

Hyungju Park

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Personal and Educational Data

1964 born in Buyeo, Korea
1986 B.S. in physics, Seoul National University
1995 Ph.D. in mathematics, U.C. Berkeley

Employment

1995~2006 Oakland University
2004~2009 Korea Institute for Advanced Study (KIAS)
2009~ POSTECH

Research Interests

Computational Algebraic Geometry, Multidimensional Systems and Signal Processing

Selected Academic Services and Functions

2005~2006 Member of executive committee for Korean Mathematical Society
2006 Delegate of Korea at IMU General Assembly
2006 Program committee member, Special Semester on Gröbner Bases and Related Methods 2006, *Linz, Austria*
2007~2010 Chair of the bidding committee for ICM 2014
2007~2011 Chair of international exchanges committee, Korean Mathematical Society
2008~2009 Chair of school of computational sciences, KIAS
2009~2013 Chair of department of mathematics, POSTECH
2009~2014 Selection committee member for POSCO TJ Park Foundation Science Fellowship
2010 Delegate of Korea at IMU General Assembly
2010~ Chair of organizing committee for ICM 2014
2012~2014 Advisory committee member for Korea Foundation for the Advancement of Science & Creativity
2013~ Director of Center for Applications of Mathematical Principles (CAMP) at National Institute for Mathematical Sciences (NIMS), Korea
2013 Moderator of FORUM "Organizing the Mathematical Union of Asia; Why and How?"
2013 Steering committee member of AMC 2013 (Asian Mathematical Conference)
2014 Co-organizer of NIMS Thematic Program on Applied Algebraic Geometry (with Bernd Sturmfels)

Selected Publications

- ✓ Generalized Castelnuovo-Mumford regularities for Affine Kac-Moody Algebras, (with Seok-Jin Kang, Dong-il Lee and EuiYong Park), Journal of Algebra, 341, no 1, 13-22, Sept, 2011
- ✓ (in Korean) The development and prospect of mathematics in Korea, a chapter in the book "Anticipating the academic advancement in Korea", edited by Korea Academic Research Council, 2010, Acanet, Seoul, Korea
- ✓ Gröbner Bases in Control Theory and Signal Processing (co-edited with Georg Regensburger), a book in Radon Series on Computational and Applied Mathematics, Nov. 2007, de Gruyter, Berlin
- ✓ Linear algebraic approach to Gröbner -Shirshov basis theory (with Seok-Jin Kang, Dong-il Lee and Kyu-Hwan Lee), Journal of Algebra, 313, no 2, 988-1004, 2007
- ✓ Symbolic Computation and Signal Processing, Journal of Symbolic Computation, 37, No 2, 209-226, 2004
- ✓ Optimal Design of Synthesis Filters in Multidimensional Perfect Reconstruction FIR Filter Banks using Gröbner Bases, IEEE Transactions on Circuits and Systems, Part-I, 49, No 6, 843-851, June 2002
- ✓ Convergence Criteria for Hierarchical Overlapping Coordination of Linearly Constrained Convex Design Problems (with D. Kulkarni, N. Michelena and P. Papalambros), Computational Optimization and Applications, 18, No 3, 273-293, 2001.
- ✓ An Algorithmic Proof of Suslin's Stability Theorem for Polynomial Rings (with C. Woodburn), Journal of Algebra, 178, 277-298, 1995

Awards

2010 Recognition of Service Award, ACM

2010 Best Reviewer Award, NRF Basic Science Division

2011 "Korea's One Hundred Shining Stars in 10 Years" selected by Dong-a Daily

Statement and Description of Activities

I am willing to serve on the IMU Executive Committee if the General Assembly makes such a choice.

I will assist next ICM organizers with what I learned during the course of organizing 2014 ICM and with the vast experience and knowledge passed to me from the organizers of the past ICMs.

I hope to contribute to enhancing the collaborations and joint academic activities in Asia-pacific region including discovering and mentoring young mathematical talents.

I also wish to make further efforts to support the mathematical community in developing world.