babes- Bolyai University in Cluj-Napoca - Romania, South Bohemian University in Cesk Budejovice - Czech Republic and University of Szeged - Hungary, 2005-2006
- Central European Functional Programming, Summer School, Faculty of Mathematics and Computer Science Babes-Bolyai University, June 25-30, 2007
- Stochastic phenomena, International workshop and summer school, 24-28.05.2008. Cluj Napoca
- Developing quality in mathematical education, COMMENIUS project yearly conference, 23-27.-9.2008., Cluj Napoca
- Bolyai Lobachevsky Gauss conference, Cluj Napoca, 2010
- International Conference on Numerical Analysis and Approximation Theory, NAAT2010 (2010.09. 23- 26)
- 9th Joint Conference on Mathematics and Computer Science, MACS 2012, 2012.02.9-12, Siófok
- Conferința Științifică Studentească din Transilvania, edițiile 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012

Activitate editoriala:

Secretar de redactie Studia Universitatis Babes-Bolyai, Mathematica

Alte activități:

Coordonator ERASMUS pe facultate, 2007-2011

Coordonator practică pe facultate, 2007-2011

Conducere de cercuri studentesti de cercetare, 2005-2009

Presedinte Fundatiei Universitare Maghiare din Cluj din 2006

Competențe și aptitudini tehnice

-echipamente multimedia

Competențe și aptitudini de utilizare a calculatorului

-editare de texte în Latex, Word

-programare in MATLAB, EXEL, MAPLE

Permis(e) de conducere

Da

Anexe

Lista lucrarilor

LISTA LUCRĂRILOR ȘTIINȚIFICE

CĂRȚI ȘI CAPITOLE DE CĂRȚI:

1. Contraction Methods in Fractal Theory, Cluj University Press Printing House, Cluj-Napoca, 2002.
2. Random Fractals, in Lectures on nonlinear analysis and its applications, Ed. Sapientia, Cluj, 2003, 293-366.
3. Kalandozás a valószínűség világában, Kiváncsiságvezérelt matematika tanítás, Ed. Status, 2010, 207-222.
4. A Happy Cube puzzle elemzése, (cu András Szilárd și Sipos Kinga), Kiváncsiságvezérelt matematika tanítás, Ed. Státus 2010, 223-255

B. MANUALE UNIVERSITARE

1. A valószínűségszámítás elemei, Presa Universitară Clujeană, 2001
2. A matematikai statisztika elemei, Presa Universitară Clujeană, 2005
3. Probability Theory through Problems and Applications, cu Hannelore Lisei și Sanda Micula, Cluj University Press, 2006

C. STUDII ÎN VOLUME

1. Fractal analysis of normal and pathological body temperature graphs by children (with Z. Ellenes), Proceeding of the Tiberiu Popoviciu Itinerant Seminar of functional Equations, Approximation and Convexity, Cluj, 2001, 247-255.
2. Brownian motion and fractal process using contraction method in probabilistic metric spaces, Seminar on Fixed Point Theory Cluj-Napoca, Proceedings of the International Conference on Nonlinear Operators, Differential Equations and Applications, September 2001, vol. 3 (2002), 369-374.
3. Fractal functions using contraction method in probabilistic metric spaces, (with J. Kolumban) Emergent Nature, M. M. Novak (ed) World Scientific, Proceedings of the Conference "Fractal 2002", 2002.03.17-20, Granada, 255-263.
4. Multiresolution analysis based on Brownian motion, Proceedings of the International Symposium on Numerical Analysis and Approximation Theory, Cluj-Napoca, 9-11 May 2002, 400-409.
5. Fractal functions and interpolation, Proceedings of the International Conference XV. DIDMATTECH 2002, Pedagogical Faculty of University of Constantine the Philosopher in Nitra, 318-322.
6. Fractal analysis of architectural objects, (with Antonio Pedro Lima) Proceedings of I.S.A.M.A., The International Society of The Arts, Mathematics and Architecture, Freiburg, 22-26.2002., ed. D Guderian, 157-164 (2004)
7. Fractal stochastic process, Proceedings of ICAM 2002, Borsa, 10-13.10.2002, Bul. Stiint. Seria B, Vol. 18(2002) Nr. 2, 341-346.
8. A new approach to IFS bounding, Seminar on Numerical and Statistical Calculus, 2004, 43-55 (with Z. Bodo)
9. Approximation of Stochastic Differential Equations Driven by Fractional Brownian Motion, (with Hannelore Lisei) in Probability 59, Birkhauser Verlag 2007, ISBN 978-3-7643-8457-9, pp. 229-244
10. Stochastic Fractal Interpolation Function and its Applications to Fractal Analysis of Normal and Pathological Body Temperature Graphs by Children, in RECENT ADVANCES IN STOCHASTIC MODELING AND DATA ANALYSIS, World Scientific, 2007, ed. Christos H Skiadas, ISBN 978-981-270-968-4 Proceedings of XIIth International Conference on Applied Stochastic Models and Data Analysis (ASMDA 2007).
11. Approximation of solutions of SDE driven by multifractional Brownian motion, Proceeding of ICAI 2007 - 7th International Conference on Applied Informatics, Eger, Hungary January 28-31 2007.

