October 6, 2019

Curriculum Vitae of Toshiyuki KOBAYASHI

Born September 1962 at Osaka (Japan)

Present Business Address

Graduate School of Mathematical Sciences and Kavli IPMU, The University of Tokyo,
3–8–1 Komaba, Meguro, Tokyo, 153–8914, Japan
Fax: +81–3–5465–7011 (secretary); Tel: +81–3–5465–7001 (secretary)
e-mail: toshi@ms.u-tokyo.ac.jp

Academic Degrees

Ph.D./Doctor of Science:	1990 The University of Tokyo
M.A.:	1987 The University of Tokyo
B.S./A.B.:	1985 The University of Tokyo

Former and Present Professional Positions

June 2011 – :	Kavli IPMU, The University of Tokyo, Principal Investigator
April 2007 – :	The University of Tokyo, Full Professor
April 2003 – March 2007:	RIMS, Kyoto University, Full Professor
October 2001 – March 2003:	RIMS, Kyoto University, Associate Professor
April 1991 – September 2001:	The University of Tokyo, Associate Professor
April 1987 – March 1991:	The University of Tokyo, Assistant Professor (tenured)

Visiting Appointments (long-term)

Yale University, U.S.A. 2019 Spring, visiting professorship)
Harvard University, U.S.A. (2000–2001; 2008 visiting professorship)
Mittag-Leffler Institute, Sweden (1995–1996)
Institute for Advanced Study, Princeton, U.S.A. (1991–1992)

Visiting Appointments (short-term)

Jubilee Professorship, Chalmers University, Sweden (2013, May, September)
Directeur de Recherche associé au CNRS, France (2013)
IHES, France (2010; 2012; 2014; 2015; 2017; 2019)
Université de Reims (autumn, 2008; autumn, 2010), Université de Poitiers (spring, 2005), Université de Paris VII (spring, 2003), Université Henri Poincaré (spring, 2003), Université de Paris VI (spring, 1999), Université de Lyon I (spring, 1998), France
Max-Planck-Institut für Mathematik, Bonn, Germany (summer, 2007; summer, 2009; August–September, 2011)
Hausdorff Institute, Germany (March 2011)
Universität Paderborn, Germany (summer, 2006; spring, 2009)
Institute for Mathematical Sciences, Singapore (autumn, 2002)
MSRI, Berkeley, USA (autumn, 2001)
Odense University, Denmark (1992, 1994, 1996, 1998, 2000)

Academic Service

Member, the Science Council of Japan (2006–2008)
Member, Board of Trustees, the Mathematical Society of Japan (2003–2005; 2005–2007).
Member, Prize Committee, the Mathematical Society of Japan (various years).
Prize Selection Committee (international: 2017-2018)
Prize Committee (Mathematics) (international: 2019-2020)

Editor/Editorial Boards

Japanese Journal of Mathematics, Springer (Editor in Chief, 2006–).
Geometriae Dedicata, Springer (2000–).
International Mathematics Research Notices, Oxford University Press (2002–).
International Journal of Mathematics, World Scientific (2004–).
Translations of Mathematical Monographs, Amer. Math. Soc. (2016–).
Journal of Lie Theory, Heldermann Verlag (2012–).
Kyoto Journal of Mathematics (2010–)
Journal of Mathematical Sciences, The University of Tokyo (2007–).
Advances in Pure and Applied Mathematics, Heldermann Verlag (2008–).
Kodaira Centennial Issue, Journal of Mathematical Sciences, The University of Tokyo (2015)
Masaki Kashiwara's 70th birthday volume (2017)
Colected volume of Sato Mikio (editor in chief) (2019-)
Journal of Mathematical Society of Japan (1998–2006),
Editor in Chief (2002–2004; 2004–2006).
Publications RIMS (2003–2007).
Representation Theory, Amer. Math. Soc. (2015–).

Academic Honors and Awards

2019: MSJ Publication Prize, Japan
2017 The Kemeny lectures. Dartmouth College, USA.
2017: Fellow of American Mathematical Society.
2015: JMSJ Outstanding Paper Prize
2014: Medal with Purple Ribbon, Japan
2013: 4-days workshop in honor of 50th birthday of T.Kobayashi, France.
2011: Inoue Prize for Science, Japan
2008: The Monna Lecturer, Netherlands
2008: Humboldt Research Award, Germany
2006/2007: Sackler Distinguished Lecturer, Israel
2007: JSPS Prize, awarded by the Japan Society for the Promotion of Science
2006: Osaka Science Prize
2002: International Congress of Mathematicians (ICM) 2002, invited speaker
1999: Spring Prize (Highest Prize of the Mathematical Society of Japan)
1997: Takebe Prize, awarded by the Mathematical Society of Japan

Selected Books by T. Kobayashi

[21] *Singular Unitary Representations and Discrete Series for Indefinite Stiefel Manifolds* $U(p,q;\mathbb{F})/U(p-m,q;\mathbb{F})$, Memoirs of the Amer. Math. Soc. **462**, 1992, 106 pp.

[84] with T. Oshima, *Lie Groups and Representations*, Iwanami, 2005, 610 pp. (Japanese)

[85] with A. Borel and L. Ji, *Lie Theory: Unitary Representations and Compactifications of Symmetric Spaces* Progr. Math. **229**, Birkhäuser, 2005.

[146] with G. Mano, *The Schrödinger model for the minimal representation of the indefinite orthogonal group* $O(p,q)$, Mem. Amer. Math. Soc. **212**, no. 1000, vi+132 pp., 2011.

[216] with B. Speh, *Symmetry Breaking for Representations of Rank One Orthogonal Groups*, Mem. Amer. Math. Soc. **236**, 131 pp., 2015. vi+112 pages. ISBN: 978-1-4704-1922-6.

[251] with T. Kubo and M. Pevzner, *Conformal Symmetry Breaking Operators for Differential Forms on Spheres*, Lecture Notes in Mathematics, **2170**, Springer, 2016. ix+192 pages

[268] with B. Speh, Symmetry Breaking for Representations of Rank One Orthogonal Groups II, Lecture Notes in Mathematics, **2234**, Springer, 2018, xv+342 pages, ISBN: 978-981-13-2900-5.

Selected invited addresses of T. Kobayashi

Conference in celebration of 60th birthday of Yves Benoist, Italy (2019).
Conference in celebration of 60th birthday of Joachim Hilgert, Paderborn, Germany (2018).
Plenary Lecture at International Colloquium on Group Theoretical Methods in Physics, Czech (2018).
Conference in celebration of 60th birthday of Aleksy Tralle, Krakow, Poland (2018).
Conference in memory of Bertram Kostant, MIT, USA (2018).
Conference in celebration of 81th birthday of Alexsandre Kirillov, France (2017).
The Kemeny Lectures, Dartmouth College, USA (2017).
70th anniversary lecture, MSJ Autumn Meeting, Japan (2016)
Conference in celebration of 80th birthday of Paul Baum, Canada (2016).
Conference in celebration of Roger Howe (opening lecture, Singapore 2006; Yale, USA 2015)
Conference in celebration of 60th birthday of David Vogan, Jr. MIT, USA (2014)
Panorama Lectures in celebration of 125th birthday of S. Ramanujan, India (2013)
Conference in honor of Michael Eastwood, Wien, Austria (2012)
Conference in honor of Jean-Marie Souriau, France (2012)
Conference in honor of Igor Frenkel, USA (2012)
Conference in honor of Joseph A. Wolf, Germany (2012)
Conference in honor of MS Raghunathan, Tata Institute, India (2011)
Chern Centennial Conference, MSRI, Berkeley, USA (2011)
Colloquium, Chicago University, USA (2011)
Geometry and Quantum Theory, Nijmegen, the Netherlands (2010)
Conference in honor of Jorge Vargas, Argentina (2009)
Conference in honor of Gregg Zuckerman, USA (2009)
Mathematische Arbeitstagung, Germany (2009)
Conference in honor of Bent Ørsted (opening lecture), Germany (2009)
Colloquium, Yale University, USA (2009)
Conference in honor of Toshio Oshima, Japan (2009; 2019)
Conference, Representations of Lie groups and applications, Paris, France (2008)
The Monna Lectures, Netherlands (2008)
Conference in honor of Jean-Louis Clerc, France (2008)
Colloquium, Harvard University, USA (2008)
Conference in honor of S. Helgason, (Demnark 1992; Iceland 2007; USA 2012)
Conference in honor of T. Sunada, Japan (2007)
Conference on representation theory, (closing lecture of MPI programme), Germany (2007)
Seminar Sophus Lie in honor of E. B. Vinberg (opening lecture), Germany (2007)
Summer Solstice Days, Université de Paris 6 & 7, France (1996; 1999; 2007)
Sackler Distinguished Lectures in Pure Mathematics, Israel (2007)
Award Lecture of Osaka Science Prize, Japan (2006)
Conference in honor of H. Abels, Germany (2006)
Conference in honor of R. Parthasarathy, India (2006)
Asian Mathematical Congress, Singapore (2005)
Seminar Sophus Lie in honor of J. Faraut, France (2005)
Pan-African Congress of Mathematicians (plenary address), Tunisia (2004)
Conference in honor of G. van Dijk, Netherland (2004)
ICM 2002, Beijing, China (2002)
European School on Group Theory (series lectures), Denmark (2000)
Conference, Oberwolfach (opening lecture), Germany (2000)
Award Lecture of Spring Prize, Japan (1999)
The Gelfand Seminar, USA (1997)
Annual Meeting of Swedish Mathematical Society, Lund, Sweden (1995)
Colloquium at Columbia University, USA (1992)

Selected Papers of T. Kobayashi

[9] *Proper action on a homogeneous space of reductive type*, Math. Ann. **285** (1989), 249–263.

[23] *A necessary condition for the existence of compact Clifford–Klein forms of homogeneous spaces of reductive type*, Duke Math. J. **67** (1992), 653–664.

[30] *Discrete decomposability of the restriction of $A_{\mathfrak{q}}(\lambda)$ with respect to reductive subgroups and its applications*, Invent. Math. **117** (1994), 181–205.

[44] *Invariant measures on homogeneous manifolds of reductive type*, J. reine und angew. Math. **490** (1997), 37–53.

[48] *Discrete decomposability of the restriction of $A_{\mathfrak{q}}(\lambda)$ with respect to reductive subgroups II—micro-local analysis and asymptotic K-support*, Annals of Math. **147** (1998), 709–729.

[50] *Discrete decomposability of the restriction of $A_{\mathfrak{q}}(\lambda)$ with respect to reductive subgroups III—restriction of Harish-Chandra modules and associated varieties*, Invent. Math. **131** (1998), 229–256.

[52] *Deformation of compact Clifford–Klein forms of indefinite-Riemannian homogeneous manifolds*, Math. Ann. **310** (1998), 395–409.

[63] *Discontinuous groups for non-Riemannian homogeneous spaces*, Mathematics Unlimited—2001 and Beyond (B. Engquist and W. Schmid, eds.), Springer-Verlag, 2000, pp. 723–748.

[65] *Branching problems of unitary representations*, Proceedings of ICM, Beijing 2002, **2** (2002), 615–627.

[72], [73], [74] with B. Ørsted, *Analysis on minimal representations of $O(p,q)$, I, II, III*, Adv. Math. **180** (2003), 486–512; 513–550; 551–595.

[86] *Multiplicity-free representations and visible actions on complex manifolds*, Publ. RIMS **41** (2005), 497–549, special issue commemorating the 40th anniversary of the founding of RIMS.

[89] with T. Yoshino, *Compact Clifford–Klein forms of symmetric spaces—revisited*, Pure and Appl. Math. Quarterly **1** (2005), 603–684, Special Issue: In Memory of Armand Borel.

[103] *Visible actions on symmetric spaces*, Transformation Groups **12** (2007), 671–694.

[147] with J.-L. Clerc, B. Ørsted and M. Pevzner, *Generalized Bernstein–Reznikov integrals*, Math. Ann. **349** (2011), 395–431.

[164] with S. Ben Saïd and B. Ørsted, *Laguerre semigroup and Dunkl operators*, Compositio Mathematica **148** (2012), 1265–1336.

[178] with T. Oshima, *Finite multiplicity theorems for induction and restriction*, Advances in Mathematics **248** (2013), 921–944.

[179] with Y. Oshima, *Classification of symmetric pairs with discretely decomposable restrictions of $(\mathfrak{g}, K)$-modules*, Crelles Journal, (2015), **703**, 201–223.

[228] with Y. Benoist, *Temperedness of reductive homogeneous spaces*, J. Eur. Math. Soc., **17** (2015), 3015–3036.

[226] with F. Kassel, *Poincaré series for non-Riemannian locally symmetric spaces*, Advances in Mathematics **287** (2016), 123–236.

[229, 230] with M. Pevzner, *Differential symmetry breaking operators. Part I. General theory and F-method., Selecta Math. **22**, (2016), pp. 901–845; Part II. Rankin–Cohen operators for symmetric pairs*, *ibid.*, **22**, (2016), pp. 847–911.

Ph.D. students and postdoc students of T. Kobayashi

Former Ph.D. and master students

Taito Tauchi, The University of Tokyo, Ph. D. 2019
Naoya Shimamoto, The University of Tokyo, Ph. D. 2019
Yosuke Morita, The University of Tokyo, Ph. D. 2017
Masatoshi Kitagawa, The University of Tokyo, Ph. D. 2016
Ryosuke Nakahama, The University of Tokyo, Ph. D. 2016
Yuichiro Tanaka, The University of Tokyo, Ph. D. 2015
Takayuki Okuda, The Uniersity of Tokyo, Ph. D. 2013
Yoshiki Oshima, The University of Tokyo, Ph. D. 2013
Jan Möllers, Paderborn University, Ph. D. 2010
Katsuki Teduka, The University of Tokyo, Ph. D. 2008
Atsumu Sasaki, Waseda University, Ph. D. 2008
Masayasu Moriwaki, Hiroshima University, Ph. D. 2008
Gen Mano, RIMS, Kyoto University, Ph. D. 2007
Taro Yoshino, The University of Tokyo, Ph. D. 2005
Salma Nasrin, The University of Tokyo, Ph. D. 2003

Takashi Satomi, The University of Tokyo, M.A. 2019
Kazuki Kannaka, The University of Tokyo, M.A. 2018
Yohei Itoh, The University of Tokyo, M.A. 2017
Hiroyoshi Tamori, The University of Tokyo, M.A. 2017
Oleksii Leontiev, The University of Tokyo, M.A. 2016
Taito Tauchi, The University of Tokyo, M.A. 2016
Naoya Shimamoto, The University of Tokyo, M.A. 2016
Yuuki Fujii, the University of Tokyo, M.A. 2012
Yukio Koriyama, the University of Tokyo, M.A. 2002
Hidehisa Alikawa, University of Tokyo, M.A. 2001

Former and Current postdoc students

Yuichiro Tanaka (Japan), 2016–
Yoshiki Oshima (Japan), 2013–2017
Toshihisa Kubo (USA), 2012 – 2016
Pierre Clare (France), 2011
Gen Mano (Japan), 2007–2008
Taro Yoshino (Japan), 2005–2007; 2007–2010
Salma Nasrin (Bangladesh), 2003–2005
Andreas Nilsson (Sweden), 1999–2001, 2005
Tibor Odor (Hungary), 1999–2001

Course Lectures for postdoc/graduate students (recent ones)

Summer School, The 2nd International Undergraduate Mathematics Summer School, The University of Tokyo,Japan. *Introduction to representation theory of real reductive Lie groups and branching problems*, 2019

Summer School, Representation Theory of Lie Groups, Mathematical Physics, and Dynamical Systems. Université de Reims, France. *Symmetry Breaking Operators: General Theory and Concrete Construction for Reductive Groups*, 2019.

Yale University, USA. *Representations of Lie groups*, January-May, 2019.

Graduate course at The University of Tokyo, *Geometry and Representations of Real Reductive Groups*, 2018

Graduate course at The University of Tokyo, *Frontiers of Mathematical Sciences and Physics*, 2017

Winter School,Geometry, Topology and Representation Theory, Berkeley, UAS, *Branching problems in representation theory of reductive Lie groups*, 2016

Graduate course at the University of Tokyo, *Symmetry breaking operators*, 2015

Graduate course at Kyushu University, *Infinite Dimensional Representations of Lie Groups*, Group Actions and Representation Theory of Lie Groups, January 2015.

Graduate course at Tohoku University, *Visible Actions and Multiplicity-free Representations on Complex Manifolds*. December 2014..

Geometry, Integrability and Quantization. Varna, Bulgaria, June 2014.

Graduate course at the University of Tokyo *Representation Theory and Visible Actions on Complex Manifolds*, 2014

CIMPA School, *Minimal Representations and Special Functions*, August, 2013, Mongol.

Graduate course at the University of Tokyo, *Differential Geometry*, 2010, Japan.

Graduate course at the University of Tokyo, *Complex geometry and representation theory II*, 2010, Japan.

Winter School on Geometry and Physics (course lectures), *Visible Actions on Complex Manifolds and Multiplicity-free Representations*, 2009, Czech.

Graduate course at the University of Tokyo, *Complex Geometry and Representation Theory*, 2009, Japan.

Graduate course at the University of Tokyo, *Lie Groups and Homogeneous Spaces*, 2008, Japan.

Summer School organized by D. Adamović et al. (4 lectures), *Visible Actions and Multiplicity-free Representations*, 2008, Croatia.

Graduate course at Harvard University (37 lectures), *Multiplicity-Free Representations*, 2008, USA.

Summer School organized by Shing-Tung Yau (chair) et al. (course lectures), *Clifford–Klein Forms of Non-Riemannian Homogeneous Spaces*, 2006, China.

Summer School organized by Joachim Hilgert and Tilmann Wurzbacher (course lectures), *Unitary Representations, Restrictions, and their Applications*, 2006, Germany.

Graduate course at the University of Tokyo, *Topics on Unitary Representation Theory by Complex Analytic Methods*, 2006, Japan.

Graduate course at Hiroshima University, *Group Actions and Representations of Lie Groups*, 2006, Japan.

Summer School (course lectures), Tambara, *Visible Actions and Multiplicity-Free Representations*, 2005, Japan.

Graduate course at Osaka City University, *Visible Actions and Multiplicity-Free Representations*, 2005, Japan.

Graduate course at the University of Tokyo, *Visible Actions and Multiplicity-Free Representations*,

2004, Japan.

Graduate course at Tokyo Institute of Technology, *Discontinuous Groups on non-Riemannian Homogeneous Spaces*, 2003, Japan.

Graduate course at the University of Tokyo, *Restriction of Unitary Representations*, 2002, Japan.

