



JAPANESE JOURNAL OF MATHEMATICS

3rd Series

Official Journal of the Mathematical Society of Japan

Volume 1 • Number 1-2 • 2006

V.I. Arnold

On the matricial version of Fermat-Euler congruences **1**

S. Iyanaga

Travaux de Claude Chevalley sur la théorie du corps de classes: Introduction **25**

S. Gindikin

Harmonic analysis on symmetric Stein manifolds from the point of view of complex analysis **87**

L. Illusie

Miscellany on traces in ℓ -adic cohomology: a survey **107**

A. De Sole, V.G. Kac

Finite vs affine W -algebras **137**

B. Roynette, P. Vallois, M. Yor

Some penalisations of the Wiener measure **263**

K.-H. Neeb

Towards a Lie theory of locally convex groups **291**

V.I. Arnold

Publisher's Erratum: On the matricial version of Fermat-Euler congruences **469**

S. Kojima

Foreword to the *Japanese Journal of Mathematics* **471**

Y. Morita

Welcome to the Third Series of the *Japanese Journal of Mathematics* **473**

Volume 2 • Number 1-2 • 2007

V. Turaev

Lectures on topology of words 1

Special Feature: Award of the 1st Gauss Prize to K. Itô

K. Itô

On the occasion of the ceremonial 2006 Gauss Prize event at Kyoto University 41

M. Fukushima

On the works of Kiyosi Itô and stochastic analysis 45

P. Malliavin, M.E. Mancino, M.C. Recchioni

A non-parametric calibration of the HJM geometry:
an application of Itô calculus to financial statistics 55

H. McKean

Recollections of K. Itô and Kyoto 1957/58 79

J. Pitman, M. Yor

Itô's excursion theory and its applications 83

P. Salminen, P. Vallois, M. Yor

On the excursion theory for linear diffusions 97

Ya.G. Sinai

Congratulations to Professor K. Itô 129

D.W. Stroock

Itô geometry 133

M. Yor

How K. Itô revolutionized the study of stochastic processes 137

Special Feature: The 1st Takagi Lectures

T. Kobayashi

On the establishment of the Takagi Lectures 145

S. Kojima

On the Takagi Lectures 149

K. Miyake

Teiji Takagi, Founder of the Japanese School of Modern Mathematics 151

S. Bloch

Motives associated to graphs 165

F. Cucker, S. Smale

On the mathematics of emergence 197

J.-M. Lasry, P.-L. Lions Mean field games	229
C. Voisin Some aspects of the Hodge conjecture	261
* * *	
E.B. Vinberg On some number-theoretic conjectures of V. Arnold	297
B. Krötz Corner view on the crown domain	303
L. Illusie <i>Publisher's Erratum</i> : Miscellany on traces in ℓ -adic cohomology: a survey	313

Volume 3 • Number 1-2 • 2008

Special Feature: The 3rd Takagi Lectures

P. Malliavin Invariant or quasi-invariant probability measures for infinite dimensional groups Part I: Non-ergodicity of Euler hydrodynamic	1
P. Malliavin Invariant or quasi-invariant probability measures for infinite dimensional groups Part II: Unitarizing measures or Berezinian measures	19
J. Makino Do-it-yourself computational astronomy Hardwares, algorithms, softwares, and sciences	49
* * *	
A.A. Davydov, G. Ishikawa, S. Izumiya, W.-Z. Sun Generic singularities of implicit systems of first order differential equations on the plane	93
D. Lenz, N. Peyerimhoff, O. Post, I. Veselić Continuity properties of the integrated density of states on manifolds	121

Special Feature: The Takagi Lectures

D.-V. Voiculescu

Aspects of free analysis

163

O. Viro

From the sixteenth Hilbert problem to tropical geometry

185

* * *

C.F. Dunkl

Reflection groups in analysis and applications

215

M. Pevzner

Covariant quantization: spectral analysis versus deformation theory

247

Volume 4 • Number 1 • 2009

Special Feature: The 5th Takagi Lectures

M. Kontsevich

Holonomic \mathcal{D} -modules and positive characteristic

1

J.-P. Bourguignon

Ricci curvature and measures

27

É. Ghys

Right-handed vector fields & the Lorenz attractor

47

N.A. Nekrasov

Instanton partition functions and M-theory

63