D. STUDII ÎN REVISTE

1. Invariant sets in Menger spaces, *Studia Univ. Babes-Bolyai, Mathematica*, XLIII, 2(1998), 39-48 (with J.Kolumban);
2. Invariant sets of random variables in complete metric spaces, *Studia Univ. Babe,s-Bolyai, Mathematica*, XLVII, 3(2001), 49-66 (with J.Kolumban);
3. Selfsimilar random fractal measures, Electronic Preprint, <http://arXiv.org/abs/math.PR/0202100>.
4. Random fractal interpolation functions using contraction method in probabilistic metric spaces, (with J. Kolumban and E. Buzogany) *Annalele Univ. Bucuresti*, LI, 1(2002),13-24.
5. Fixed point theorem in $_E$ -spaces,(with J. Kolumban) *Studia Univ. Babes-Bolyai, Mathematica*, XLVII, 4(2002),65-74.
6. Selfsimilar random measures using contraction methods in probabilistic metric spaces, *International Journal of Mathematics and Mathematical Sciences*, 52 (2003) 3299-3313 (with J. Kolumban, V. Varga).
7. Unsupervised classification for designing speaker identification systems, *Studia Univ. Babes-Bolyai*, 49, 1(2004), 3-13 (with M.Antal)
8. Wavelet Approximation of the Solutions of Some Stochastic Differential Equations, *Pure Mathematics and Applications (PUMA)*, (with Hannelore Lisei), 2005, 213-223.
9. Invariant sets in $_E$ -spaces, *PU.M.A. Vol. 17 (2006)*, No. 3-4, pp. 1-18
10. Fractional Brownian Motion using contraction method in probabilistic metric space, *Studia Univ. Babes-Bolyai*, 49, 4(2004), 107-115.
11. Homogenization and Iterated Function Systems, *Journal of Mathematical Analysis and its Applications* (with Kolumban Jozsef)(submitted)
12. Mathematical Excursion in FractalWorld, *Creative Mathematics vol. 14 (2005)*, Department of Mathematics and Computer Science North University Baia Mare.
13. Homogenization and Multiple scale expansion, (with Kolumban J.), *Studia Univ. Babes-Bolyai*, 51, 4(2006),129-144.
14. Diszkrét dinamikus rendszerek es kaosz, *Alkalmazott Matematikai Lapok* (with Kolumban Jozsef), 25(2007), 1-17.
15. Stochastic homogenization on selfsimilar structures, *Proceedings in Applied Mathematics and Mechanics [PAMM]*, Volume 7, Issue 1 , Pages 2080001 – 2080002 , WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim
16. Welke Wirrel Warrel is moeilijker?, with Andras Szilard, Sipos Kinga, *Recreatieve wiskunde, NAW* 5/12 nr. 2,(2011), 121-126.
17. Approximation of the solution of stochastic differential equations driven by multifractional Brownian motion, *Studia Univ. Babes-Bolyai*, 54, 2(2011).
18. Approximation of Stochastic Differential Equations Driven by Step Fractional Brownian Motion, *Annales Univ. Sci. Budapest., Sect. Comp.* 37 (2012) 337–352 , with Robu Judit

Articole didactice:

1. Programozas Logoban,(Programming in Logo, in Hungarian) *Firka* 3/1994
2. Programozas Logoban, Turtle-grafika, (Programming in Logo, in Hungarian), *Firka* 4/1994
3. A racionalis szamok abrazolasa kulonbozo szamrendszerekben, (The representation of rational numbers, in Hungarian) *Matematikai Lapok*, 9/1995 (with J.Kolumban)
4. A valos szam fogalmanak kialakitasa, (About the notion of real number, in Hungarian) *Matematikai Lapok*, 10/1995 (with J.Kolumban);
5. Programozas Logoban, rekurzio, (Programming in Logo, in Hungarian) *Firka* 1/1995;

6. Programozas Logoban, logo-csipkek,(Programming in Logo, in Hungarian) Firka 2/1995;
7. A Cantor halmaz,(The Cantor set, in Hungarian) Matematikai Lapok, 1/1996 (with J.Kolumban);
8. A satorfuggvény,(in Hungarian)Matematikai Lapok, 4/1996 (with J.Kolumban);
9. Prolog programozas, (Programming in Prolog, in Hungarian) Firka, 1/2001, 9-13.
10. Fraktalok Logoban (Fractals using Logo, in Hungarian), HungaroLogo 2003 Conference, Budapest, 2003.09.20., 17-25.

Alte articole:

- 1.A fraktálanalízis alkalmazása az orvostudományban, (Application of fractal analysis in medicine, in Hungarian), EME-Orvostudományi Közlemények, (2000), (with Z.Ellenes)
2. A matematika és természettudományok oktatása Erdélyben, Természetudomány tanítása korszerűen és vonzóan, Budapest, 2011. augusztus 23.-25., konferencia kiadványa, 2011.
3. Laudationes Hungarorum, Lustrum, Sollemnia aedificii a D.MCMXI inaugurati, Typotex Kiadó, 2011, 79-82.

Cluj Napoca, la 10.02.2013,

Conf.dr. Anna Soos