Winter School on Geometry and Physics (course lectures), *Conformal Geometry and Analysis on Minimal Representations*, 2002, Czech Republic.

Graduate course at the University of Tokyo, *Multiplicity One Theorem of Branching Laws*, 2001, Japan.

Graduate course at Harvard University (25 lectures), *Restriction of Representations to Reductive Subgroups*, 2000–2001, USA.

European School on Group Theory (course lectures), *Branching Problems and Unitary Representations*, 2000, Denmark.

Graduate course at the Univerity of Tokyo, *Lie Groups and Lie Algebras*, 2000, Japan.

Graduate course at the University of Tokyo, *Discontinuous Groups for Homogeneous Spaces*, 2000, Japan.

Graduate course at the Univeristy of Tokyo, *Conformal Geometry and Global Solutions to Yamabe Equations*, 1999-2000, Japan.

Graduate course at Hokkaido University, *Geometric Structures on Homogeneous Spaces and Discontinuous Groups*, 1999, Japan.

Summer School (course lectures), Yonsei University, *Restriction Theory of Unitary Representations*, 1999, Korea.

International Conference (co)organized by T. Kobayashi

The 23rd Takagi Lectures, Tokyo, Japan, 2019.
The 22nd Takagi Lectures, Tokyo, Japan, 2018.
coorganized with Y. Kawahigashi, T. Kumagai, H. Nakajima, K. Ono and T. Saito.
The 21st Takagi Lectures, Kyoto, Japan, 2018.
The 20th Takagi Lectures, Tokyo, Japan, 2017,
The 19th Takagi Lectures, Kyoto, Japan, 2017.
The 18th Takagi Lectures, Tokyo, Japan, 2016.
The 17th Takagi Lectures, Kyoto, Japan, 2016,
Winter School on Representation Theory of Real Reductive Groups Tokyo, Japan, 2016
The 16th Takagi Lectures, Tokyo, Japan, 2015.
Analytic Representation Theory of Lie Groups, Kavli IPMU, Japan, 2015.
The 15th Takagi Lectures, Tohoku, Japan, 2015,
The 14th Takagi Lectures, Tokyo, Japan, 2014,
The 13th Takagi Lectures, Kyoto, Japan, 2013,
Representations of Lie Groups and Supergroups,
Oberwolfach, Germany, 2013, coorganized with J. Hilgert, K.-H. Neeb and T. Ratiu.
JSPS-DST Asian Academic Seminar, Discrete Mathematics and its Applications,
the University of Tokyo, Tokyo, Japan, 2013.
The 12th Takagi Lectures, Tokyo, Japan, 2013,
The 11th Takagi Lectures, Tokyo, Japan, 2012,
The Tenth Takagi Lectures, Kyoto, Japan, 2012,
Harmonic Analysis, Operator Algebras and Representations,
CIRM, Luminy, France, 2012. (scientific committee)
AIM conference on Branching Problems for Unitary Representations,
Max Planck Institute for Mathematics Bonn, Germany, 2011,
coorganized with B. Ørsted and B. Speh.
The Ninth Takagi Lectures, Kyoto, Japan, 2011,
The Eighth Takagi Lectures, Kyoto, Japan, 2010,
Representation Theory and Harmonic Analysis,
Oberwolfach, Germany, 2010, coorganized with B. Krötz.
IPMU Workshop: Quantizations, Integrable Systems and Representation Theory,
Tokyo, Japan, 2009, coorganized with Martin Guest and Toshitake Kohno.
Workshop on Integral Geometry and Group Representations, Tambara, Japan, 2009,
coorganized with Fulton Gonzalez, Tomoyuki Kakehi and Toshio Oshima.
The Seventh Takagi Lectures, Tokyo, Japan, 2009,
The Sixth Takagi Lectures, Hokkaido, Japan, 2009,
Conference in honor of Bent Ørsted's 60th birthday, Göttingen, Germany, 2009,
coorganized with M. Pevzner, P. Ramacher and I. Witt.
Spring School on Representation Theory, Tokyo, Japan, 2009.
The 8th Workshop on Nilpotent Orbits and Representation Theory, Otsu, Japan, 2009,
coorganized with K. Nishiyama and H. Yamashita.
Global COE Opening Symposium, Tokyo, Japan, 2009,
coorganized with Y. Kawahigashi, Y. Kawamata and T. Saito.
Conference in honor of Toshio Oshima's 60th birthday, Tokyo, Japan, 2009,
coorganized with H. Matumoto, H. Ochiai and H. Sekiguchi.
The Fifth Takagi Lectures, Tokyo, Japan, 2008,
The Fourth Takagi Lectures, Kyoto, Japan, 2008,

Harmonische Analysis und Darstellungstheorie Topologischer Gruppen,
Oberwolfach, Germany, 2007, coorganized with B. Krötz, E. Lapid, and C. Torossian.
The Third Takagi Lectures, Tokyo, Japan, 2007,
The Second Takagi Lectures, Tokyo, Japan, 2007,
The First Takagi Lectures, Kyoto, Japan, 2006,
coorganized with Y. Kawahigashi, H. Nakajima, K. Ono and T. Saito.
Representation Theory and Automorphis Forms, Seoul, Korea, 2005,
coorganized with W. Schmid and J. Yang.
Representation Theory, Awajishima island, Japan, 2004,
coorganized with H. Ochiai and H. Tagawa.
Analysis on Homogeneous Spaces and Representation Theory, Okayama, Japan, 1997,
coorganized with M. Kashiwara, T. Oshima and K. Nishiyama.

Lie groups and representations seminar organized by T. Kobayashi

Speakers in the last 20 years include:

2016: Jeffrey Adams (USA) Yiannis Sakellaridis (USA, Greece), Tobias Weich (Germany), Wan-Yu Tsai (Taiwan).

2015: Peter Trapa (USA), Raul Gomez (USA), Benjamin Harris (USA), Piotr Pragacz (Poland), Bent Ørsted (Denmark), Anton Evseev (UK), Takeyoshi Kogiso (Japan), Anatoly Vershik (Russia), Gabriele Bianchi (Italy), Takeshi Hirai (Kyoto), Micael Pevzner (France), Kyo Nishiyama (Japan), Hiroyuki Ochiai (Kyushu), Birgit Speh (USA).

2014: Masaki Kashiwara (Kyoto), Mikhail Kapranov (USA), Toshio Oshima (Japan), F. Januszewski (Germany), L. Barchini (USA), Ivan Cherednik (USA), Pablo Ramacher (Germany), Gordan Savin (USA), Patrick Delorme (France).

2013: Soji Kaneyuki (Tokyo), Dipendra Prasad (India), Simon Goodwin (UK), Nizar Demni (France), Michael Pevzner (France), Pierre Clare (USA), Birgit Speh (USA), Maarten van Pruijssen (Netherland), Benjamin Harris, Vaibhav Vaish (India), Pampa Paul (India), Ronald King (UK), Simon Gindikin (USA).

2012: Yves Benoist, Eric Opdam, Toshihisa Kubo (USA), Oskar Hamlet (Sweden), Ali Baklouti (Tunisia), Hiroshi Konno (Tokyo),

2011: Pierre Clare (France),Gang Liu (France), Job Kuit (Netherland), Laurant Demonet, Daniel Sternheimer,Hung Yean Loke (Singapore).

2010: Fanny Kassel (France), Yves Benoist (France), Shu Kato (Japan), Uuganbayar Zunderiya (Japan), Takayuki Okuda (Japan), Yoshiki Oshima (Japan), Hisayosi Matumoto (Japan), Birgit Speh (USA), Kaoru Hiraga (Japan), Kanehisa Takasaki (Japan), Soji Kaneyuki (Japan), Soo Teck Lee (Singapore), Bernhard Muhlherr (Germany), Daniel Sternheimer (France), Michael Eastwood (Australia), Katsuyuki Naoi (Japan),

2009: Erik van den Ban (Netherlands), Patrick Delorme (France), Mogens Flensted-Jensen (Denmark), Masaki Kashiwara (Japan), Toshiyuki Kobayashi (Japan), Toshihiko Matsuki (Japan), Hisayosi Matumoto (Japan), Hiroyuki Ochiai (Japan), Yasunori Okada (Japan), Toshio Oshima (Japan), Yoshiki Otobe (Japan), Hideko Sekiguchi (Japan), Jiro Sekiguchi (Japan), Nobukazu Shimeno (Japan), Eric Opdam (Netherlands), Gombodorj Bayarmagnai (Japan), Bernhard Krötz (Germany), Salah Mehdi (France), Peter Trapa (USA), Roger Zierau (USA), Michel Duflo (France), Gert Heckman (The Netherlands), Hiroshi Iritani (Japan), Carlos Olmos (Argentina), Michael Pevzner (France), Daniel Sternheimer (France), Takaaki Nomura (Japan), Toshikazu Sunada (Japan), Kyo Nishiyama (Japan),

2008: Fulton Gonzalez (USA), Katsuki Teduka (Japan), Toshio Oshima (Japan), Akishi Kato (Japan), Taro Yoshino (Japan), Atsumu Sasaki (Japan), Nobukazu Shimeno (Japan), Takayuki Okuda (Japan), Katsuyuki Naoi (Japan), Kazuki Hiroe (Japan), Takeyoshi Kogiso (Japan), Federico Incitti (Italy), Joachim Hilgert (Germany), Jan Moellers (Germany), Hiroyuki Ochiai (Japan), Jorge Vargas (Argentina), Masahiko Kanai (Japan), Genkai Zhang (Sweden),

2007: Yiannis Sakellaridis (Israel), Ali Baklouti (Tunisia), Gen Mano (Japan), Joseph Bernstein (Israel), Tilmann Wurzbacher (France), Peter Trapa (USA), Herve Sabourin (France), R. Stanton (USA), Masatoshi Iida (Japan), Tomoyuki Arakawa (Japan), Chifune Kai (Japan), Nobutaka Boumuki (Japan), Soji Kaneyuki (Japan), Karl-Hermann Neeb (Germany), Yoshishige Haraoka (Japan), Salem Ben Saïd (France), Pablo Ramacher (Germany), Michaël Pevzner (France), Hisayosi Matumoto (Japan), Masayasu Moriwaki (Japan), Kyo Nishiyama (Japan), Junko Inoue (Japan), Noriyuki Abe (Japan),

2006: Hubert Rubenthaler (France), Hidenori Fujiwara (Japan), Toshihiko Matsuki (Japan), Anthony Dooley (Australia), Pavle Pandzic (Croatia), Gestur Ólafsson (USA), Sigurdur Helgason (USA), Katsuhiko Kikuchi (Japan), Pierre Pansu (France), Sai Kee Yeung (USA), Oksana Yakimova (Germany), Hadi Salmasian (Canada),

2005: Kazunari Sugiyama (Japan), Michel Duflo (France), Wachi Akihito (Japan), Dan Barbasch (USA), Takeshi Kawazoe (Japan), Alexander Alldridge (Germany), Troels Johansen (Germany), Andreas Nilsson (Sweden), Jun O'Hara (Japan), Ivan Cherednik (USA), Simon Gindikin (USA),

Complete List of Publications of Toshiyuki Kobayashi

[1] T. Kobayashi, Seminar Reports of Unitary Representation (in Japanese).

[2] ———, *The null variety of the Fourier transform of the characteristic function of a convex domain*, Master Dissertation I, the University of Tokyo, 1987, 98 pp.

[3] ———, *Discrete series representation for vector bundles over semisimple symmetric spaces*, Master Dissertation II, the University of Tokyo, 1987, 56 pp.

[4] ———, *Construction of discrete series for vector bundles over semisimple symmetric spaces*, Characteristic Function on a Symmetric Space and Representation of Lie Group (K. Minemura, ed.), vol. 642, 1988, pp. 134–156.

[5] ———, *Properly discontinuous actions on reductive homogeneous spaces*, Seminar Reports of Unitary Representation **8** (1988), 17–22 (in Japanese), at the annual conference on unitary representation theory at Lake-Kawaguchi (organized by H. Yamada), November 1988.

[6] T. Kobayashi and K. Ono, *Note on Hirzebruch's proportionality principle*, Representation Theory and its Applications to Physics (Y. Kanie, ed.), vol. 700, 1989, pp. 103–126.

[7] T. Kobayashi, K. Ono, and T. Sunada, *Periodic Schrödinger operators on a manifold*, Forum Math. **1** (1989), no. 1, 69–79.

[8] T. Kobayashi, *Asymptotic behaviours of the null variety for a convex domain in a non-positively curved space form*, Jour. Fac. Sci. Univ. Tokyo **36** (1989), no. 3, 389–478.

[9] ———, *Proper action on a homogeneous space of reductive type*, Math. Ann. **285** (1989), no. 2, 249–263.

[10] ———, *How can we VIEW from silhouettes?*, Sugaku Seminar **9** (1989), 82–87 (in Japanese), reproduced in "Gendai Sugaku no Ayumi 4".

[11] ———, *Unitary representations realized in L^2-sections of vector bundles over semisimple symmetric spaces*, Proceedings of the Joint Sympoium of Real Analysis and Functional Analysis (cosponsored by the Mathematical Society of Japan), 1989, pp. 39–54 (in Japanese).

[12] ———, *Homogeneous spaces with indefinite-metric and discontinuous groups*, 36th Geometry Symposium, 1989, pp. 104–116 (in Japanese).

[13] ———, *Analysis on homogeneous vector bundles and unitary representations of semisimple Lie groups*, Proceedings of the Annual Meeting of the Mathematical Society of Japan held at Sophia University, September 1989, 1989, pp. 84–93 (in Japanese).

[14] ———, *Proper action on a homogeneous space of reductive type*, Ph.D. thesis, the University of Tokyo, 1990, DOI: 10.11501/3087251.

[15] ———, *Discontinuous groups acting on non-Riemannian homogeneous spaces*, Workshop on Algebraic Groups and Related Topics (I. Satake, ed.), vol. 737, 1990, pp. 6–29.

[16] T. Kobayashi and K. Ono, *Note on Hirzebruch's proportionality principle*, Journal of the Faculty of Science. University of Tokyo. Section IA. Mathematics **37** (1990), no. 1, 71–87.

[17] T. Kobayashi, *Discontinuous group in a homogeneous space of reductive type*, Seminar Reports of Unitary Representation **10** (1990), 41–45, at the International Conference on Representation Theories of Lie Groups and Lie Algebras at Lake-Kawaguchi.

[18] ———, *Some examples of the branching rule of unitary representations associated to isomorphisms of homogeneous spaces*, unpublished notes, 1990.

[19] ———, *Singular unitary representations and discrete series for the indefinite Stiefel manifolds* $U(p,q;\mathbb{F})/U(p-m,q;\mathbb{F})$, abstracts of a Conference held in Sandbjerg Gods', August 26–30, 1991, edited by N. V. Pedersen, Mathematical Institute, Copenhagen University, Report, vol. 3, 1991, pp. 30–33.

[20] ———, *Convex domains and Fourier transform on spaces of constant curvature*, Lecture Notes of the UNESCO–CIMPA School on "Invariant differential operators on Lie groups and homogeneous spaces", at WuHan University in P. R. China, 1991 (P. Torasso, ed.), 1991, 112 pp.

[21] ———, *Singular unitary representations and discrete series for indefinite Stiefel manifolds* $U(p,q;\mathbb{F})/U(p-m,q;\mathbb{F})$, Mem. Amer. Math. Soc., vol. 462, Amer. Math. Soc., 1992, v+106 pages, ISBN-10: 0-8218-2524-0; ISBN-13: 978-0-8218-2524-2 (print); ISBN-13: 978-1-4704-0888-6 (electric).

[22] ———, *Discontinuous groups acting on homogeneous spaces of reductive type*, Proceedings of Representation Theory of Lie Groups and Lie Algebras, Fuji-Kawaguchiko, 1990 (T. Kawazoe, T. Oshima, and S. Sano, eds.), World Scientific, 1992, pp. 59–75, ISBN 9810210906.

[23] ———, *A necessary condition for the existence of compact Clifford–Klein forms of homogeneous spaces of reductive type*, Duke Math. J. **67** (1992), 653–664.

[24] ———, *Perturbations of domains in the Pompeiu problem*, Comm. Anal. Geom. **1** (1993), 29–55.

[25] ———, *The restriction of* $A_{\mathfrak{q}}(\lambda)$ *to reductive subgroups*, Proc. Japan Acad. Ser. A **69** (1993), 262–267.

[26] ———, *On discontinuous groups acting on homogeneous spaces with noncompact isotropy subgroups*, J. Geom. Physics **12** (1993), 133–144.

[27] ———, *Introduction to unitary representation theory of semisimple Lie groups—Vogan–Zuckerman's derived functor modules, and discretely decomposable unitary representations*, Proceedings of Symposium on Representation Theory at Izu–Atagawa, 1993, 1993, pp. 32–51 (Japanese).

[28] ———, *Bounded domains and the zero sets of Fourier transforms*, 75 Years of Radon Transform (S. Gindikin and P. Michor, eds.), International Press, Hongkong, 1994, pp. 223–239, Conference Proceedings and Lecture Notes in Mathematical Physics, **IV**. ISBN 157146008X.

[29] ———, *Harmonic analysis on homogeneous spaces of reductive type and representation theory*, Sugaku **46** (1994), 124–143 (in Japanese).

[30] ———, *Discrete decomposability of the restriction of* $A_{\mathfrak{q}}(\lambda)$ *with respect to reductive subgroups and its applications*, Invent. Math. **117** (1994), 181–205, DOI: 10.1007/BF01232239.

[31] ———, *Discontinuous groups acting on homogeneous spaces—Calabi–Markus phenomenon, compact Clifford–Klein forms*, Lecture notes of European School on Group Theory held at Sandbjerg Gods', August 15–26, 1994 (1994), 30 pp.

[32] ———, *Integral geometry for submanifolds and Plancherel formulas of complex homogeneous manifolds*, Proceedings of Symposium on Representation Theory at Toyama (November 16–19, 1994), 1994, pp. 16–25 (in Japanese).

[33] ———, *The restriction of $A_{\mathfrak{q}}(\lambda)$ to reductive subgroups* II, Proc. Japan Acad. Ser. A **71** (1995), 24–26.

[34] ———, *Introduction to harmonic analysis on spherical homogeneous spaces*, Proceedings of 3rd Summer School on Number Theory "Homogeneous Spaces and Automorphic Forms" held at Rikkyo University, January 1995 and at Yamagata-mura in Nagano, July 1995 (F. Sato, ed.), 1995, pp. 22–41 (in Japanese).

[35] ———, *Criterion for proper actions on homogeneous spaces of reductive groups*, J. Lie Theory **6** (1996), no. 2, 147–163.

