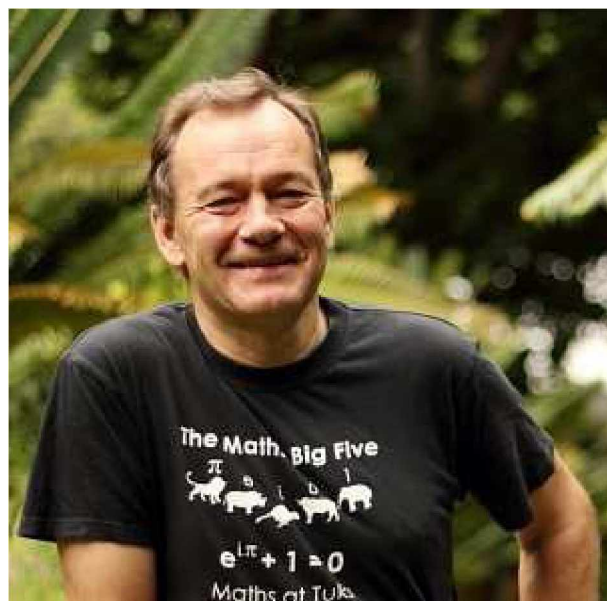


JACEK BANASIAK
(on 60th birthday)



Jacek Banasiak was born on the 15th of March 1959 in Lodz, Poland.

He graduated with MSc (Engineering) from the Technical University of Lodz in 1981, received PhD at the Strathclyde University in Glasgow in 1989 and Habilitation (DSc) at the University of Warsaw in 1999. In 2007 he gained the State title of Professor conferred by the President of the Republic of Poland. He was a lecturer at the Technical University of Lodz from 1981 till 1992, then he joined the Department of Mathematics and Applied Mathematics at the University of Natal (later the University of KwaZulu-Natal) in Durban, South Africa, where he reached the position of Senior Professor in 2008 and served as a Head of the School of Mathematical Sciences in 2005 – 2007. From January 2016 he has been the DST/NRF Chair in Mathematical Models and Methods in Biosciences and Bioengineering at the University of Pretoria.

Research interests of Jacek Banasiak are concerned with nonlocal integro-differential models in kinetic theory, mathematical biology and fragmentation-coagulation theory, asymptotic analysis of multiple scale problems. He has authored/co-authored 5 research monographs, over 100 refereed research papers and supervised 8 PhD and over 20 MSc students. In 2012 he received the South African Mathematical Society Award for Research Distinction, in 2013 was awarded a Cross of Merit (Silver) of the Republic of Poland.

He is a fellow of the African Academy of Sciences and a member of the Academy of Science of South Africa.

We wish Jacek Banasiak good health, great life filled with prosperity and true happiness.

*E.V. Bychkov, A.V. Keller, N.A. Manakova, M.A. Sagadeeva,
G.A. Sviridyuk, A.A. Zamyshlyeva, S.A. Zagrebina*

