



JongHae Keum

Date of birth: April 5, 1957. Married with two sons. Nationality: Korea, Republic of
Professor, School of Mathematics, Korea Institute for Advanced Study (KIAS),
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Academic degrees

1980 : B.S. in Mathematics, Seoul National University, Seoul, Korea
1988 : Ph.D. in Mathematics, University of Michigan, Ann Arbor, USA

Awards and Honors

Invited Speaker, ICM 2018
Fellow of the Korean Academy of Science and Technology, since 2011
Korea Science Prize, awarded by the President of Korea, 2008

Community Services

1991 -2010 : Korean Mathematical Olympiad Committee
2004 - : founding member of Korean Women In Math Science(KWMS),
supporter of **ICWM 2014**
2008 -2014 : National Committee for Promotion of Basic Research
2012 -2016 : Presidium of Postech
2012 -2015 : Selection and Evaluation Committee, IBS
2012 -2014 : **ICM 2014 Program Committee**
2014 : (as KIAS President) sponsored **ICM 2014 NANUM Travel Grant** which supported 1000 mathematicians from developing countries
2015 -2020 : Advisory Board of Samsung Science and Technology Foundation(SSTF)
2019 -2022 : President, Korean Mathematical Society
2019 -2022 : Chair, Presidium of Institute for Basic Science (IBS)

Employment

1988-1991 : Instructor, Department of Mathematics, U. of Utah
1991-2000 : Professor, Chair, Konkuk University, Seoul
2000 - present : Professor, School of Mathematics, KIAS
2013 - 2016 : President of KIAS

Selected Publications

1. Quotients of fake projective planes,
Geometry and Topology, 12 no. 4 (Oct 2008), 2497--2515.
2. (with I. Dolgachev), Finite groups of symplectic automorphisms of K3 surfaces in positive characteristic,
Annals of Mathematics, 169 no. 1 (Jan 2009), 269--313.
3. (with D. Hwang) The maximum number of singular points on rational homology projective planes,
Journal of Algebraic Geometry, 20, no. 3, (2011), 495--523.
4. Orders of automorphisms of K3 surfaces,
Advances in Math. 303 (5 November 2016) 39--87.
5. A vanishing theorem on fake projective planes with enough automorphisms, Transactions AMS. 369 (Oct 2017) 7067--7083.
6. (with K. Lee) Examples of Mori dream surfaces of general type with $p_g=0$, Advances in Math. 347 (2019), 708--738.
7. (with Lev Borisov) Explicit equations of a fake projective plane,
Duke Mathematical J. 169 (2020), No. 6, 1135--1162.