[36] ———, *Discontinuous groups and Clifford–Klein forms of pseudo-Riemannian homogeneous manifolds*, Algebraic and Analytic Methods in Representation Theory (H. Schlichtkrull and B. Ørsted, eds.), Perspectives in Mathematics, vol. 17, Academic Press, 1996, pp. 99–165, ISBN 0-12-625440-0.

[37] ———, *A vanishing theorem of modular symbols on locally symmetric varieties,* (notes taken by S. Ishikawa), Proceedings of Representation Theory and Related Topics, Kurashiki 1996 (N. Shimeno, ed.), 1996, pp. 1–16 (in Japanese).

[38] T. Kobayashi and T. Oshima, *Multiplicities of induced representations of semisimple Lie groups*, unpublished notes, 1996.

[39] T. Kobayashi, *On the restriction of unitary representations and their applications*, Proceedings of Symposium on Representation Theory, Mikawa, 1996, pp. 131–141 (in Japanese).

[40] ———, *Monastir Seminar on the restriction of unitary representations and their applications*, Proceedings of the CIMPA School, held in Tunisia, July–August 1996 (P. Torasso, ed.), 1997.

[41] ———, *Monastir Seminar on proper actions, discontinuous groups, and uniform lattices for pseudo-Riemannian homogeneous manifolds*, Proceedings of the CIMPA School, held in Tunisia, July–August 1996 (P. Torasso, ed.), 1997.

[42] ———, *L^p-analysis on homogeneous manifolds of reductive type and representation theory*, Proc. Japan Acad. **73** (1997), 62–66.

[43] ———, *Multiplicity free theorem in branching problems of unitary highest weight modules*, Proceedings of Representation Theory held at Saga, Kyushu, 1997 (K. Mimachi, ed.), 1997, pp. 9–17.

[44] ———, *Invariant measures on homogeneous manifolds of reductive type*, J. Reine Angew. Math. **490** (1997), 37–53, DOI: 10.1515/crll.1997.490.37.

[45] ———, *Discrete and continuous—Branching laws of infinite dimensional representations and their applications*, Proceedings of plenary lectures, the Mathematical Society of Japan, held at Meijo University, March, 1998, 1998, pp. 35–54 (in Japanese).

[46] ———, *Harmonic analysis on homogeneous manifolds of reductive type and unitary representation theory*, Translations, Series II, Selected Papers on Harmonic Analysis, Groups, and Invariants (K. Nomizu, ed.), vol. 183, Amer. Math. Soc., 1998, pp. 1–31, ISBN 0-8218-0840-0.

[47] ———, *Discrete series representations for the orbit spaces arising from two involutions of real reductive Lie groups*, J. Funct. Anal. **152** (1998), 100–135.

[48] ———, *Discrete decomposability of the restriction of $A_{\mathfrak{q}}(\lambda)$ with respect to reductive subgroups* II—*micro-local analysis and asymptotic K-support*, Annals of Math. **147** (1998), no. 3, 709–729, DOI: 10.2307/120963.

[49] T. Kobayashi and T. Oda, *A vanishing theorem for modular symbols on locally symmetric spaces*, Comment. Math. Helv. **73** (1998), 45–70.

[50] T. Kobayashi, *Discrete decomposability of the restriction of $A_{\mathfrak{q}}(\lambda)$ with respect to reductive subgroups* III—*restriction of Harish-Chandra modules and associated varieties*, Invent. Math. **131** (1998), 229–256.

[51] T. Kobayashi and B. Ørsted, *Conformal geometry and branching laws for unitary representations attached to minimal nilpotent orbits*, C. R. Acad. Sci. Paris **326** (1998), 925–930.

[52] T. Kobayashi, *Deformation of compact Clifford–Klein forms of indefinite-Riemannian homogeneous manifolds*, Math. Ann. **310** (1998), no. 3, 395–409.

[53] ———, *Theory of discretely decomposable restrictions of unitary representations and its development*, Proceedings of Plenary Lectures of the Mathematical Society of Japan, held at Gakushuin University, Tokyo, March, 1999, 1999, pp. 1–19 (in Japanese).

[54] ———, *Theory of discretely decomposable restrictions of unitary representations of semisimple Lie groups and its developments*, Sugaku **51** (1999), no. 4, 337–356 (in Japanese), an English translation.

[55] ———, *Adjoint action*, Encyclopaedia of Mathematics, Kluwer Academic Publishers, 1999, pp. 15–16.

[56] ———, *Discontinuous groups for homogeneous spaces*, Symposium on Representation Theory, at Tateyama (H. Matumoto, ed.), 1999, pp. 99–110 (in Japanese).

[57] T. Kobayashi and T. Oshima, *Lie groups and Lie algebras I*, Iwanami, 1999 (in Japanese), xvi+293 pp. Reproduced in "Lie Groups and Representations", Iwanami, 2005.

[58] T. Kobayashi, *Lie groups and Lie algebras II*, Iwanami, 1999 (in Japanese), xix+314 pp. Reproduced in "Lie Groups and Representations", Iwanami, 2005.

[59] ———, *Multiplicity-free restrictions of unitary highest weight modules for reductive symmetric pairs*, preprint UTMS 2000–1.

[60] ———, *Discretely decomposable restrictions of unitary representations of reductive Lie groups—examples and conjectures*, Advanced Study in Pure Mathematics, Analysis on Homogeneous Spaces and Representation Theory of Lie Groups, Okayama–Kyoto (T. Kobayashi, M. Kashiwara, T. Matsuki, K. Nishiyama, and T. Oshima, eds.), vol. 26, 2000, pp. 98–126.

[61] ———, *Branching laws of unitary highest weight modules with respect to semisimple symmetric pairs*, Tangunsbericht, Representation Theory and Complex Analysis **18** (2000), 15–16.

[62] T. Kobayashi, M. Kashiwara, T. Matsuki, K. Nishiyama, and T. Oshima (eds.), *Analysis on homogeneous spaces and representation theory of Lie groups, Okayama–Kyoto*, Adv. Stud. Pure Math., vol. 26, Mathematical Society of Japan, 2000, 359 pp. ISBN 4-314-10138-5.

[63] T. Kobayashi, *Discontinuous groups for non-Riemannian homogeneous spaces*, Mathematics Unlimited—2001 and Beyond (B. Engquist and W. Schmid, eds.), Springer-Verlag, 2001, pp. 723–747, ISBN 3540669132.

[64] ———, *Book review on "Continuous groups", L. S. Pontryagin*, Sugaku no Tanoshimi, vol. 23, Nippon-Hyoron-Sha, 2001, pp. 110–119 (in Japanese).

[65] ———, *Branching problems of unitary representations*, Proc. of ICM 2002, Beijing, vol. 2, 2002, pp. 615–627, math.RT/0304326.

[66] ———, *Discontinuous groups for non-Riemannian homogeneous spaces (translation from English)*, Sugaku no Saisentan, challenge to the 21th century, vol. 1, Springer-Verlag, Tokyo, 2002, pp. 18–73 (in Japanese).

[67] ———, *Introduction to actions of discrete groups on pseudo-Riemannian homogeneous manifolds*, Acta Appl. Math. **73** (2002), 115–131.

[68] ———, *Various prompts—when I started studying mathematics*, Sugaku no Tanoshimi, vol. 29, Nippon-Hyoron-Sha, 2002, pp. 9–19, Reproduced in "Sugaku Manabi Hajime", vol. 2, Nippon-Hyoron-Sha, 2006. (in Japanese).

[69] ———, *On the canonical inner product on the space of global solutions of the Yamabe operator*, Proceedings of Differential Geometry Symposium on "Various Geometric Structures", 2002, pp. 4–5.

[70] ———, *The canonical inner product on the space of solutions of the Yamabe operator*, Representations of Noncomutative Algebraic Systems and Harmonic Analysis (T. Ohta, ed.), vol. 1294, 2002, pp. 76–86 (in Japanese).

[71] ———, *Branching problems of unitary representations*, Proceedings of Symposium of Representation Theory, held at Fuji Haitsu, November 2002 (S. Sano, ed.), 2002, pp. 39–52.

[72] T. Kobayashi and B. Ørsted, *Analysis on the minimal representations of $O(p,q)$,* I.—*Realization and conformal geometry*, Adv. Math. **180** (2003), 486–512, math.RT/0111083.

[73] ———, *Analysis on the minimal representations of $O(p,q)$,* II.—*Branching laws*, Adv. Math. **180** (2003), 513–550, math.RT/0111085.

[74] ———, *Analysis on the minimal representations of $O(p,q)$,* III.—*Ultra-hyperbolic equations on $\mathbb{R}^{p-1,q-1}$*, Adv. Math. **180** (2003), 551–595, math.RT/0111086.

[75] T. Kobayashi, *Conformal geometry and global solutions to the Yamabe equations on classical pseudo-Riemannian manifolds*, Supplemento di Rendiconti del Circolo Matematico di Palermo, Serie II **71** (2003), 15–40, Lecture Notes of the 22nd Winter School 2002 on Geometry and Physics, Czech Republic.

[76] T. Kobayashi and S. Nasrin, *Multiplicity one theorem in the orbit method*, Amer. Math. Soc. Transl., Advances in the Mathematical Sciences, Series 2 **210** (2003), 161–169, Special volume in memory of Professor F. Karpelevič.

[77] T. Kobayashi, *Schrödinger model of the minimal representation of $O(p,q)$*, Automorphic Forms on Type IV Symmetric Domains (T. Oda, ed.), vol. 1342, 2003, pp. 107–116 (in Japanese).

[78] ———, *Multiplicity one theorem on branching laws and geometry of complex manifolds*, Expansion of Lie Theory and New Advances (S. Ariki, ed.), vol. 1348, 2003, pp. 1–9 (in Japanese).

[79] T. Kobayashi and A. Nilsson, *Characterizing multipliers by relative invariance*, Expansion of Lie Theory and New Advances (S. Ariki, ed.), vol. 1348, 2003, pp. 10–22.

[80] T. Kobayashi, *On discontinuous groups for non-Riemannian homogeneous spaces*, Proceedings of Geometry Session, the Mathematical Society of Japan, September 2003, 2003, pp. 75–89.

[81] ———, *Geometry of multiplicity-free representations of $GL(n)$, visible actions on flag varieties, and triunity*, Acta Appl. Math. **81** (2004), 129–146.

[82] T. Kobayashi, H. Ochiai, and H. Tagawa (eds.), *Symposium on Representation theory 2004, Awajishima*, 2004, 164 pp., ISBN 4-9902328-0-1.

[83] T. Kobayashi and G. Mano, *Integral formulas for the minimal representations for $O(p,2)$*, Acta Appl. Math. **86** (2005), 103–113.

[84] T. Kobayashi and T. Oshima, *Lie groups and representations*, Iwanami, 2005 (in Japanese), 638 pp. ISBN 4-00-006142-9.

[85] T. Kobayashi, *Restrictions of unitary representations of real reductive groups*, Lie Theory: Unitary Representations and Compactifications of Symmetric Spaces (J.-P. Anker and B. Ørsted, eds.), Progress in Mathematics **229**, Birkhäuser, 2005, pp. 139–207, ISBN 0817635262.

[86] ———, *Multiplicity-free representations and visible actions on complex manifolds*, Publ. Res. Inst. Math. Sci. **41** (2005), 497–549, special issue commemorating the fortieth anniversary of the founding of RIMS.

[87] ———, *Theory of discrete decomposable branching laws of unitary representations of semisimple Lie groups and some applications*, Sugaku Expositions **18** (2005), 1–37, a translation of the original article in Japanese.

[88] ———, *On discontinuous group actions on non-Riemannian homogeneous spaces*, Sugaku **57** (2005), 267–281 (in Japanese), An English translation: Sugaku Expositions **22** (2009), Amer. Math. Soc., 1-19.

[89] T. Kobayashi and T. Yoshino, *Compact Clifford–Klein forms of symmetric spaces—revisited*, Pure and Appl. Math. Quarterly **1** (2005), 603–684, Special Issue: In Memory of Armand Borel. math.DG/0509543. DOI: 10.4310/PAMQ.2005.v1.n3.a6.

[90] T. Kobayashi and G. Mano, *The minimal representation of $O(p,2)$ and an integral formula for the inversion operator*, Representation Theory and Harmonic Analysis on Homogeneous Spaces (J. Inoue, ed.), vol. 1410, 2005, pp. 173–187 (in Japanese).

[91] T. Kobayashi, *Fourier transform of a minimal K-type vector in the minimal representation of $O(p+1,q+1)$*, Automorphic Forms on $Sp(2,\mathbb{R})$ and $SU(2,2)$, III (T. Oda, ed.), vol. 1421, 2005, pp. 1–11 (in Japanese).

[92] T. Kobayashi and A. Nilsson, *Invariant multipliers and $O(p,q)$-action*, Proceedings of Symposium on Representation Theory 2005, held at Kakegawa, November 15–18, 2005 (S. Aoki, S. Kato, and H. Oda, eds.), 2005, pp. 10–21.

[93] T. Kobayashi, *Multiplicity-free representations and visible actions on complex manifolds*, Proceedings of Symposium on Representation Theory 2005, held at Kakegawa, November 15–18, 2005 (S. Aoki, S. Kato, and H. Oda, eds.), 2005, pp. 33–66.

[94] T. Kobayashi and G. Mano, *The inversion operator for the minimal representation of $O(p,q)$*, Representation Theory of Groups and Extension of Harmonic Analysis (T. Kawazoe, ed.), vol. 1467, 2006, pp. 51–61 (in Japanese).

[95] T. Kobayashi and S. Nasrin, *Deformation space of discontinuous groups $\mathbb{Z}^k$ for a nilmanifold $\mathbb{R}^{k+1}$*, Representation Theory of Groups and Extension of Harmonic Analysis (T. Kawazoe, ed.), vol. 1467, 2006, pp. 101–111.

[96] ———, *Deformation of properly discontinuous actions of $\mathbb{Z}^k$ on $\mathbb{R}^{k+1}$*, Internat. J. Math. **17** (2006), no. 10, 1175–1193, math.DG/0603318.

[97] T. Kobayashi, *Various prompts*, Sugaku Manabi Hajime [When I Started Studying Mathematics], vol. 2, Nippon-Hyoron-Sha, 2006, pp. 198–221, ISBN 4-535-78516-3 (in Japanese).

[98] ———, *Introduction to visible actions on complex manifolds and multiplicity-free representations*, Developments of Cartan Geometry and Related Mathematical Problems (T. Morimoto, ed.), vol. 1502, 2006, pp. 82–95.

[99] ———, *Multiplicity-free representations and visible actions on complex manifolds*, Proceedings of The 53rd Geometry Symposium (edited by Kenji Fukaya), 2006, pp. 119–133 (in Japanese).

[100] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The first Takagi Lectures*, 2006.

[101] T. Kobayashi, *Multiplicity-free theorems of the restrictions of unitary highest weight modules with respect to reductive symmetric pairs*, Representation Theory and Automorphic Forms, Progr. Math., vol. 255, Birkhäuser, 2007, pp. 45–109, math.RT/0607002.

[102] T. Kobayashi, W. Schmid, and J.-H. Yang (eds.), *Representation theory and automorphic forms*, Progr. Math., vol. 255, Birkhäuser, 2007, ISBN 0817645055.

[103] T. Kobayashi, *Visible actions on symmetric spaces*, Transformation Groups **12** (2007), no. 4, 671–694, math.DG/0607005.

[104] ———, *A generalized Cartan decomposition for the double coset space* $(U(n_1) \times U(n_2) \times U(n_3))\backslash U(n)/(U(p) \times U(q))$, Journal of Mathematical Society of Japan **59** (2007), no. 3, 669–691, math.RT/0607006.

[105] T. Kobayashi and G. Mano, *The inversion formula and holomorphic extension of the minimal representation of the conformal group*, Harmonic Analysis, Group Representations, Automorphic Forms and Invariant Theory: In Honour of Roger E. Howe (Jian-Shu Li, Eng-Chye Tan, Nolan Wallach, and Chen-Bo Zhu, eds.), Singapore University Press and World Scientific Publishing, 2007, pp. 159–223, ISBN 978-9812770783. math.RT/0607007. DOI:10.1142/9789812770790_0006.

[106] ———, *Integral formula of the unitary inversion operator for the minimal representation of* $O(p, q)$, Proc. Japan Acad. Ser. A **83** (2007), 27–31.

[107] T. Kobayashi, *On the establishment of the Takagi Lectures*, Japan. J. Math. **2** (2007), no. 1, 145–148.

[108] ———, *On the establishment of the Takagi Lectures*, Sugaku Seminar **6** (2007), no. 549, 50–51 (in Japanese).

[109] ———, *Discoveries at the age of twenty-five, and mathematics expanding beyond oneself*, Japanese Scientific Monthly **60** (2007), no. 5, 311–313 (in Japanese).

[110] ———, *On the Takagi Lectures*, Sugaku Tsushin **12** (2007), no. 1, 49–51 (in Japanese).

[111] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The second Takagi Lectures*, 2007.

[112] T. Kobayashi, *Sozoryoku no gensen, sugaku [mathematics—a source of creativity]*, Kyoyo-gakubu-ho, University of Tokyo (2007), no. 506, 2 (in Japanese).

[113] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 3, 2007, viii+92 pp.

[114] T. Kobayashi, *On the establishment of the Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 3, 2007, pp. i–iii.

[115] T. Kobayashi, B. Krötz, E. Lapid, and C. Torossian (eds.), *Harmonische Analysis und darstellungstheorie topologischer Gruppen*, Mathematisches Forschungsinstitut Oberwolfach Report, no. 49, 2007.

[116] T. Kobayashi and A. Nilsson, *Group invariance and* L^p*-bounded operators*, Math. Z. **260** (2008), 335–354, (published online first, on 22 November 2007).

[117] T. Kobayashi, *Rigidity and deformation of discontinuous groups for non-Riemannian symmetric spaces*, Representation Theory and Analysis on Homogeneous Spaces (H. Sekiguchi, ed.), RIMS Kokyuroku Bessatsu, vol. B7, 2008, pp. 1–12 (in Japanese).

[118] ———, *Preface to the fourth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 4, 2008, pp. i–iii.

[119] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 4, 2008, iv+64 pp.

[120] T. Kobayashi, *What I thought on returning to Komaba [Komaba ni modotte kanjita koto]*, Suri News 2007–2 (2008) (Japanese).

[121] ———, *The third Takagi Lectures were held*, Suri News 2007–2 (2008) (Japanese).

[122] ———, *Preface to the fifth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 5, 2008, pp. i–iii.

[123] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 5, 2008, iv+108 pp.

[124] T. Kobayashi, *On discontinuous group actions on non-Riemannian homogeneous spaces*, Sugaku Expositions **22** (2009), no. 1, 1–19, Amer. Math. Soc., a translation by Miles Reid of the Japanese original article. math.DG/0603319.

