

**JOSAI  
MATHEMATICAL  
MONOGRAPHS**

**10**

**2017**

**Representation Theory  
and  
Differential Equations**

Proceedings  
of JMM Workshop  
on Representation Theory  
and Differential Equations

November 26 – 27, 2016  
JOSAI UNIVERSITY

Edited by  
Kazuki HIROE  
Manabu INUMA  
Takeyoshi KOGISO  
Toshio OSHIMA



JOSAI UNIVERSITY  
GRADUATE SCHOOL OF SCIENCE

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**JMM10 (2017): Representation Theory and Differential Equations**

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TEL +81-49-271-7690 (OFFICE)  
FAX +81-49-271-7685,7689

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Keyakidai 1-1, Sakado  
Saitama, Japan 350-0295

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# JOSAI MATHEMATICAL MONOGRAPHS

## JMM 10. Representation Theory and Differential Equations, Kazuki Hiroe, Program Chair

*JMM Workshop on Representation Theory and Differential Equations  
held at Josai University on November 26 – 27, 2016*

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**JMM Workshop**  
**on Representation Theory and Differential Equations**

Department of Mathematics, Graduate School of Science, Josai University

**Venue:** Room 5201, The 5th Building, Tokyo Kioi-cho Campus, Josai University

**Date:** November 26 – 27, 2016

**Program:**

November 26 (Saturday)

11:00 – 12:00 Takeyoshi KOGISO (Josai University)

*Local functional equations associated with the polarizations of homaloidal polynomials*

13:30 – 14:30 Ryosuke NAKAHAMA (The University of Tokyo)

*Intertwining operators between holomorphic discrete series representations*

14:40 – 15:40 Tadashi MIYAZAKI (Kitasato University)

*Whittaker functions on  $GL(2, \mathbb{C})$  and the local zeta integrals*

15:40 – 16:00 Genki SHIBUKAWA (Osaka University)

*A generalization of multivariate Meixner, Charlier and Krawtchouk polynomials*

17:10 – 18:10 Noriyuki ABE (Hokkaido University)

*Affine Hecke algebra at  $q = 0$  and mod  $p$  Satake transform*

November 27 (Sunday)

9:00 – 10:00 Hajime NAGOYA (Kanazawa University)

*On confluence of vertex operators of Virasoro algebra*

10:10 – 11:10 Shintarou YANAGIDA (Nagoya University)

*Factorization space and Liouville CFT*

11:20 – 12:20 Seiji NISHIOKA (Yamagata University)

*Transcendence of solutions of iterated Riccati equations*

13:30 – 14:30 Shingo KAMIMOTO (Hiroshima University)

*Resurgent functions and nonlinear differential and difference equations*

14:40 – 15:40 Daisuke YAMAKAWA (Tokyo Institute of Technology)

*Filtered Riemann-Hilbert-Birkhoff correspondence*

**Representation Theory  
and  
Differential Equations**

## List of Special Issues

SCIENCE BULLETIN OF JOSAI UNIVERSITY

- No.1 Convexity, Chaos and Fractals**  
Proceedings of the Symposium on Nonlinear Analysis (NLA96), Spring 1996
- No.2 Surgery and Geometric Topology**  
Proceedings of the Conference, September 1996
- No.3 Mathematics Applied to Economics and Finance**  
Proceedings of the International Conference, February 1997
- No.4 Complex Dynamical Systems**  
Proceedings of the Symposium on Non-Linear Analysis (NLA97), May 1997
- No.5 Wavelet, Chaos and Nonlinear PDEs**  
Proceedings of the Symposium on Applied Mathematics, September 1997

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Proceedings of the Symposium on Nonlinear Analysis (NLA98), July 1998  
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Proceedings of the Symposium on Nonlinear Analysis (NLA99), September 1999  
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Proceedings of the Symposium on Differential Geometry, February 2001  
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Proceedings of the Workshop on Geometry, January 2011  
Kiyoko NISHIZAWA, editor
- JMM 6. REPRESENTATION THEORY OF ALGEBRAIC GROUPS AND RELATED TOPICS**  
Proceedings of the Workshop on Representation Theory, September 2012  
Masatoshi IIDA, Takeyoshi KOGISO, Haruko NISHI, editors
- JMM 7. MATHEMATICS AND COMPUTER SCIENCE**  
Proceedings of Annual Workshop on Mathematics and Computer Science, March 2014  
Masatoshi IIDA, Manabu INUMA, Kiyoko NISHIZAWA, editors
- JMM 8. STATISTICAL SCIENCE AND RELATED TOPICS**  
Proceedings of Annual Workshop on Statistical Science and Related Topics, December 2014  
Masatoshi IIDA, Manabu INUMA, Kiyoko NISHIZAWA, Takahiro TSUCHIYA, editors
- JMM 9. MODELING AND SIMULATION IN APPLIED MATHEMATICS**  
Proceedings of Annual Workshop on Modeling and Simulation in Applied Mathematics, December 2015  
Masahiro FUJITA, Manabu INUMA, Takahiro TSUCHIYA, Hidenori YASUDA, editors
- JMM 10. REPRESENTATION THEORY AND DIFFERENTIAL EQUATIONS**  
Proceedings of JMM Workshop on Representation Theory and Differential Equations, November 2016  
Kazuki HIROE, Manabu INUMA, Takeyoshi KOGISO, Toshio OSHIMA, editors



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