NEW HOT PAPERS - 2009

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PDF

Taekyun Kim talks with *ScienceWatch.com* and answers a few questions about this month's New Hot Paper in the field of Mathematics.

Article Title: On p-adic interpolating function for q-Euler numbers and its derivatives
Authors: Kim, T
Journal: J MATH ANAL APPL
Volume: 339
Issue: 1
Page: 598-608
Year: MAR 1 2008
* Kyungpook Natl Univ, EECS, Taegu 702701, South Korea.

SW: Why do you think your paper is highly cited?

I made the first definition of the q-extension of an Euler number using a Fermonic p-adic q-integral and made p-adic analytic functions interpolating at negative integer. I also studied properties related to alternating harmonic sums and several kinds of number theoretical properties and applications. I think that a newly made q-extension Euler number in my paper can be used to study theories related to p-adic L-functions.

SW: Does it describe a new discovery, methodology, or synthesis of knowledge?

I think my paper was a new discovery that contained a methology which differed from older research of the p-adic L-function.

SW: Would you summarize the significance of your paper in layman's terms?

My research can be utilized in the study of quantum physics that explains the atom.

SW: How did you become involved in this research, and were there any particular problems encountered along the way?

I had studied p-adic q-L-function in Japan in 1994 and considered the p-adic invariant q-integral from the Fermonic point of view.

SW: Where do you see your research leading in the future?

It is quite interesting that research involving the p-adic interpolation function using p-adic invariant q-integral , can also be used in the fermonic distribution of Physics and the Radon-Nikodyn theorm.

SW: Do you foresee any social or political implications for your research?

I believe that it can help in the development of quantum physics.

Taekyun Kim, Ph.D.
Professor
Division of General Education
Kwangwoon University
Seoul, South Korea

KEYWORDS: ZETA FUNCTION; Q-SERIES; P-ADIC INTERPOLATING FUNCTIONS; Q-EULER NUMBERS; PARTIAL ZETA FUNCTION; ANALYTIC FUNCTION.