[125] T. Kobayashi and A. Nilsson, *Indefinite higher Riesz transforms*, Arkiv för Matematik **47** (2009), 331–344, (published online first, on 3 March 2008).

[126] T. Kobayashi, *Hidden symmetries and spectrum of the Laplacian on an indefinite Riemannian manifold*, Spectral Analysis in Geometry and Number Theory (in honor of Professor Sunada) (M. Kotani, H. Naito, and T. Tate, eds.), Contemp. Math., vol. 484, Amer. Math. Soc., Providence, RI, 2009, pp. 73–87, ISBN: 978-0-8218-4269-0.

[127] T. Kobayashi, B. Ørsted, M. Pevzner, and A. Unterberger, *Composition formulas in the Weyl calculus*, J. Funct. Anal. **257** (2009), 948–991.

[128] T. Kobayashi, *A journey into infinite dimension*, (2008), Summary of the lecture at Nada High School, Kobe, Japan, 15 November 2008.

[129] ———, *The fifth Takagi Lectures—commemorating the 50th anniversary of the IHES's foundation [dai 5 kai Takagi Lectures—IHES 50 shunen wo kinen shite]*, Suri News 2009–3 (2009) (Japanese).

[130] ———, *On receiving Humboldt Research Award in Mathematics for 2008 [2008 nen Humboldt sho sugaku bumon jusho]*, Suri News 2009–3 (2009) (Japanese).

[131] ———, *Discontinuous group theory beyond the classical Riemannian setting/infinite dimensional representation theory across algebra, geometry and analysis*, The Research and Training Center for New Development in Mathematics (Global COE Program pamphlet), Graduate School of Mathematical Sciences, the University of Tokyo, 2009, p. 14 (Japanese).

[132] S. Ben Saïd, T. Kobayashi, and B. Ørsted, *Generalized Fourier transforms* $\mathcal{F}_{k,a}$, C. R. Math. Acad. Sci. Paris **347** (2009), 1119–1124, (published online first, on 21 August 2009).

[133] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 6, 2009, iv+51 pp.

[134] T. Kobayashi, *Preface to the sixth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 6, 2009, pp. i–iii.

[135] ———, *Discontinuous groups on pseudo-Riemannian spaces*, Mathematische Arbeitstagung 2009, 2009, MPIM2009-40n, 15 pp.

[136] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 7, 2009, iv+157 pp.

[137] T. Kobayashi, *Preface to the seventh Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 7, 2009, pp. i–iii.

[138] ———, *Prefatory note [kanto-gen]*, Sugaku Tsushin **14** (2010), no. 4, 3–6 (in Japanese).

[139] ———, *From the editorial board of the Japanese Journal of Mathematics [Japanese Journal of Mathematics henshu iinkai yori]*, Sugaku Tsushin **14** (2010), no. 4, 98 (in Japanese).

[140] ———, *The seventh Takagi Lectures: 50th annual Teiji Takagi memorial [dai 7-kai Takagi Lectures: Takagi Teiji 50-nen sai kinen]*, Suri News 2009-2 (2010), 2 (in Japanese).

[141] T. Kobayashi (interview), *Shin-riron wo soshi-suru [creating new theories]*, Rigakuru 02, Nikkei BP, 2010, pp. 48–49., ISBN-13: 978-4901823371 (in Japanese).

[142] T. Kobayashi, *Preface to the eighth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 8, 2010, pp. i–iii.

[143] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 8, 2010, iv+90 pp.

[144] Y. Giga and T. Kobayashi (eds.), *Sugaku wa yaku ni tatte iru ka? [Has mathematics been useful?]*, Springer Japan/Maruzen Publishing, 2010/2012 (in Japanese), ISBN10: 4-431-10239-6; ISBN13: 978-4-431-10239-7; ISBN-10: 4621061305; ISBN-13: 978-4621061305.

[145] T. Kobayashi and F. Cho, *A dialogue between a mathematician and Toyota's chairman: Think, think, and think again.*, Sugaku wa yaku ni tatte iru ka? [Has mathematics been useful?] (Y. Giga and T. Kobayashi, eds.), Springer Japan, 2010 (in Japanese).

[146] T. Kobayashi and G. Mano, *The Schrödinger model for the minimal representation of the indefinite orthogonal group $O(p,q)$*, Mem. Amer. Math. Soc. **212** (2011), no. 1000, vi+132 pp., (accepted for publication on 31 July, 2008; published online first, on 4 February 2011). DOI: 10.1090/S0065-9266-2011-00592-7. arXiv:0712.1769 [math.RT].

[147] J.-L. Clerc, T. Kobayashi, B. Ørsted, and M. Pevzner, *Generalized Bernstein–Reznikov integrals*, Mathematische Annalen **349** (2011), no. 2, 395–431, (published online first, on 4 May 2010). DOI: 10.1007/s00208-010-0516-4. arXiv:0906.2874 [math.CA].

[148] J. Hilgert, T. Kobayashi, G. Mano, and J. Möllers, *Special functions associated to a certain fourth order differential equation*, Ramanujan Journal **26** (2011), no. 1, 1–34, (published online August 31, 2011). DOI: 10.1007/s11139-011-9315-0. arXiv:0907.2608 [math.CA].

[149] ———, *Orthogonal polynomials associated to a certain fourth order differential equation*, Ramanujan Journal **26** (2011), 295–310, DOI: 10.1007/s11139-011-9338-6. arXiv:0907.2612 [math.CA].

[150] T. Kobayashi, *Algebraic analysis of minimal representations*, Publ. RIMS (Publications of the Research Institute for Mathematical Sciences) **47** (2011), no. 2, 585–611, Special issue in commemoration of the golden jubilee of algebraic analysis. DOI: 10.2977/PRIMS/45.arXiv:1001.0224 [math.RT].

[151] T. Kobayashi, B. Ørsted, and M. Pevzner, *Geometric analysis on small unitary representations of $GL(n,\mathbb{R})$*, J. Funct. Anal. **260** (2011), no. 6, 1682–1720, (published online first, on 28 December 2010). DOI: 10.1016/j.jfa.2010.12.008. arXiv:1002.3006 [math.RT].

[152] T. Kobayashi and J. Möllers, *An integral formula for L^2-eigenfunctions of a fourth order Bessel-type differential operator*, Integral Transforms and Special Functions **22** (2011), no. 7, 521–531, (published online first, on 27 January 2011) DOI: 10.1080/10652469.2010.533270. arXiv:1003.2699 [math.CA].

[153] F. Kassel and T. Kobayashi, *Stable spectrum for pseudo-Riemannian locally symmetric spaces*, C. R. Math. Acad. Sci. Paris **349** (2011), no. 1–2, 29–33, DOI: 10.1016/j.crma.2010.11.023.

[154] T. Kobayashi, *Branching problems of Zuckerman derived functor modules*, Representation Theory and Mathematical Physics (in honor of Gregg Zuckerman) (Jeffrey Adams, Bong Lian, and Siddhartha Sahi, eds.), Contemporary Mathematics, vol. 557, Amer. Math. Soc., Providence, RI, 2011, pp. 23–40, ISBN: 9780821852460, arXiv:1104.4399.

[155] ———, *Geometric quantization, limits, and restrictions—some examples for elliptic and nilpotent orbits*, Geometric Quantization in the Non-compact Setting (Lisa Jeffrey, Xiaonan Ma, and Michèle Vergne, eds.), Oberwolfach Reports, vol. 8, 2011, pp. 466–469, DOI: 10.4171/OWR/2011/09.

[156] ———, *Analysis on infinite dimensional symmetries [mugen jigen no taishosei no kaiseki]*, Suri News 2010–2 (2011) (Japanese).

[157] ———, *Geometric analysis on minimal representations*, Ninth Oka Symposium Lecture Notes (J. Matsuzawa and S. Tsunoda, eds.), Department of Mathematics, Faculty of Science, Nara Women's University, 2011, pp. 27–61.

[158] ———, *On the eighth and ninth Takagi lectures*, Sugaku Tsushin **16** (2011), no. 1 (Japanese), p.107.

[159] ———, *Japanese Journal of Mathematics (JJM)*, Gakuto **108** (2011), no. 2, 56 (Japanese).

[160] ———, *Analysis on infinite dimensional symmetries [mugen jigen no taisho-sei no sugaku] (an interview)*, Bulletin of the University of Tokyo Graduate School of Arts and Scienes [Kyoyo Gakubu Ho] (2011), no. 540 (6 July 2011) (Japanese).

[161] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 9, 2011, iv+52 pp.

[162] T. Kobayashi, *Preface to the ninth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 9, 2011, pp. i–iii.

[163] ———, *Our team*, IPMU News **16** (2011), 10, 40.

[164] S. Ben Saïd, T. Kobayashi, and B. Ørsted, *Laguerre semigroup and Dunkl operators*, Compositio Mathematica **148** (2012), 1265–1336, DOI: 10.1112/S0010437X11007445. arXiv:0907.3749 [math.RT].

[165] T. Kobayashi, *Restrictions of generalized Verma modules to symmetric pairs*, Transformation Groups **17** (2012), no. 2, 523–546, (published online first 5 April 2012). DOI: 10.1007/s00031-012-9180-y. arXiv:1008.4544 [math.RT].

[166] T. Kobayashi and Y. Oshima, *Classification of discretely decomposable $A_{\mathfrak{q}}(\lambda)$ with respect to reductive symmetric pairs*, Advances in Mathematics **231** (2012), 2013–2047, arXiv:1104.4400. DOI:10.1016/j.aim.2012.07.006.

[167] J. Hilgert, T. Kobayashi, J. Möllers, and B. Ørsted, *Fock model and Segal–Bargmann transform for minimal representations of Hermitian Lie groups*, Journal of Functional Analysis **263** (2012), no. 11, 3492–3563, DOI: 10.1016/j.jfa.2012.08.026. arXiv:1203.5462.

[168] T. Kobayashi, *On the ninth and tenth Takagi lectures*, Sugaku Tsushin **17** (2012), no. 1 (Japanese), p.87.

[169] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 10, 2012, iv+90 pp.

[170] T. Kobayashi, *Preface to the tenth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 10, 2012, pp. i–iii.

[171] ———, *On the 10th and 11th Takagi lectures*, Sugaku Tsushin **17** (2012), no. 2 (Japanese), p.99.

[172] ———, *Preface to the eleventh Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 11, 2012, pp. i–iii.

[173] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 11, 2012, iv+102 pp.

[174] T. Kobayashi, *On the 11th and 12th Takagi Lectures*, Sugaku Tsushin **17** (2012), no. 3 (Japanese), p.77.

[175] IPMU News **17** (2012), cover photo.

[176] T. Kobayashi, *Natural differential operators in parabolic geometry and branching problems*, Proceedings of Symposium on Representation Theory 2012, held at Kagoshima, December 4–7, 2012 (M. Itoh and H. Ochiai, eds.), 2012, pp. 31–55, ISBN 978-4-9902328-8-7.

[177] ———, *Propagation of multiplicity-free property for holomorphic vector bundles*, Lie Groups: Structure, Actions, and Representations (In Honor of Joseph A. Wolf on the Occasion of his 75th Birthday) (A. Huckleberry, I. Penkov, and G. Zuckerman, eds.), Progress in Mathematics, vol. 306, 2013, pp. 113–140, ISBN: 978-1-4614-7192-9. DOI:10.1007/978-1-4614-7193-6_6. arXiv:math/0607004.

[178] T. Kobayashi and T. Oshima, *Finite multiplicity theorems for induction and restriction*, Advances in Mathematics **248** (2013), 921–944, DOI:10.1016/j.aim.2013.07.015. arXiv:1108.3477.

[179] T. Kobayashi and Y. Oshima, *Classification of symmetric pairs with discretely decomposable restrictions of* $(\mathfrak{g}, K)$*-modules*, Journal für die reine und angewandte Mathematik (Crelles Journal) **2015** (2015), no. 703, 201–223, published online 2013 July 13. 19 pp. DOI:10.1515/crelle-2013-0045. arXiv: 1202.5743.

[180] T. Kobayashi, *Varna lecture on L^2-analysis of minimal representations*, Lie Theory and Its Applications in Physics: IXth International Workshop (V. Dobrev, ed.), Springer Proceedings in Mathematics & Statistics, vol. 36, Springer, 2013, pp. 77–93, DOI: 10.1007/978-4-431-54270-4_6. arXiv: 1212.6871.

[181] ———, *F-method for constructing equivariant differential operators*, Geometric Analysis and Integral Geometry (E. T. Quinto, F. B. Gonzalez, and J. Christensen, eds.), Contemporary Mathematics, vol. 598, Amer. Math. Soc., 2013, pp. 141–148, arXiv: 1212.6862. DOI: 10.1090/conm/598/11998.

[182] T. Kobayashi and M. Pevzner, *Rankin–Cohen operators for symmetric pairs*, preprint, 53 pp. arXiv:1301.2111.

[183] T. Kobayashi, *On the 11th–13th Takagi Lectures*, Sugaku Tsushin **17** (2013), no. 4, 55 (Japanese).

[184] ———, *The 11th Takagi Lectures*, Suri News 2013–2 (2013) (Japanese).

[185] Y. Giga and T. Kobayashi (eds.), *What mathematics can do for you: Essays and tips from Japanese industry leaders*, Springer, 2013, viii+144 pp. ISBN 978-4-431-54345-9. An enlarged English edition of the Japanese version.

[186] T. Kobayashi and F. Cho, *A dialogue between a mathematician and Toyota' s chairman: Think, think, and think again.*, What Mathematics Can Do for You: Essays and Tips from Japanese Industry Leaders (Y. Giga and T. Kobayashi, eds.), Springer, 2013, pp. 1–6.

[187] T. Kobayashi, *On the 12th–13th Takagi Lectures*, Sugaku Tsushin **18** (2013), no. 1, 147 (Japanese).

[188] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 12, 2013, iv+114 pp.

[189] T. Kobayashi, *Preface to the twelfth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 12, 2013, pp. i–iii.

[190] ———, *On the 12th–13th Takagi Lectures*, Sugaku Tsushin **18** (2013), no. 2, 97 (Japanese).

[191] ———, *Preface to the 13th Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 13, 2013, pp. i–iii.

[192] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 13, 2013, iv+81 pp.

[193] T. Kobayashi, *On the 13th Takagi Lectures*, Sugaku Tsushin **18** (2013), no. 3, 77 (Japanese).

[194] J. Hilgert, T. Kobayashi, K. Neeb, and T. Ratiu (eds.), *Representations of Lie groups and supergroups*, Oberwolfach Reports, vol. 10, 2013, DOI: 10.4171/OWR/2013/13.

[195] T. Kobayashi, *Special functions in minimal representations*, Perspectives in Representation Theory in honor of Igor Frenkel on his 60th birthday (Pavel Etingof, Miikhail Khovanov, and Alistair Savage, eds.), Comtemporary Mathematics, vol. 610, Amer. Math. Soc., Providence, RI, 2014, pp. 253–266, DOI: 10.1090/conm/610/12103. arXiv:1301.5505.

[196] J. Hilgert, T. Kobayashi, and J. Möllers, *Minimal representations via Bessel operators*, J. Math. Soc. Japan **66** (2014), 349–414, DOI: 10.2969/jmsj/06620349. arXiv:1106.3621.

[197] T. Kobayashi, *F-method for symmetry breaking operators*, Differential Geometry and its Applications **33** (2014), 272–289, Special Issue "Interaction of Geometry and Representation Theory: Exploring New Frontiers" (in honor of Michael Eastwood's 60th birthday). arXiv:1303.3541. DOI:10.1016/j.difgeo.2013.10.003.

[198] T. Kobayashi and B. Speh, *Intertwining operators and the restriction of representations of rank one orthogonal groups*, C. R. Acad. Sci. Paris, Ser. I **352** (2014), 89–94, DOI: 10.1016/j.crma.2013.11.018.

[199] T. Kobayashi, *From "local" to "global": Beyond the Riemannian geometry*, Kavli IPMU News (2014), no. 25 (March 2014), 4–11.

[200] ———, *On the 13th–14th Takagi Lectures*, Sugaku Tsushin **19** (2014), no. 2, 81 (Japanese).

[201] T. Kobayashi and T. Matsuki, *Classification of finite-multiplicity symmetric pairs*, Transformation Groups **19** (2014), 457–493, Special Issue in honour of Professor Dynkin for his 90th birthday. DOI: 10.1007/s00031-014-9265-x. arXiv: 1312.4246.

[202] T. Kobayashi, *Symmetric pairs with finite-multiplicity property for branching laws of admissible representations*, Proc. Japan Acad., Ser. A, Mathematical Sciences **90** (2014), no. 6, 79–83, DOI: 10.3792/pjaa.90.79.

[203] ———, *On the 14th–15th Takagi Lectures*, Sugaku Tsushin **19** (2014), no. 3, 76 (Japanese).

[204] ———, *Shintani functions, real spherical manifolds, and symmetry breaking operators*, Developments and Retrospectives in Lie Theory Geometric and Analytic Methods (G. Mason, I. Penkov, and Joseph A. Wolf, eds.), Developments in Mathematics, vol. 37, 2014, pp. 127–159, arXiv: 1401.0117. DOI: 10.1007/978-3-319-09934-7_5.

[205] T. Kobayashi, T. Kubo, and M. Pevzner, *Vector-valued covariant differential operators for the Möbius transformation*, Lie Theory and Its Applications in Physics (V. Dobrev, ed.), Springer Proceedings in Mathematics & Statistics, vol. 111, 2015, pp. 67–86, arXiv: 1406.0674. DOI: 10.1007/978-4-431-55285-7_6.

[206] T. Kobayashi, *Preface to the fourteenth Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 14, 2014, pp. i–iii.

[207] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 14, 2014, iv+97 pp. ISSN 2187-3267.

[208] T. Kobayashi, *Symmetry breaking operators and branching problems*, Proceedings of Symposium on Representation Theory 2014, held at Awajishima, November 25–28, 2014 (J. Matsuzawa and N. Shimeno, eds.), 2014, pp. 37–62.

[209] T. Kobayashi, T. Kubo, and M. Pevzner, *Covariant differential operators and the Rankin–Cohen bracket*, Proceedings of Symposium on Representation Theory 2014, held at Awajishima, November 25–28, 2014 (J. Matsuzawa and N. Shimeno, eds.), 2014, pp. 75–86.

[210] T. Kobayashi, *Analysis on real spherical manifolds and their applications to Shintani functions and symmetry breaking operators*, Mathematisches Forschungsinstitut Oberwolfach Report **11** (2014), no. 1, 176–179, Representation Theory and Analysis of Reductive Groups: Spherical Spaces and Hecke Algebras (organised by B. Krötz, E. M. Opdam, H. Schlichtkrull and P. Trapa, 19–25 January 2014), DOI: 10.4171/OWR/2014/3.