Main Publications

1. Banasiak J., Mika J.R. Diffusion Limit for the Linear Boltzmann Equation of the Neutron Transport Theory. *Mathematical Methods in the Applied Sciences*, 1994, vol. 17, no. 13, pp. 1071–1087. DOI: 10.1002/mma.1670171306
2. Banasiak J., Frosali G., Spiga G. Asymptotic Analysis for a Particle Transport Equation with Inelastic Scattering in Extended Kinetic Theory. *Mathematical Models and Methods in Applied Sciences*, 1998, vol. 8, no. 5, pp. 851–874. DOI: 10.1142/S021820259800038X
3. Banasiak J. Mathematical Properties of Inelastic Scattering Models in Linear Kinetic Theory. *Mathematical Models and Methods in Applied Sciences*, 2000, vol. 10, no. 2, pp. 163–186. DOI: 10.1142/S0218202500000112
4. Banasiak J. On a Diffusion-Kinetic Equation Arising in Extended Kinetic Theory. *Mathematical Methods in the Applied Sciences*, 2000, vol. 23, no. 14, pp. 1237–1256. DOI: 10.1002/1099-1476(20000925)23:14<1237::AID-MMA163>3.0.CO;2-I
5. Banasiak J., Lachowicz M. Chaos for a Class of Linear Kinetic Models. *Comptes Rendus de l'Academie de Sciences – Serie IIb: Mecanique*, 2001, vol. 329, no. 6, pp. 439–444. DOI: 10.1016/S1620-7742(01)01353-8 (in French)
6. Banasiak J., Lamb W. On the Application of Substochastic Semigroup Theory to Fragmentation Models with Mass Loss. *Journal of Mathematical Analysis and Applications*, 2003, vol. 284, no. 1, pp. 9–30. DOI: 10.1016/S0022-247X(03)00154-9
7. Arlotti L., Banasiak J. Strictly Substochastic Semigroups with Application to Conservative and Shattering Solutions to Fragmentation Equations with Mass Loss. *Journal of Mathematical Analysis and Applications*, 2004, vol. 293, no. 2, pp. 693–720. DOI: 10.1016/j.jmaa.2004.01.028
8. Banasiak J., Lachowicz M., Moszynski M. Semigroups for Generalized Birth-and-Death Equations in l_p Spaces. *Semigroup Forum*, 2006, vol. 73, no. 2, pp. 175–193. DOI: 10.1007/s00233-006-0621-x
9. Banasiak J., Lachowicz M., Moszynski M. Chaotic Behavior of Semigroups Related to the Process of Gene Amplification-Deamplification with Cell Proliferation. *Mathematical Biosciences*, 2007, vol. 206, no. 2, pp. 200–205. DOI: 10.1016/j.mbs.2005.08.004
10. Banasiak J., Moszynski M. Dynamics of Birth-and-Death Processes with Proliferation – Stability and Chaos. *Discrete and Continuous Dynamical Systems*, 2011, vol. 29, no. 1, pp. 67–79. DOI: 10.3934/dcds.2011.29.67
11. Banasiak J., Lamb W. Analytic Fragmentation Semigroups and Continuous Coagulation-Fragmentation Equations with Unbounded Rates. *Journal of Mathematical Analysis and Applications*, 2012, vol. 391, no. 1, pp. 312–322. DOI: 10.1016/j.jmaa.2012.02.002
12. Banasiak J. Global Classical Solutions of Coagulation Fragmentation Equations with Unbounded Coagulation Rates. *Nonlinear Analysis: Real World Applications*, 2012, vol. 13, no. 1, pp. 91–105. DOI: 10.1016/j.nonrwa.2011.07.016
13. Banasiak J. Transport Processes with Coagulation and Strong Fragmentation. *Discrete and Continuous Dynamical Systems – Series B*, 2012, vol. 17, no. 2, pp. 445–472. DOI: 10.3934/dcdsb.2012.17.445
14. Banasiak J., Lachowicz M. On a Macroscopic Limit of a Kinetic Model of Alignment. *Mathematical Models and Methods in Applied Sciences*, 2013, vol. 23, no. 14, pp. 2647–2670. DOI: 10.1142/S0218202513500425

-
15. Banasiak J., Falkiewicz A., Namayanja P. Asymptotic State Lumping in Transport and Diffusion Problems on Networks with Applications to Population Problems. *Mathematical Models and Methods in Applied Sciences*, 2016, vol. 26, no. 2, pp. 215–247. DOI: 10.1142/S0218202516400017
 16. Banasiak J., Puchalska A. Generalized Network Transport and Euler–Hille Formula. *Discrete and Continuous Dynamical Systems – B*, 2018, vol. 23, no. 5, pp. 1873–1893. DOI: 10.3934/dcdsb.2018185
 17. Banasiak J. Analytic Fragmentation Semigroups and Classical Solutions to Coagulation-Fragmentation Equations – a Survey. *Acta Mathematica Sinica, English Series*, 2019, vol. 35, no. 1, pp. 83–104. DOI: 10.1007/s10114-018-7435-9