[211] ———, *Visible actions on complex manifolds and multicity-free representations*, Suri News (2014), no. 1, 4 (Japanese).

[212] ———, *Gimon o okoshite, kangae, soshite kangae-nuku [raising questions, thinking about them, and thinking them through]*, Shin Suugaku no Manabi-kata [How to study mathematics. New edition] (K. Kodaira, ed.), Iwanami Shoten, 2015, pp. 91–115 (Japanese).

[213] ———, *On the 14th Takagi Lectures*, Sugaku Tsushin **19** (2015), no. 4 (Japanese).

[214] ———, *The 14th Takagi Lectures*, Suri News 2014–2 (2015) (Japanese).

[215] J.-P. Demailly, G. van der Geer, C. Hacon, Y. Kawamata, T. Kobayashi, Y. Miyaoka, and W. Schmid (eds.), *Special issue in commemoration of Professor Kunihiko Kodaira's centennial birthday March 16, 2015*, vol. 22, 2015.

[216] T. Kobayashi and B. Speh, *Symmetry breaking for representations of rank one orthogonal groups*, vol. 238, Memoirs of American Mathematical Society, no. 1126, 2015, Published electronically May 12, 2015. vi+112 pp. arXiv: 1310.3213. ISBN: 978-1-4704-1922-6. DOI: 10.1090/memo/1126.

[217] T. Kobayashi, *On the 15th and 16th Takagi Lectures*, Sugaku Tsushin **20** (2015), no. 1, 103 (Japanese).

[218] T. Kobayashi and G. Savin, *Global uniqueness of small representations*, Mathematische Zeitschrift **281** (2015), no. 1–2, 215–239, Published online first on 22 May 2015. DOI: 10.1007/s00209-015-1481-0. arXiv: 1412.8019.

[219] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 15, 2015, iv+137 pp. ISSN 2187-3267.

[220] T. Kobayashi, *Preface to the 15th Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 15, 2015, pp. i–iii.

[221] ———, *On the 15th and 16th Takagi Lectures*, Sugaku Tsushin **20** (2015), no. 2, 56 (Japanese).

[222] T. Kobayashi, B. Ørsted, P. Somberg, and V. Souček, *Branching laws for Verma modules and applications in parabolic geometry. I*, Advances in Mathematics **285** (2015), 1796–1852, DOI:10.1016/j.aim.2015.08.020. arXiv:1305.6040.

[223] J.-P. Demailly, G. van der Geer, C. Hacon, Y. Kawamata, T. Kobayashi, Y. Miyaoka, and W. Schmid (eds.), *Special issue in commemoration of professor Kunihiko Kodaira's centennial birthday*, vol. 22, J. Math. Sci. Univ. Tokyo, no. 1, 2015.

[224] ———, *Foreword: In commemoration of professor Kunihiko Kodaira's centennial birthday, March 16, 2015.*, J. Math. Sci. Univ. Tokyo **22** (2015), no. 1, iii–iv, Special issue. J.-P. Demailly, G. van der Geer, C. Hacon, Y. Kawamata, T. Kobayashi, Y. Miyaoka, W. Schmid (eds.).

[225] T. Kobayashi, *A program for branching problems in the representation theory of real reductive groups*, Representations of Lie Groups: In Honor of David A. Vogan, Jr. on his 60th Birthday (M. Nevins and P. Trapa, eds.), Progress in Mathematics, vol. 312, Birkhäuser, 2015, pp. 277–322, DOI: 10.1007/978-3-319-23443-4_10. arXiv: 1509.08861. ISBN: 978331923442.

[226] F. Kassel and T. Kobayashi, *Poincaré series for non-Riemannian locally symmetric spaces*, Advances in Mathematics **287** (2016), 123–236, Published online: 20-NOV-2015. DOI: 10.1016/j.aim.2015.08.029. arXiv: 1209.4075.

[227] T. Kobayashi, *On the 16th Takagi Lectures*, Sugaku Tsushin **20** (2015), no. 3, 58 (Japanese).

[228] Y. Benoist and T. Kobayashi, *Temperedness of reductive homogeneous spaces*, J. Eur. Math. Soc. **17** (2015), 3015–3036, DOI: 10.4171/JEMS/578. arXiv: 1211.1203.

[229] T. Kobayashi and M. Pevzner, *Differential symmetry breaking operators. I. General theory and F-method.*, Selecta Mathematica (N.S.) **22** (2016), no. 2, 801–845, Published OnLine 11 December 2015. 45 pages. DOI: 10.1007/s00029-015-0207-9. arXiv:1301.2111. [old title of the preprint version: Rankin–Cohen operators for symmetric pairs].

[230] ———, *Differential symmetry breaking operators. II. Rankin–Cohen operators for symmetric pairs*, Selecta Mathematica (N.S.) **22** (2016), no. 2, 847–911, Published OnLine 14 December 2015. 65 pages. DOI: 10.1007/s00029-015-0208-8. arXiv:1301.2111. [old title of the preprint version: Rankin–Cohen operators for symmetric pairs].

[231] T. Kobayashi, A. Nilsson, and F. Sato, *Maximal semigroup symmetry and discrete Riesz transforms*, Journal of the Australian Mathematical Society **100** (2016), no. 2, 216–240, Published Online, 14 December 2015. DOI: 10.1017/S144678871500049X.

[232] T. Kobayashi, *Analysis on non-Riemannian locally symmetric spaces: an application of invariant theory*, Symposium on Representation Theory 2015 held at Izu, Japan, 2015, pp. 46–59, organized by S. Naito and K. Naoi.

[233] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet, in celebration of the 100th anniversary of Kodaira's birth*, vol. 16, 2015, v+232 pp. ISSN 2187-3267.

[234] T. Kobayashi, *Preface to the 16th Takagi Lectures — in celebration of the 100th anniversary of Kodaira's birth*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 16, 2015, pp. i–iii.

[235] ———, *The 16th Takagi Lectures*, Suri News 2015–2 (2016), 4–5 (Japanese).

[236] ———, *Sozoryoku no gensen, sugaku [mathematics—a source of creativity]*, Kyoyo-gakubu-ho Seisen shu [Selected Essays from Bulletin of College of Arts and Sciences], University of Tokyo Press, 2016, pp. 159–160 (Japanese).

[237] T. Kobayashi, T. Kubo, and M. Pevzner, *Classification of differential symmetry breaking operators for differential forms*, C. R. Acad. Sci. Paris, Ser.I **354** (2016), 671–676, published online 17 May 2016. DOI: 10.1016/j.crma.2016.04.012.

[238] T. Saito, Y. Kawahigashi, and T. Kobayashi (eds.), *Creating mathematics [sugaku no genzai], i*, University of Tokyo Press, 2016.

[239] T. Saito, Y. Kawahigashi, and T. Kobayashi (eds.), *Creating mathematics [sugaku no genzai], π*, University of Tokyo Press, 2016 (Japanese).

[240] T. Saito, Y. Kawahigashi, and T. Kobayashi (eds.), *Creating mathematics [sugaku no genzai], e*, University of Tokyo Press, 2016 (Japanese).

[241] T. Kobayashi, *Symmetries and global analysis [taisho-sei to taiiki kaiseki]*, Creating Mathematics [Sugaku no Genzai], π (T. Saito, Y. Kawahigashi, and T. Kobayashi, eds.), University of Tokyo Press, 2016, pp. 1–21 (Japanese).

[242] ———, *The 16th Takagi Lectures*, Suri News 2015–2 (2016) (Japanese).

[243] ———, *On the 16th Takagi Lectures*, Sugaku Tsushin **20** (2016), no. 4, 56 (Japanese).

[244] ———, *On the 17th Takagi Lectures*, Sugaku Tsushin **21** (2016), no. 1, 90–91 (Japanese).

[245] Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito (eds.), *The Takagi booklet*, vol. 17, 2016.

[246] T. Kobayashi, *Preface to the 17th Takagi Lectures*, The Takagi Booklet (Y. Kawahigashi, T. Kobayashi, H. Nakajima, K. Ono, and T. Saito, eds.), vol. 17, 2016, pp. i–iii.

[247] ———, *On the 17–18th Takagi Lectures*, Sugaku Tsushin **21** (2016), no. 2, 60–61 (Japanese).

[248] ———, *Birth of new branching problems*, Abstract of the 70th Anniversary Lecture at the MSJ 2016 Autumn Meeting, Mathematical Society of Japan, 2016, pp. 65–92 (Japanese).

[249] T. Kobayashi, T. Kubo, and M. Pevzner, *Construction and classification of differential symmetry breaking operators for differential forms on spheres*, Abstract of the Functional Analysis Session at the MSJ 2016 Autumn Meeting, Mathematical Society of Japan, 2016, pp. 85–86 (Japanese).

[250] T. Kobayashi and O. Leontiev, *Symmetry breaking operators for the indefinite orthogonal groups $O(p,q)$*, Abstract of the Geometry Session at the MSJ 2016 Autumn Meeting, Mathematical Society of Japan, 2016, pp. 101–102 (Japanese).

[251] T. Kobayashi, T. Kubo, and M. Pevzner, *Conformal symmetry breaking operators for differential forms on spheres*, Lecture Notes in Mathematics, vol. 2170, Springer Singapore, 2016, DOI: 10.1007/978-981-10-2657-7. arXiv: 1605.09272. Softcover ISBN: 978-981-10-2656-0. eBook ISBN: 978-981-10-2657-7.

[252] T. Kobayashi, *Intrinsic sound of anti-de Sitter manifolds*, Lie Theory and Its Applications in Physics, Springer Proceedings in Mathematics & Statistics, vol. 191, Springer, 2016, pp. 83–99, DOI: 10.1007/978-981-10-2636-2_6. arXiv: 1609.05986.

[253] ———, *Conformal geometry and branching problems in representation theory*, Proceedings of the Symposium on Representation Theory 2016 held in Okinawa (M. Ishikawa and Y. Hashimoto, eds.), 2016, pp. 16–37.

[254] T. Kobayashi and A. Leontiev, *Symmetry breaking operators for representations of indefinite orthogonal groups $O(p,q)$*, Proceedings of the Symposium on Representation Theory 2016 held in Okinawa (M. Ishikawa and Y. Hashimoto, eds.), 2016, pp. 38–52.

[255] T. Kobayashi, *On the 19th Takagi Lectures*, Sugaku Tsushin **22** (2017), no. 1, 118 (Japanese).

[256] ———, *Prefatory note*, Sugaku Tsushin **22** (2017), no. 1, 3–4 (Japanese).

[257] T. Kobayashi and A. Leontiev, *Symmetry breaking operators for conformal transformation groups $O(p,q)$*, Abstract Book of MSJ Spring Meeting 2017 at Tokyo Metropolitan University, 2017, pp. 81–82 (Japanese).

[258] T. Kobayashi, *On the 19–20th Takagi Lectures*, Sugaku Tsushin **22** (2017), no. 2, 51 (Japanese).

[259] T. Kobayashi and A. Leontiev, *Symmetry breaking operators for the restriction of representations of indefinite orthogonal groups $O(p,q)$*, Proc. Japan Acad. Ser. A Math. Sci. **93** (2017), no. 8, 86–91, DOI: 10.3792/pjaa.93.86.

[260] T. Kobayashi, *Global analysis by hidden symmetry*, Representation Theory, Number Theory, and Invariant Theory: In Honor of Roger Howe on the Occasion of His 70th Birthday (Jim Cogdell, Ju-Lee Kim, and Chen-Bo Zhu, eds.), Progress in Mathematics, vol. 323, 2017, pp. 359–397, arXiv: 160808356. ISBN 978-3-319-59727-0. DOI: 10.1007/978-3-319-59728-7_13.

[261] ———, *International exchange [kokusai kooryuu]*, Overview 2017 [Gaiyoo 2017], Graduate School of Mathematical Sciences, The University of Tokyo, 2017, p. 18 (Japanese).

[262] T. Kobayashi and A. Leontiev, *Symmetry breaking operators for the indefinite orthogonal groups $O(p,q)$*, The Proceedings of the 56th Real Analysis and Functional Analysis Joint Symposium (T. Matsumoto and M. Nagisa, eds.), 2017, pp. 1–20 (Japanese).

[263] ———, *A certain integral formula containing two Gegenbauer polynoimals*, Representation Theory and Related Areas (N. Abe, ed.), RIMS Kokyuroku, vol. 2077, 2018, pp. 22–35 (Japanese).

[264] T. Kobayashi, *Symmetry breaking operators for indefinite orthogonal groups*, Proceedings of the Symposium on Representation Theory 2017 held at Isawa, Japan (H. Sekiguchi and T. Taniguchi, eds.), 2017, pp. 17–45.

[265] T. Kobayashi, T. Kubo, and M. Pevzner, *Conformal differential symmetry breaking operators for differential forms on spheres*, Proceedings of the Symposium on Representation Theory 2017 held at Isawa, Japan (H. Sekiguchi and T. Taniguchi, eds.), 2017, pp. 132–143 (Japanese).

[266] ———, *Conformal symmetry breaking operators for anti-de Sitter spaces*, Geometric Methods in Physics XXXV (P. Kielanowski, A. Odzijewicz, and E. Previato, eds.), Trends in Mathematics, Birkhäuser, Springer, 2018, pp. 75–91, DOI: 10.1007/978-3-319-63594-1_9. arXiv: 1610.09475.

[267] T. Kobayashi, *Exposition: Recent advances in representation theory of lie groups*, Introduction to Unitary Representation Theory (by Mitsuo Sugiura), Tokyo Tosho, 2018, pp. 214–242 (Japanese).

[268] T. Kobayashi and B. Speh, *Symmetry breaking for representations of rank one orthogonal groups II*, Lecture Notes in Mathematics, vol. 2234, Springer, 2018, eBook:978-981-13-2901-2. arXiv: 1801.00158. DOI: 10.1007/978-981-13-2901-2.

[269] T. Kobayashi and S. Nasrin, *Geometry of coadjoint orbits and multiplicity-one branching laws for symmetric pairs*, Algebras and Representation Theory **21** (2018), no. 5, 1023–1036, Special Issue: Representation Theory at the Crossroads of Modern Mathematics - Special volume in honor of Alexandre Kirillov. DOI: 10.1007/s10468-018-9810-8.

[270] T. Kobayashi, *Symmetry breaking operators for orthogonal groups $O(n,1)$*, Mathematisches Forschungsinstitut Oberwolfach Report (2017), no. 25, 1572–1575, DOI: 10.4171/OWR/2017/25. Harmonic Analysis and the Trace Formula, Organised by Werner Müller, Sug Woo Shin, Birgit Speh, and Nicolas Templier.

[271] ———, *Residue formula for regular symmetry breaking operators*, Contemporary Mathematics, vol. 714, pp. 175–193, Amer. Math.Soc., 2018, arXiv: 1709.05035. 10.1090/conm/714/14380.

[272] T. Kobayashi and A. Leontiev, *Image of conformally covariant, symmetry breaking operators for $\mathbb{R}^{p,q}$*, Quantum Theory and Symmetries with Lie Theory and Its Applications in Physics. Volume 1. LT-XII/QTS-X 2017 (V. Dobrev, ed.), Springer Proceedings in Mathematics & Statistics, vol. 263, 2018, pp. 3–31, DOI: 10.1007/978-981-13-2715-5_1.

[273] T. Kobayashi, *Global geometry and analysis on pseudo-Riemannian locally symmetric spaces*, Proceedings of the (J. Inoue and Y. Mori, eds.), 2018, pp. 89–98 (Japanese).

[274] ———, *Global geometry and analysis of locally symmetric spaces with indefiite metric*, Proceedings of the 65th Geometry Symmposium (H. Konno, ed.), 2018, pp. 1–10 (Japanese).

[275] T. Kobayashi and B. Speh, *Symmetry breaking for orthogonal groups and a conjecture by B. Gross and D. Prasad*, SSTF 2016: Geometric Aspects of the Trace Formula (W. Müller, S. Shin, and N. Templier, eds.), Simons Symposium on the Trace Formula, Springer, Cham, 2018, pp. 245–266, Published online: 12 October 2018. Print ISBN: 978-3-319-94832-4. Online ISBN: 978-3-319-94833-1. arXiv: 1702.00263. DOI: 10.1007/978-3-319-94833-1_8.

[276] T. Kobayashi and A. Leontiev, *Double Gegenbauer expansion of $|s-t|^{\alpha}$*, Integral Transforms and Special Functions **30** (2019), no. 7, 512–525, Published online: 26 Mar 2019. DOI: 10.1080/10652469.2019.1585433. arXiv: 1902.08064.

[277] T. Kobayashi, *Conformal symmetry breaking on differential forms and some applications*, Geometric Methods in Physics XXXVI workshop 2017 (P. Kielanowski, A. Odzijewicz, and E. Previato, eds.), Trends in Mathematics, Birkhäuser, Cham, 2019, pp. 289–308, DOI: 10.1007/978-3-030-01156-7_32. arXiv: 1712.09212.

[278] F. Kassel and T. Kobayashi, *Invariant differential operators on spherical homogeneous spaces with overgroups*, Journal of Lie Theory **29** (2019), 663–754, arXiv: 1810.02803.

[279] Y. Benoist and T. Kobayashi, *Tempered homogeneous spaces*, accepted for publication in Margulis Festschrift. 34 pages. arXiv: 1706.10131.

[280] T. Kobayashi and M. Pevzner, *Inversion of rankin–cohen operators via holographic transform*, preprint. 52 pages. arXiv: 1812.09733.

[281] T. Kobayashi, *Recent advances in branching laws of representations [hyogen no bunki-soku no saikin no shinten]* (Japanese), preprint, 29 pages. To appear in Sugaku, MSJ.

[282] T. Kobayashi and B. Speh, *Distinguished representations of $SO(n+1,1)\times SO(n,1)$, periods and branching laws*, preprint, 32 pages. arXiv: 1907.05890.

[283] T. Kobayashi, *Branching laws of unitary representations associated to minimal elliptic orbits for indefinite orthogonal group $O(p,q)$*, preprint, 37 pages. arXiv: 1907.07994.

[284] ———, *Admissible restrictions of irreducible representations of reductive Lie groups: Symplectic geometry and discretely decomposability*, preprint, 20 pages. arXiv: 1907.12964.

Complete List of Invited Lectures of Toshiyuki Kobayashi

[1] *On the Null Variety of the Fourier–Laplace Transform of the Characteristic Function of a Domain.* Symposium on Unitary Representation Theory. Toba, Japan, 20–22 November 1986.

[2] *On the Null Variety of the Fourier–Laplace Transform of the Characteristic Function of a Domain.* colloquium. the University of Tokyo, Japan, may 1987.

[3] *On Discrete Series for Vector Bundles over Semisimple Symmetric Spaces.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, may 1987.

[4] *On the Null Variety of the Fourier–Laplace Transform of the Characteristic Function of a Domain.* seminar. Tokyo Institute of Technology, Japan, jun 1987.

[5] *Construction of Discrete Series for Vector Bundles over Semisimple Symmetric Spaces.* Workshop on Eigenspaces on Symmetric Spaces and Representations of Lie Groups. RIMS, Kyoto University, Japan, 27–30 July 1987.

[6] *Note on Hirzebruch's Proportionality Principle.* Workshop on Representation Theory and its Application to Physics. RIMS, Kyoto University, Japan, 18–21 July 1988. (with Kaoru Ono).

[7] *Properly Discontinuous Actions on Homogeneous Spaces of Reductive Type.* Symposium on Unitary Representation Theory. Kawaguchiko, Japan, 19–22 November 1988.

[8] *On Uniform Lattice for an Pseudo-Riemannian Homogeneous Space.* lecture on Lie Groups. Okayama University of Science, Japan, 15–16 December 1988.

[9] *Towards Harmonic Analysis on a (Non-symmetric) Homogeneous Space of Reductive Type.* Symposium on Fields of Functional Analysis and their Developments (on the occasion of Professor I. M. Gel'fand's visit to Japan). RIMS, Kyoto University, Japan, 24 March 1989.

[10] *Properly Discontinuous Actions on Homogeneous Spaces of Reductive Type.* Annual Meeting of the Mathematical Society of Japan. Nihon University, Japan, apr 1989.

[11] *A Remark on Hirzebruch's Proportionality Principle.* Annual Meeting of the Mathematical Society of Japan. Nihon University, Japan, apr 1989. (with Kaoru Ono).

[12] *How Can We VIEW From Silhouettes?* Relay Lecture at the May Festival. the University of Tokyo, Japan, may 1989.

[13] *Unitary Representations Realized as Sections for Vector Bundles over Semisimple Symmetric Spaces.* Joint Symposium on Real Analysis and Functional Analysis. Hirosaki University, Japan, 20–22 July 1989.

[14] *Homogeneous Spaces with Indefinite Metric and their Discontinuous Groups.* Geometry Symposium. Tohoku University, Japan, aug 1989.

[15] *Analysis on Homogeneous Vector Bundles and Unitary Representations of Semisimple Lie Groups.* (invited address at Functional Analysis Session), Annual Meeting of the Mathematical Society of Japan. Sophia University, Japan, sep 1989.

[16] *Discontinuous Groups for Homogeneous Spaces.* Friday Colloquium. the University of Tokyo, Japan, 20 October 1989.

[17] *New Examples of Branching Laws of Infinite Dimensional Representations That Arise from Isomorphisms of Homogeneous Spaces.* Seminar on Lie Groups and Representation Theory. the University of Tokyo, Japan, 16 November 1989.

[18] *New Examples of Branching Laws of Infinite Dimensional Representations That Arise from Isomorphisms of Homogeneous Spaces.* Second Workshop on Representation of Lie Groups. Tottori University, Japan, 8–10 January 1990.

[19] *Criterion of the Vanishing of a Certain Family of* $(\mathfrak{g}, K)$*-modules.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 8 March 1990.

[20] *Properly Discontinuous Group in a Non-Riemannian Homogeneous Space.* RIMS, Kyoto University, Japan, 28–31 May 1990.

[21] *Discontinuous Group in a Homogeneous Space of Reductive Type.* (opening lecture), International Conference on Representation Theories of Lie Groups and Lie Algebras. Kawaguchi, Japan, 30 August–3 September 1990.

[22] *The Non-vanishing Condition of Certain Family of Cohomologically Induced* $(\mathfrak{g}, K)$*-modules.* special colloquium. Kyoto University, Japan, 16 November 1990.

[23] *A Necessary Condition for the Existence of a Uniform Lattice for Homogeneous Spaces of Reductive Type.* Seminar on Lie Groups and Representation Theory. the University of Tokyo, Japan, 22 December 1990.

[24] *On the Structure of the Group Consisting of Elliptic Elements.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 26 January 1991.

[25] *On Discontinuous Groups Acting on Homogeneous Spaces of Reductive Type.* colloquium. the University of Tokyo, Japan, 11 April 1991.

[26] *Convex Domains and Fourier Transform on a Space of Constant Curvature.* (12 lectures),Spring school on Invariant Differential Operators on Lie Groups and Homogeneous Spaces(CIMPA-UNESCO School cosponsored by China and the France Mathematics Centre). Wuhan University, China, 21 April–11 May 1991.

[27] *Singular Unitary Representations and Discrete Series for Indefinite Stiefel Manifolds* $U(p, q; \mathbb{F})/U(p - m, q; \mathbb{F})$. Conference at Sandbjerg Estate on Harmonic Analysis on Lie groups. Denmark, aug 1991.

[28] *Actions on Discrete Groups on Symmetric Spaces.* seminar on Lie groups (Odense, Roskilde, Royal Veterinary and Agricultural Universities). Roskilde University, Denmark, 5 September 1991.

[29] *Proper Actions on Non-Riemannian Homogeneous Spaces.* Institute for Advanced Study, Princeton, USA, 4 November 1991.

[30] *Discontinuous Groups Acting on Pseudo-Riemannian Homogeneous Spaces.* colloquium. Columbia University, USA, 15 January 1992.

[31] *Discontinuous Groups Acting on Homogeneous Spaces of Reductive Type.* seminar on Lie Groups. University of Maryland, USA, 2 April 1992.

[32] *Actions of Discrete Groups on Homogeneous Spaces of Reductive Type.* colloquium. State University of New York at Stony Brook, USA, 9 April 1992.

[33] *Discontinuous Groups Acting on Homogeneous Spaces with Noncompact Isotropy Subgroups.* Special Geometry Seminar. State University of Pennsylvania, USA, apr 1992.

[34] *Bounded Domains and the Zero Sets of Fourier Transform.* Workshop on Integral Geometry on Homogeneous Manifolds(in Conference "75 years of Radon transform"). University of Vienna, Austria, sep 1992.

[35] *Some Features in Harmonic Analysis on Non-symmetric Homogeneous Spaces and Unitary Representations of Semisimple Lie Groups.* Conference on Fourier and Radon Transformations on Symmetric Spaces,in honor of Prof. S. Helgason's 65th birthday. Roskilde University, Denmark, sep 1992.

[36] *Some Topics in Integral Geometry Related to the Pompeiu Problem.* colloquium. Odense University, Denmark, 17 September 1992.

[37] *Hirzebruch's Proportionality Principle, Discontinuous Groups and Proper Actions on Indefinite Riemannian Homogeneous Spaces.* Aarhus University, Denmark, 29 September 1992.

[38] *Discrete Groups and Non-Riemannian Homogeneous Manifolds—On the Existence of Clifford–Klein Forms.* Geometry colloquium. the University of Tokyo, Japan, 19 November 1992.

[39] *On a Criterion for Cohomologically Induced Unitary Representations to Decompose DiscretelyWhen Restricted to Reductive Subgroups.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 7 December 1992.

[40] *Branching Rules of Unitary Representations of Real Reductive Lie Groups and Noncommutative Harmonic Analysis.* Monday colloquium. the University of Tokyo, Japan, 21 December 1992.

[41] New Year Free Talk. the University of Tokyo, Japan, jan 1993.

[42] *Branching Rules of Unitary Representations of Reductive Lie Groups and Non-commutative Harmonic Analysis.* colloquium. Tottori University, Japan, mar 1993.

[43] *Discrete Decomposability of $A_{\mathfrak{q}}(\lambda)$ with Respect to Reductive Subgroups.* colloquium. Kyoto University, Japan, 6 April 1993.

[44] *Actions of Discrete Groups on Non-Riemannian Homogeneous Spaces.* Geometry Seminar. Keio University, Japan, 10 May 1993.

[45] *Introduction to Holomorphic Discrete Series Representations I, II.* Workshop on Representation Theory of Classical Groups,Quantum Groups, and Hecke Algebras, and Combinatorial Theory. RIMS, Kyoto University, Japan, 24–28 May 1993.

[46] *Compact Clifford–Klein Forms of Semisimple Symmetric Spaces.* Problems on Structure and Representations of Lie Groups. RIMS, Kyoto University, Japan, 26–29 November 1993.

[47] *Irreducible Restriction of $A_{\mathfrak{q}}(\lambda)$ to Reductive Subgroups.* Lecture at Summer Workshop on Representation Theory. Polytechnic University, Japan, 24 August 1993.

[48] *Discontinuous Groups for Pseudo-Riemannian Homogeneous Spaces—Calabi–Markus Phenomenon, Uniform Lattice and Local Rigidity.* NUS-JSPS Seminar on Representation Theory and Number Theory. the University of Tokyo, Japan, 1–4 November 1993.

[49] *Discontinuous Groups Acting on Homogeneous Spaces with Indefinite Metric.* Symposium on Topology from Transformation Group Theoretic Approaches. Atami, Japan, nov 1993.

[50] *Introduction to Unitary Representation Theory of Semisimple Lie Groups—Vogan–Zuckerman's Derived Functor Modules, and Discretely Decomposable Unitary Representations.* (plenary lecture), Symposium on Representation Theory. Izu–Atagawa, Japan, 23–26 November 1993.

[51] *On Discontinuous Groups.* informal seminar by Aomoto. Nagoya University, Japan, jun 1994.

[52] *Plancherel Theorem for Complex Homogeneous Spaces.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 21 June 1994.

[53] *Plancherel Theorem for Complex Homogeneous Spaces II.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 28 June 1994.

[54] *Discontinuous Groups Acting on Homogeneous Spaces.* (4 lectures), European School on Group Theory. Denmark, 15–26 August 1994.

[55] *Clifford–Klein Forms of Homogeneous Spaces.* International Conference by Kanai and Zimmer. Keio University, Japan, August 1994.

[56] *The Criterion for Properly Discontinuous Actions of Discrete Subgroups and for Proper Actions of SubgroupsActing on Homogeneous Spaces of Reductive Lie Groups.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 25 October 1994.

[57] *On the Criterion of Proper Actions and the Discontinuous Duality Theorem.* Survey Seminar in Lie Groups and Representation Theory. the University of Tokyo, Japan, 15 November 1994.

[58] *Integral Geometry for Submanifolds in Complex Manifolds, and Plancherel Formula for Complex Homogeneous Spaces.* Symposium on Representation Theory. Toyama, Japan, 16–19 November 1994.

[59] *Properly Discontinuous Actions on Homogeneous Spaces, and Clifford–Klein Forms.* (series lectures), Surveys in Lie Groups and Representation Theory. the University of Tokyo, Japan, 19–22 December 1994.

[60] *On the Criterion for Discrete Group Actions on Homogeneous Spacesto be Properly Discontinuous.* Fifth Workshop on Representation of Lie Groups. Tottori University, Japan, 8–10 January 1995.

[61] *Cohomology Groups of Locally Symmetric Spaces and Vogan–Zuckeman's Derived Functor Modules.* RIMS, Kyoto University, Japan, 9–13 January 1995.

[62] *Introduction to Harmonic Analysis on Spherical Homogeneous Manifolds.* Workshop on Homogeneous Spaces and Automorphic Forms. Rikkyo University, Japan, jan 1995.

[63] *Discrete Decomposability of $A_{\mathfrak{q}}(\lambda)$ with Respect to Reductive Subgroups and its Applications.* Seminar on Lie groups. Rutgers University, USA, 7 April 1995.

[64] *Discontinuous Groups and Clifford–Klein Forms of Pseudo-Riemannian Homogeneous Manifolds.* colloquium. Rutgers University, USA, 7 April 1995.

[65] *Discontinuous Groups for Homogeneous Spaces and Non-Riemannian Geometry.* (4 lectures). Kyoto University, Japan, 26, 27, 29, 30 June 1995.

[66] *Restriction of Irreducible Unitary Representations to Reductive Subgroups and their Applications.* Functional Analysis Seminar, organized by Professor Hirai. Kyoto University, Japan, 27 June 1995.

[67] *Integral Geometry of Submanifolds.* colloquium. Kyoto University, Japan, 28 June 1995.

[68] *Introduction to Harmonic Analysis on Spherical Homogeneous Spaces.* Summer School on Number Theory. Nagano, Japan, July 1995.

[69] *Discontinuous Groups and Clifford–Klein Forms of Pseudo-Riemannian Homogeneous Manifolds.* Institut Mittag-Leffler, Stockholm, Sweden, 3 October 1995.

[70] *Harmonic Analysis on Noncompact Complex Homogeneous Manifolds and Integral Geometry.* Annual Meeting of Swedish Mathematical Society. Lund University, Sweden, 20 October 1995.

[71] *A Universal Formula in Integral Geometry.* Institute seminar. Institut Mittag-Leffler, Stockholm, Sweden, 30 November 1995.

[72] *Restriction of the Irreducible Unitary Representation $A_{\mathfrak{q}}(\lambda)$ with Respect to Reductive Subgroups.* Institut Mittag-Leffler, Stockholm, Sweden, 1 February 1996.

[73] *The Middle Hodge Components of Certain Modular Symbols on Arithmetic Quotients of Type IV Bounded Symmetric Domains.* Institut Mittag-Leffler, Stockholm, Sweden, 6 February 1996.

[74] *Discrete Series for Certain Spherical Homogeneous Spaces.* Institut Mittag-Leffler, Stockholm, Sweden, 13 February 1996.

[75] *Compact Clifford–Klein Forms of Semisimple Symmetric Spaces.* Institut Mittag-Leffler, Stockholm, Sweden, 22 May 1996.

[76] *Representations on Dolbeault Cohomologies and Restriction Problems.* CIME Session "Integral Geometry, Radon Transforms, and Complex Analysis". Venice, Italy, 3–12 June 1996.

[77] *Clifford–Klein Forms of Pseudo-Riemannian Symmetric Spaces.* Politecnico di Torino (Seminar organized by Prof. Fulvio Ricci). Italy, 14 June 1996.

[78] *Restriction of Irreducible Unitary Representations of Semisimple Lie Groups and its Applications toModular Symbols.* International Conference "Analysis, Arithmetic and Geometry on Reductive Groups",Summer Solstice Days. Université de Paris VI & VII, France, 17–21 June 1996.

[79] *Clifford–Klein Forms of Homogeneous Spaces of Reductive Lie Groups.* CIMPA School. Monastir, Tunisia, 14 July–2 August 1996.

[80] *Restriction of Unitary Representations.* CIMPA School. Monastir, Tunisia, 14 July–2 August 1996.

[81] *Restriction of Unitary Representations of Real Reductive Lie Groups.* Analysis Seminar. Aarhus University, Denmark, 16 August 1996.

[82] *On the Restriction of Unitary Representations and its Applications.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 8 October 1996.

[83] *Vanishing Theorem of Modular Symbols on Locally Symmetric Spaces.* Workshop on Representation Theory and Related Topics. Kurashiki, Japan, 5–8 November 1996.

[84] *The Restriction of Unitary Representations and its Applications.* Symposium on Representation Theory. Aichi, Japan, 19–22 November 1996.

[85] *Discrete Series Representations for (Non-symmetric) Homogeneous Spaces of Reductive Type.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 10 December 1996.

[86] *Restriction of Unitary Representations and Some Applications.* seminar. National University of Singapore (NUS), Singapore, 16 December 1996.

[87] *On the 'Dual Pair Correspondence' for the minimal Representation of $O(p,q)$.* Tottori Symposium on Representation Theory. Tottori University, Japan, 5–8 January 1997.

[88] *Conformal Geometry and Branching Laws for Unitary Representations Attached to Minimal Nilpotent and Elliptic Orbits.* Lie Group Seminar, organized by Simon Gindikin. Rutgers University, USA, apr 1997.

[89] *Conformal Geometry and Branching Laws for Unitary Representations Attached to Minimal Nilpotent and Elliptic Orbits.* The Gelfand Seminar. Rutgers University, USA, apr 1997.

[90] *Compact Clifford–Klein Forms of Homogeneous Manifolds.* AMS 1997 Spring Eastern Sectional Meeting, University of Maryland at College Park, USA, 12–13 April 1997.

[91] *On the Discontinuous Groups for Pseudo-Riemannian Homogeneous Spaces and its Deformation Theory.* Joint seminar of Geometry Colloquium–Lie Groups and Representation Theory. the University of Tokyo, Japan, 22 May 1997.

[92] *Discrete Branching Laws of Unitary Representations and their Applications.* colloquium. Kobe University, Japan, 6 June 1997.

[93] *Minimal Representations of $SO(p,q)$, Conformal Geometry, and the 'Dual Pair' Correspondences.* Saturday Seminar on Automorphic Forms. the University of Tokyo, Japan, jul 1997.

[94] *Restriction of Unitary Representations of Reductive Lie Groups.* International Symposium on Representation Theory and Homogeneous Spaces, Hayashibara Forum. Okayama, Japan, 27 July–1 August 1997.

[95] *Restriction of Unitary Representations of Real Reductive Lie Groups.* Workshop on Analysis on Lie Groups and Homogeneous Spaces. Department of Mathematics, University of Copenhagen, Denmark, 19–23 August 1997.

[96] *Discrete Branching Laws of Unitary Representations.* Annual Meeting of the Mathematical Society of Japan. the University of Tokyo, Japan, oct 1997.

[97] *Invariant Measure on (Non-symmetric) Homogeneous Spaces of Reductive Type.* Annual Meeting of the Mathematical Society of Japan. the University of Tokyo, Japan, oct 1997.

[98] *Discrete Series Representations for (Non-symmetric) Homogeneous Spaces of Reductive Type.* Annual Meeting of the Mathematical Society of Japan. the University of Tokyo, Japan, oct 1997.

[99] *Conformal Geometry, Minimal Representations, and the Dual Pair Correspondences.* Annual Meeting of the Mathematical Society of Japan. the University of Tokyo, Japan, oct 1997.

[100] *Conformal Geometry and Unipotent Branching Laws of $O(p,q)$ Attached to Minimal Nilpotent Orbits.* Workshop on Invariant Differential Operators, Special Functions and Representation Theory (organized by Toshio Oshima). RIMS, Kyoto University, Japan, 20–31 October 1997.

[101] *Compact Indefinite Kähler Manifolds as Clifford–Klein forms of reductive homogeneous spaces.* Workshop on Complex Geometry and Group Actions. Gifu University, Japan, 1–3 November 1997.

[102] *Non-Riemannian homogeneous manifolds and discontinuous groups.* colloquium. Osaka University, Japan, 10 November 1997.

[103] *Multiplicity Free Branching Laws for Unitary Highest Weight Modules.* Symposium on Representation Theory (organized by K. Mimachi and S. Takenaka). Saga, Japan, 17–20 November 1997.

[104] *Invariant Measures on (Non-symmetric) Homogeneous Spaces of Reductive Type.* Workshop on Geometry and Lie Groups. Yamaguchi University, Japan, dec 1997.

[105] *Unitary Highest Weight Modules and Multiplicity Free Branching Laws.* (3 lectures). the University of Tokyo, Japan, 26–28 January 1998.

[106] *Survey on the Theory of Infinite Dimensional Representations of Semisimple Lie Groups,with Focus on the Classification and Construction of Irreducible Representations.* (2 lectures), Geometry Seminar (organized by Masahiko Kanai and Koji Fujiwara). Keio University, Japan, 9, 10 March 1998.

[107] *Introduction to Clifford–Klein Forms of Pseudo-Riemannian Homogeneous Manifolds, and Discontinuous Groups.* Geometry Seminar (organized by Masahiko Kanai and Koji Fujiwara). Keio University, Japan, 11 March 1998.

[108] *Discrete and Continuous—Branching Laws of Infinite Dimensional Representations and their Applications.* (plenary lecture), Annual Meeting of Mathematical Society of Japan. Meijo University, Japan, mar 1998.

[109] *Compact Clifford–Klein Forms of Pseudo-Riemannian Homogeneous Manifolds.* Séminaire de Mathématiques Pures. École Normale Supérieure de Lyon, France, 13 May 1998.

[110] *Discrete Branching Laws of Unitary Representations.* Séminaire d'Algèbre. Institut Girard Desargues, Université Claude Bernard Lyon I, 28 May 1998.

[111] *Compact Clifford–Klein Forms of Pseudo-Riemannian Homogeneous Manifolds.* Arthur L. Besse Round Table in Global Pseudo-Riemannian Geometry. Université Henri Poincaré, Nancy, France, 6 June 1998.

[112] *Restriction of Unitary Representations and Discrete Series Representations for Non-symmetric Spaces.* Groupe de travail, Analyse sur les Espaces Symétriques (organized by Faraut). Université de Paris VI, France, 10 June 1998.

[113] *Conformal Geometry and Minimal Unipotent Representations.* Symposium on Lie Groups and Geometry. Yokohama, Japan, dec 1998.

[114] *Unitary Highest Weight Modules and Multiplicity-free Branching Laws.* (series lectures). Nagoya University, Japan, 11–14 January 1999.

[115] *On a Phenomenon that a Non-compact Group Behaves as if it were a Compact Group.* colloquium. Nagoya University, Japan, 13 January 1999.

[116] *Restriction of Unitary Representations with Respect to Reductive Subgroups.* Seminar Sophus Lie. Technische Universität Clausthal, Germany, 5–6 February 1999.

[117] *A Vanishing Theorem for Modular Symbols of Locally Riemannian Symmetric Spaces.* Joint seminar of University of Göttingen–Clausthal University. Germany, 8 February 1999.

[118] *Compact Clifford–Klein Forms of Pseudo-Riemannian Homogeneous Manifolds.* colloquium. University of Göttingen, Germany, 11 February 1999.

[119] *Theory of Discretely Decomposable Restrictions of Unitary Representationsof Semisimple Lie Groups, and Some Applications.* plenary address (Award Lecture), Annual Meeting of Mathematical Society of Japan. Gakushuin University, Japan, mar 1999.

[120] *Conformal Geometry and Branching Laws of $O(p,q)$ Attached to Minimal Nilpotent Orbits.* Groupe de travail, Analyse sur les Espaces Symétriques. Université de Paris VI, France, 8 April 1999.

[121] *On Discontinuous Groups Acting on Pseudo-Riemannian Homogeneous Spaces.* Joint seminar of Topology–Lie Groups and Representation Theory. the University of Tokyo, Japan, 11 May 1999.

[122] *The Restriction of Unitary Highest Representations of Reductive Lie Groups and its Multiplicities.* International Conference, Summer Solstice Days. Université de Paris VI & VII, France, jun 1999.

[123] *Restriction of Unitary Representations of Reductive Groups.* (4 lectures), Summer School on Representation Theory of Lie Groups. Yonsei University, Seoul, Republic of Korea, 20–22 July 1999.

[124] *On Discontinuous Groups for Homogeneous Spaces.* (plenary lecture), Geometry Symposium. the University of Tokyo, Japan, 2–5 August 1999.

[125] *Multiplicity-free Theorem in Branching Problems of Unitary Highest Weight Modules.* the Copenhagen Workshop (organized by M. Flensted-Jensen and H. Schlichtkrull). Denmark, 26–27 August 1999.

[126] *Geometry of Homogeneous Spaces and Discontinuous Groups.* (5 lectures). Hokkaido University, Japan, 1–5 November 1999.

[127] *Discontinuous Groups for Homogeneous Spaces.* (plenary lecture), Symposium on Representation Theory. Chiba, Japan, 15–18 November 1999.

[128] *A Note on Caratheodory Metric.* Workshop on Representation Theory. Wakayama, Japan, 6–8 January 2000.

[129] *Geometric Approach to Discretely Decomposable Restrictions.* Workshop on the Geometry of Nilpotent Orbits and Representation Theory. Kyoto University, Japan, 31 January–3 February 2000.

[130] *A Generalization of the Kostant–Schmid Formula.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 18 April 2000.

[131] *Branching Laws of Unitary Highest Weight Modules with Respect to Semisimple Symmetric Pairs.* (opening lecture), Representation Theory and Complex Analysis. Oberwolfach, Germany, 23–29 April 2000.

[132] *Discrete Decomopsable Restrictions and Geometry of Locally Symmetric Spaces.* Workshop in Representation Theory and Automorphic Forms (organized by J.-S. Li). Hangzhou, China, jun 2000.

[133] *Branching Problems and Unitary Representations.* (8 lectures), European School on Group Theory. SDU–Odense University, Denmark, 14–26 August 2000.

[134] *Discontinuous Subgroups for Non-Riemannian Homogeneous Spaces.* MIT Lie Groups Seminar (organized by David Vogan). USA, 25 October 2000.

[135] *Discrete Decomposable Restrictions of Unitary Representations.* colloquium. Oklahoma State University, USA, 1 December 2000.

[136] *Discrete Groups for Pseudo-Riemannian Homogeneous Spaces.* Lie Group Seminar (organized by Korany, cosponsored by Baruch). City University of New York, USA, 12 December 2000.

[137] *Discontinuous Groups for Non-Riemannian Homogeneous Manifoldsand Deformations of Clifford–Klein Forms.* (2 lectures), The 2000 Twente Conference on Lie Groups. University of Twente, Enschede, the Netherlands, 18–20 December 2000.

[138] *Conformal Geometry and Analysis on the Minimal Representation of $O(p, q)$.* MIT Lie Groups Seminar (organized by David Vogan). USA, 4 April 2001.

[139] *Restriction of Representations to Reductive Subgroups.* (24 lectures). Harvard University, USA, April–May 2001.

[140] *Discretely Decomposable Restriction of Unitary Representationsand a Vanishing Theorem for Modular Symbols.* 2001 Midwest Workshop in Lie Theory, Representation Theory and Automorphic Forms (organized by Moy). University of Michigan in Ann Arbor, USA, 11–13 May 2001.

[141] *Conformal Geometry and Analysis on Minimal Representations.* Workshop on Integral Geometry in Representation Theory. MSRI, Berkeley, USA, 8–12 October 2001.

[142] *Multiplicity One Theorem of Branching Laws.* MSRI seminar (organized by Gindikin). Berkeley, USA, 20 November 2001.

[143] *Multiplicity-free Branching Theorem.* (3 lectures). the University of Tokyo, Japan, 5, 12, 19 December 2001.

[144] *Multiplicity One Theorem of Branching Laws.* Lie Groups and Representation Theory Seminar. the University of Tokyo, Japan, 18 December 2001.

[145] *Canonical Hilbert Space of Ultrahyperbolic Solutions.* (closing lecture), Makuhari Workshop (organized by Kumahara and Nomura). Chiba, Japan, 6–8 January 2002.

[146] *Conformal Geometry and Analysis on Minimal Representations.* (3 plenary lectures), The 22nd Winter School on Geometry and Physics. Srni, Czech Republic, 12–19 January 2002.

[147] *On the Canonical Inner Product on the Solution Space of the Yamabe Operator.* Symposium on Various Geometric Structures. Nippon Institute of Technology, Japan, 6–8 March 2002.

[148] *On the Branching Laws of Infinite Dimensional Representations.* (5 lectures). the University of Tokyo, Japan, 17–21 June 2002.

[149] *Canonical Hilbert Spaces of Ultrahyperbolic Solutions.* colloquium. the University of Tokyo, Japan, 21 June 2002.

[150] *On the Invariant Inner Product on the Space of Global Solutions of the Yamabe Operator.* Workshop on Representations of Noncommutative Algebraic Systems and Harmonic Analysis. RIMS, Kyoto University, Japan, 23–26 July 2002.

[151] *Conformal Geometry and Analysis on Minimal Representations of $O(p,q)$.* Workshop on Representation Theory of Lie Groups, Special Year Program on Representation Theory of Lie Groups (organized by Jeffrey Adams, Jian-Shu Li, Kyo Nishiyama, Dipendra Prasad, Gordan Savin, Eng-Chye Tan and Chen-Bo Zhu). Institute for Mathematical Sciences (IMS), Singapore, 13 August 2002.

[152] *Branching Problems of Unitary Representations.* (invited lecture), International Congress of Mathematicians (ICM 2002). Beijing, China, 20–28 August 2002.

[153] *Conformal Geometry and Global Solutions to the Yamabe Equations on Classical Pseudo-Riemannian Manifolds.* Special Year Program on Representation Theory of Lie Groups (organized by Eng-Chye Tan and Chen-Bo Zhu). Institute for Mathematical Sciences (IMS), Singapore, 24 September 2002.

[154] *Restriction of Unitary Representations.* Special Year Program on Representation Theory of Lie Groups (organized by Eng-Chye Tan and Chen-Bo Zhu). Institute for Mathematical Sciences (IMS), Singapore, 1 October 2002.

[155] *Complex Geometry and Multiplicity One Theorem in Branching Laws.* Lie Groups and Representation Theory Seminar. National University of Singapore, Singapore, 22 October 2002.

[156] *Branching Problems of Unitary Representations.* (series lectures), Symposium on Representation Theory. Shizuoka, Japan, 12–15 November 2002.

[157] *Multiplicity One Theorem in the Branching Laws.* Workshop on Representations of Lie Groups, Harmonic Analysis on Homogeneous Spaces and Quantization(organized by G. van Dijk and V. F. Molchanov). Lorentz Center, Leiden University, the Netherlands, 9–13 December 2002.

[158] *Conformal Geometry and Analysis on Minimal Representations of $O(p,q)$.* The 2002 Twente Conference on Lie Groups. Twente University, the Netherlands, dec 2002.

[159] *The Schrödinger Model of the Minimal Representation of $O(p,q)$.* (closing lecture), Workshop on Automorphic Forms on Bounded Symmetric Domains of Type IV (organized by T. Oda). RIMS, Kyoto University, Japan, 24–26 December 2002.

[160] *The Schrödinger Model of the Minimal Representation of the Lorentz Group.* Makuhari Workshop. Chiba, Japan, 6–8 January 2003.

[161] *Analysis on Minimal Representations and Conformal Geometry.* Séminaire d'Analyse Harmonique. Institut de Mathématiques Élie Cartan, Université Henri Poincaré, France, 15 May 2003.

[162] *Branching Problems of Representations of Lie Groups.* colloquium. Université de Reims, France, 12 June 2003.

[163] *A Multiplicity Theorem in the Branching Laws of Representations.* Théorie des Représentations, Théorie des Groupes. Université de Paris VII, France, 16 June 2003.

[164] *Multiplicity One Theorem on Branching Laws and Geometry of Complex Manifolds.* (opening lecture), RIMS Workshop on Expansion of Lie Theory and New Advances. Kyoto, Japan, 22–25 July 2003.

[165] *On Discontinuous Groups for Non-Riemannian Homogeneous Spaces.* (invited address at Geometry Session), Annual Meeting of Mathematical Society of Japan. Chiba University, Japan, sep 2003.

[166] *Restriction of Unitary Representations.* JSPS–DFG Seminar, Lie Groups: Analysis and Geometry. Kyoto University, 6–11 October 2003.

[167] *Survey Lecture on Representation Theory of Lie Groups; Restriction of Unitary Representations.* (2 lectures). Seoul National University, Republic of Korea, nov 2003.

[168] *On Multiplicity-free Representations.* colloquium. Kyoto University, Japan, 26 November 2003.

[169] *On Discontinuous Groups for Non-Riemannian Homogeneous Spaces.* colloquium. Tokyo Institute of Technology, Japan, 8 December 2003.

[170] *Group Action on Homogeneous Spaces Having Indefinite Metric.* (series lectures). Tokyo Institute of Technology, Japan, 8–12 December 2003.

[171] *On the Double Coset Space $U(n_1)\times U(n_2)\times U(n_3)\backslash U(n)/U(p)\times U(q)$—Visibility of the Action,and a Generalization of the Cartan Decomposition.* Makuhari Workshop. Chiba, Japan, 6–8 January 2004.

[172] *Visible Actions on Complex Homogeneous Manifolds and their Application to Representation Theory.* (5 lectures). the University of Tokyo, Japan, 19–23 January 2004.

[173] *Visible Actions on Complex Manifolds, and their Applications to Representation Theory.* Mathematisches Kolloquium. Technische Universität Clausthal, Germany, 30 January 2004.

[174] *Visible Actions on Complex Manifolds and Multiplicity One Theorems.* (opening lecture), Finite and Infinite Dimensional Complex Geometry and Representation Theory(organized by Alan T. Huckleberry, Karl-Hermann Neeb and Joseph A. Wolf). Oberwolfach, Germany, 1–7 February 2004.

[175] *On Complex Geometry and Multiplicity-free Representations.* Fourth Workshop on Nilpotent Orbits and Representation Theory. Nagoya University, Japan, 21–24 February 2004.

[176] *Symmetry and Geometry—Continuous Groups and Discontinuous Groups.* RIMS, Kyoto University, Japan. 28 May 2004.

[177] *Restriction of Unitary Representations of Reductive Lie Groups.* International Symposium on Representation Theory and Harmonic Analysis. Urumqi, Xinjiang, China, 2–8 August 2004.

[178] *Visible Actions on Complex Manifolds and Multiplicity-free Representations.* (closing lecture), Conference on Lie Groups and Representation Theory. Odense, Denmark, 10–13 August 2004.

[179] *Schrödinger Model of the Minimal Representation of the Lorentz Group $O(p,q)$.* Workshop on Harmonic Analysis and Homogeneous Spaces (in honor of Professor G. van Dijk). Lorentz Center, Leiden University, the Netherlands, 23–26 August 2004.

[180] *Restriction of Unitary Representations—Discrete and continuous spectrum.* (plenary lecture), Sixth Pan-African Congress of Mathematicians (PACOM2004). Institut National des Sciences Appliquées et de la Technologie (INSAT), Tunis, Tunisia, sep 2004.

[181] *Conformal Geometry and Analysis on Minimal Representation of $O(p,q)$.* PACOM2004, Parallel Session: Lie Groups and Representation Theory. Tunis, Tunisia, sep 2004.

[182] *Restriction of Unitary Representations of Real Reductive Groups.* (closing lecture), Conference on Nilpotent Orbits and Representation Theory 2004. Kawaguchiko, Japan, 6–10 September 2004.

[183] *A Fourier-Transform Formula of the Minimal K-type of the Minimal Representation.* RIMS Workshop on Automorphic Forms of $Sp(2,\mathbb{R})$ and $SU(2,2)$, III. Kyoto, Japan, sep 2004.

[184] *Multiplicity-free Representations.* colloquium. Osaka City University, Japan, 2 February 2005.

[185] *Multiplicity-free Representations and Visible Actions on Complex Manifolds.* (4 lectures). Osaka City University, Japan, 31 January–4 February 2005.

[186] *Visible Actions on Complex Manifolds and Multiplicity-free Theorems.* (2 lectures), International Symposium on Representation Theory and Automorphic Forms. Seoul National University, Seoul, Republic of Korea, 14–17 February 2005.

[187] *Analysis on Minimal Representation of Indefinite Orthogonal Groups.* Séminaire Théorie de Lie et Applications, Groupe de travail. Université de Poitiers, France, 26 May 2005.

[188] *Visible Actions on Complex Manifolds and Multiplicity-free Representations.* Séminaire Théorie de Lie et applications. Université de Poitiers, France, 2 June 2005.

[189] *Analysis on Homogeneous Spaces Revisited—From Viewpoint of Branching Laws of Unitary Representations.* Harmonic Analysis on Lie Groups and Symmetric Spaces in honor of Jacques Faraut,Joint meeting of Seminar Sophus Lie. Nancy, France, 10–11 June 2005.

[190] *Integral Formulas for the Minimal Representation of the Conformal Group.* Seminar organized by Professor Faraut. Analyse Algébrique,Université Pierre et Marie Curie, France, 22 June 2005.

[191] *Introduction to Lie Groups and Representation Theory.* RIMS, Kyoto University, Japan. 8 July 2005.

[192] *Multiplicity-free Theorem and Visible Actions on Complex Manifolds.* The Asian Mathematical Conference (AMC2005). Singapore, 20–23 July 2005.

[193] *Multiplicity-free Representations and Visible Actions on Complex Manifolds:1. Multiplicity-free theorem; 2. Visible actions on symmetric spaces;3. Visible actions on non-symmetric spaces.* (3 lectures), Workshop on Integral Transformations on Homogeneous Spaces(organized by Toshio Oshima). Tambara Institute of Mathematical Sciences, the University of Tokyo, Japan, 21–25 August 2005.

[194] *Visible Actions on Complex Manifolds and Multiplicity-free Representations.* RIMS Symposium on Development of Cartan Geometry and Related Mathematical Problems(organized by Tohru Morimoto). RIMS, Kyoto University, Japan, 24–27 October 2005.

[195] *Multiplicity-free Representations and Visible Actions on Complex Manifolds.* (expository lecture), Symposium on Representation Theory. Kakegawa, Japan, 15–18 November 2005.

[196] *Restrictions of Unitary Representations of Real Reductive Groups.* International Conference on Representations of Real Reductive Groups,in honor of R. Parthasarathy. Tata Institute of Fundamental Research, Mumbai, India, 2–5 January 2006.

[197] *Multiplicity-free Representations and Visible Actions on Complex Manifolds.* (opening lecture), International Conference on Harmonic Analysis, Group Representations,Automorphic Forms and Invariant Theory(on the Occasion of Professor Roger Howe's 60th Birthday). Singapore, 9–11 January 2006.

[198] *On Visible Actions on Complex Manifolds.* Geometric Aspects of Homogeneous Spaces(on the Occasion of Professor Soji Kaneyuki's 70th Birthday). Meijo University, Japan, 2–4 March 2006.

[199] *What Are Possible Global Forms of Locally Symmetric Spaces?* colloquium. Kyoto University, Japan, 12 April 2006.

[200] *Group Actions and Representations of Lie Groups.* (5 lectures). Hiroshima University, Japan, 24–28 April 2006.

[201] *Visible Actions and Multiplicity-free Representations.* colloquium. Hiroshima University, Japan, 25 April 2006.

[202] *Topics on Unitary Representation Theory by Complex Analytic Methods.* (5 lectures). the University of Tokyo, Japan, 8–12 May 2006.

[203] *Mathematics of Symmetry.* RIMS, Kyoto University, Japan. 26 May 2006.

[204] *Is the Universe Closed?—Existence Problem of Compact Clifford–Klein Forms of Symmetric Spaces.* colloquium. Universität Paderborn, Germany, 4 July 2006.

[205] *Branching Problems of Unitary Representations.* "Perspectives in Representation Theory" Strategic Workshop and Round Table Discussion (organized by Steffen Koenig, Henning Krause, Peter Littelmann, and Gunter Malle). Physikzentrum Bad Honnef, Germany, 7–9 July 2006.

[206] *Is the Universe Closed?—Existence Problem of Compact Locally Symmetric Spaces.* colloquium. Technische Universität Darmstadt, Germany, 12 July 2006.

[207] *Unitary Representations, Restrictions, and their Applications.* (8 lectures), Summer School: Microlocal and Geometric Methods in Representation Theory. Günzburg, Germany, 17–28 July 2006.

[208] *Clifford–Klein Forms of Non-Riemannian Homogeneous Spaces.* (4 lectures), International Conference and Instructional Workshop: Geometry Topology, Analysis of Locally Symmetric Spacesand Discrete Groups (organized by Shing-Tung Yau (chair), Lizhen Ji, Kefeng Liu, Nanhua Xi Hongwei Xu, Lo Yang, Zhu-Jun Zheng and Xiangyu Zhou). Beijing, Republic of China, 17 July–4 August 2006.

[209] *Compact Clifford–Klein Forms of Non-Riemannian Symmetric Spaces.* Mini-Workshop on Lie groups, Algebraic Groups and Transformation Groups (organized by H. Abels and E. Vinberg). Universität Bielefeld, Germany, 15–16 July 2006.

[210] *Conformally Invariant Hilbert Structure on the Solution Space of the Ultrahyperbolic Laplace Equation on* $\mathbb{R}^{p+q}$. Tsukuba Conference on Integral Geometry and Harmonic Analysis (organized by Fulton Gonzalez, Tomoyuki Kakehi and Toshio Oshima). University of Tsukuba, Japan, 7–10 August 2006.

[211] *Multiplicity-free Representations and Visible Actions on Complex Manifolds.* The 53rd Geometry Symposium (organized by Kenji Fukaya, Takao Yamaguchi, Atsushi Kasue and Akito Futaki). Kanazawa University, Japan, 5–8 August 2006.

[212] *On Compact Locally Symmetric Spaces.* RIMS Workshop on Representation Theory and Analysis on Homogeneous Spaces (organized by Hideko Sekiguchi). RIMS, Kyoto University, Japan, 21–24 August 2006.

[213] *Visible Actions on Complex Manifolds.* Workshop on Representation Theory and Prehomogeneous Vector Spaces (organized by Yumiko Hironaka, Iris Muller, Hiroyuki Ochiai, Hubert Rubenthaler, Fumihiro Sato). Institut de Recherche Mathématique Avancée (IRMA), Strasbourg, France, 11–14 September 2006.

[214] *Multiplicity-free Representations and Visible Actions on Complex Manifolds.* Analysis Seminar. University of Aarhus, Denmark, 18 September 2006.

[215] The 24th Osaka Science Prize Lecture. Osaka Science & Technology Center, Japan, 1 November 2006.

[216] *On Compact Locally Symmetric Spaces.* International Conference on Harmonic Analysis and Applications. Sousse, Tunisia, 6–11 November 2006.

[217] *Topics on Discontinuous Groups.* (5 lectures). Nagoya University, Japan, 29 January–1 February 2007.

[218] *Topics on Discontinuous Groups.* colloquium. Nagoya University, Japan, 29 January 2007.

[219] *Existence Problem of Compact Locally Symmetric Spaces.* Tuesday Seminar on Topology. University of Tokyo, Japan, 17 April 2007.

[220] *Branching Problems of Unitary Representations.* (2 lectures), Sackler Distinguished Lectures in Pure Mathematics. Tel Aviv University, Israel, 7, 9 May 2007.

[221] *Existence Problem of Compact Locally Symmetric Spaces.* Journées Solstice d'été 2007:Théorie de Lie, Géométrie et Représentations (organized by B. Keller, B. Klingler, R. Rentschler and O. Schiffmann). Institut de Mathématiques de Jussieu, Paris, France, 21–23 June 2007.

[222] *The unitary inversion operator on the L^2 model of a minimal representation.* Journée-GAG. Poitiers, France, 25 June 2007.

[223] *Visible Actions on Symmetric Spaces and Multiplicity-free Representations.* Bonn–Cologne algebra seminar (organized by Peter Littelmann). Universität zu Köln, Germany, 3 July 2007.

[224] *Multiplicities in the Decomposition of Unitary Representations of Reductive Lie Groups.* (opening lecture), Lie Groups, Algebraic Groups and Transformation Groups: A conference in honor of Ernest B. Vinberg's 70th birthday (organized by Herbert Abels, Vladimir Chernousov, Gregory Margulis, Detlev Poguntke, and Katrin Tent). Universität Bielefeld, Germany, 20–24 July 2007.

[225] *On Locally Symmetric Spaces.* (closing lecture), Representation Theory, Complex Analysis and Integral Geometry (organized by Simon Gindikin and Bernhard Krötz). Max-Planck-Institut für Mathematik, Bonn, Germany, 25–27 July 2007.

[226] *On a Conjecture of Sunada and Theory of Discretely Decomposable Restrictions of Unitary Representations.* International Conference "Spectral Analysis in Geometry and Number Theory" on the occasion of Toshikazu Sunada's 60th birthday. Nagoya University, Japan, 6–10 August 2007.

[227] *Branchings to Symmetric Pairs and Analysis on Symmetric Spaces.* International Conference on Integral Geometry, Harmonic Analysis and Representation Theory in honor of Sigurdur Helgason on the occasion of his 80th birthday. Reykjavik, Iceland, 15–18 August 2007.

[228] *Fourier Transform on the Isotropic Cone for the Indefinite Quadratic Form.* Analysis Seminar. Aarhus University, Denmark, 23 August 2007.

[229] *Multiplicity-Free Representations: Complex Geometric Methods in Representation Theory.* (37 lectures). Harvard University, USA, spring term (January–May) 2008.

[230] *Propagation Theorem of Multiplicity-Free Representations and Visible Actions on Complex Manifolds.* AMS 2008 Spring Southeastern Meeting. Louisiana State University, Baton Rouge, USA, 28–30 March 2008.

[231] *Existence Problem of Compact Locally Symmetric Spaces.* colloquium. Harvard University, USA, 17 March 2008.

[232] *Existence Problem of Compact Locally Symmetric Spaces.* colloquium. Louisiana State University, Baton Rouge, USA, 27 March 2008.

[233] *Compact Locally Symmetric Spaces—non-Riemannian case.* colloquium. Tufts University, USA, 25 April 2008.

[234] *Restriction of Unitary Representations of Real Reductive Groups.* Locally Symmetric Spaces (organized by Stephen Kudla, Juergen Rohlfs, Leslie Saper and Birgit Speh). Banff International Research Station, Canada, 18–23 May 2008.

[235] *Restriction of Unitary Representations of Real Reductive Groups.* Number Theory Seminar. Harvard University, 28 May 2008.

[236] *Visible Action, Polar Action and Coisotropic Action.* Conference in honor of Prof. Jean-Louis Clerc "Hermitian Symmetric Spaces, Jordan Algebras and Related Problems" (organized by Wolfgang Bertram and Khalid Koufany). Centre International de Recherches Mathématiques (CIRM), Luminy, France, 23–27 June 2008.

[237] *Visible Actions and Multiplicity-free Representations.* (4 lectures), Functional Analysis X: Representation Theory (organized by Dražen Adamović, Damir Bakić, Davor Butković, Hrvoje Kraljević, Goran Muić, Mirko Primc, Murali Rao, David Renard, Hrvoje Šikić and David Vogan). Dubrovnik, Croatia, 30 June–5 July 2008.

[238] *Visible actions and multiplicity-free theorems.* colloquium. Université de Reims, France, 23 September 2008.

[239] *Holomorphic semigroups for minimal representations of conformal groups.* Harmonic Analysis, Operator Algebras and Representation Theory (organized by Jean Ludwig and Anthony To-Ming Lau). Centre International de Recherches Mathématiques (CIRM), Luminy, France, 3–7 November 2008.

[240] *A journey into infinite dimension.* Nada High School, Kobe, Japan, 15 November 2008.

[241] *Global Geometry of Locally Symmetric Spaces—beyond the Riemannian case.* the Monna Lectures. Utrecht University, the Netherlands, 11 December 2008.

[242] *Global Geometry on Locally Symmetric Spaces—beyond the Riemannian case.* Representations of Lie groups and applications. Institut Henri Poincaré, Paris, France, 15–18 December 2008.

[243] *Global Geometry and Analysis on Locally Symmetric Spaces—Beyond the Riemannian case.* Conference in honor of Toshio Oshima's 60th birthday "Differential Equations and Symmetric Spaces". University of Tokyo, Japan, 13–16 January 2009.

[244] *Global Geometry and Analysis on Locally Symmetric Spaces—Beyond the Riemannian case.* colloquium. Yale University, USA, 25 March 2009.

[245] *Analysis on Minimal Representations.* Geometry, Symmetry and Physics. Yale University, USA, 26 March 2009.

[246] *Fundamental Groups of Locally Complex Symmetric Spaces—An Application of Symmetries of Nilpotent Orbits.* The 8th Workshop on Nilpotent Orbits and Representation Theory (NORTh 8). Otsu, Japan, 8–11 March 2009.

[247] *Conformal Geometry and Schrödinger Model of Minimal Representations.* (opening lecture). Conference in honor of Bent Ørsted's 60th birthday: Representations, Lie groups, and Conformal Geometry. Göttingen, Germany, 6–10 April 2009.

[248] *Minimal Representations.* Research Seminar "Lie Theory". Universität Paderborn, Germany, 23 April 2009.

[249] *Lie Groups and Representation Theory.* Mathematics XB. Graduate School of Mathematical Sciences, the University of Tokyo, 26 May 2009.

[250] *Conformal Geometry, Schrödinger Model of Minimal Representations, and Deformation of Fourier Transforms.* 83ème Rencontre entre physiciens théoriciens et mathématiciens (Encounter between theoretical physicists and mathematicians). Institut de Recherche Mathématique Avancée, Strasbourg, France, 11–13 June 2009.

[251] *1. Conformal Geometry and Schrödinger Model of Minimal Representations; 2. Generalized Bernstein–Reznikov Integrals.* (2 lectures), Representation Theory XI. Dubrovnik, Croatia, 14–21 June 2009.

[252] *Discontinuous Groups on pseudo-Riemannian Spaces.* Mathematische Arbeitstagung 2009. Max-Planck-Institut für Mathematik, Bonn, Germany, 5–11 June 2009.

[253] *Geometric Analysis on Minimal Representations.* Representation Theory of Real Reductive Groups (organized by Jeffrey Adams, Susana Salamanca, John Stembridge, Peter Trapa and David Vogan). University of Utah, Salt Lake City, USA, 27–31 July 2009.

[254] *Geometric Analysis on Minimal Representations.* Workshop on Integral Geometry and Group Representations (organized by Fulton B. Gonzalez, Tomoyuki Kakehi, Toshiyuki Kobayashi, Toshio Oshima). Tambara Institute of Mathematical Sciences, the University of Tokyo, Japan, 5–10 August 2009.

[255] *Breaking Symmetries and Locally Symmetric Spaces.* Geometry and Analysis of Automorphic Forms: Conference in honor of Professor Takayuki Oda on the occasion of his 60th birthday. the University of Tokyo, Japan, 14–17 September 2009.

[256] *Branching Problems for Zuckerman's Derived Functor Modules.* Representation Theory and Mathematical Physics: Conference in honor of Gregg Zuckerman's 60th birthday. Yale University, USA, 24–27 October 2009.

[257] *Restriction of Unitary Representations to Reductive Subgroups.* Encuentro de Teoria de Lie (in honor of Prof. Jorge Vargas' 60th Birthday). Córdoba, Argentina, 26 November 2009.

[258] *Applications of Branching Laws to Certain Problems on Global Analysis.* The Seventh Workshop in Lie Theory and its Applications. Córdoba, Argentina, 27 November–1 December 2009.

[259] *Visible Actions and Multiplicity-free Representations.* (3 lectures). The 30th Winter School on Geometry and Physics. Srni, Czech, 16–23 January 2010.

[260] *From Local to Global—The World of Lie Groups and Discontinuous Groups.* Mathematics XB. Graduate School of Mathematical Sciences, the University of Tokyo, 12 May 2010.

[261] *Geometric Analysis on Minimal Representations.* Geometry and Quantum Theory. Nijmegen, the Netherlands, 28 June–2 July 2010.

[262] *Stable Spectrum on Locally Homogeneous Spaces.* Structure and Representations of Exceptional Groups (organized by Wulf Rossmann, Jedrzej Sniatycki, Shlomo Sternberg, David Vogan and Joseph Wolf). Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Canada, 4–9 July 2010.

[263] *Minimal Representations and Generalized Fourier Transforms.* Autour des Transformations de Fourier (Around the Fourier Transforms) (organized by D. Juteau, E. Letellier and P.-E. Paradan). Centre International de Rencontres Mathématiques (CIRM), Luminy, France, 13–17 September 2010.

[264] *Geometric Analysis on Minimal Representations.* Colloquium. Université de Reims, France, 5 October 2010.

[265] *Geometric Analysis on Minimal Representations.* 9th Oka Symposium. Nara Women's University, Japan, 4–5 December 2010.

[266] *Analysis on Minimal Representations.* Special Seminar [Mathematics]. IPMU, the University of Tokyo, Japan, 9 December 2010.

[267] *Geometric Analysis on Minimal Representations.* Geometry and Dynamics Seminar. Université Lille, France, 6 January 2011.

[268] *Geometric Quantization, Limits, and Restrictions—Some Examples for Elliptic and Nilpotent Orbits.* Geometric Quantization in the Non-compact Setting (organized by L. Jeffrey, X. Ma and M. Vergne). Oberwolfach, Germany, 13–19 February 2011.

[269] *Geometric Quantization of Coadjoint Orbits, Limits and Restrictions.* (closing lecture), The 10th Workshop on Nilpotent Orbits and Representation Theory (NORTh10). Kyushu University, Japan, 19–23 February 2011.

[270] *Restrictions of Verma Modules to Symmetric Pairs and Some Applications to Differential Geometry.* Workshop on the Interaction of Representation Theory with Geometry and Combinatorics. Hausdorff Institute, Bonn, Germany, 28 March–1 April 2011.

[271] *Global Geometry and Analysis on Locally Symmetric Spaces—Beyond the Riemannian Case.* Colloquium. University of Chicago, USA, 6 May 2011.

[272] *Restrictions of Verma Modules to Symmetric Pairs and Some Applications to Differential Geometry.* Special day on Lie groups. Utrecht University, the Netherlands, 17 May 2011.

[273] *Restrictions of Verma Modules to Symmetric Pairs and Some Applications to Differential Geometry.* (2 lectures), Representation Theory XII. Dubrovnik, Croatia, 19–26 June 2011.

[274] *Analysis on Minimal Representations.* IX. International Workshop: Lie Theory and Its Applications in Physics. Varna, Bulgaria, 20–26 June 2011.

[275] *Geometry of Symmetry.* Present, Past and Future of Mathematics (relay lectures). The University of Tokyo, Japan, 4, 11 July 2011.

[276] *Multiplicities of Irreducible Representations.* (closing lecture), Seminar Sophus Lie. Erlangen, Germany, 15–16 July 2011.

[277] *1. Branching problems for unitary representations—analytic aspects; 2. Branching problems for unitary representations—algebraic aspects.* (opening lecture), AIM Conference: Branching Problems for Unitary Representations. Max Planck Institute for Mathematics, Bonn, Germany, 25–29 July 2011.

[278] *Conformally Equivariant Differential Operators and Branching Problems of Verma Modules.* Lie Groups: Geometry and Analysis (JSPS/DFG seminar). Paderborn, Germany, 5–10 September 2011.

[279] *Analysis of Minimal Representations.* Harmonic Analysis, Deformation Quantization, Noncommutative Geometry. Scalea, Italy, 5–9 September 2011.

[280] *On Real Spherical Homogeneous Spaces.* Analysis on Lie Groups. Max Planck Institute for Mathematics, Bonn, Germany, 27 September 2011.

[281] *Analysis on pseudo-Riemannian locally symmetric spaces.* Chern Centennial Conference. Mathematical Science Research Institute (MSRI) at Berkeley, California, USA, 30 October–5 November 2011.

[282] *Finite Multiplicity Theorems.* (closing lecture), Lie Groups, Lie Algebras and their Representations (organized by Joseph Wolf). University of California, Berkeley, USA, 5–6 November 2011.

[283] *Global Geometry and Analysis on Locally Homogeneous Spaces.* IPMU Colloquium. IPMU, the University of Tokyo, Japan, 14 December 2011.

[284] *Discrete Spectrum for Non-Riemannian Locally Symmetric Spaces.* Cohomology of Arithmetic Groups (on the occasion of Prof. MS Raghunathan turning 70 during the year). Tata Institute of Fundamental Research, Mumbai, India, 28–31 December 2011.

[285] *Conformally Equivariant Differential Operators and Branching Problems of Verma Modules.* Workshop on Geometric Analysis on Euclidean and Homogeneous Spaces (in honor of Sigurdur Helgason's 85th birthday, in conjuction with the AMS special session "Radon Transforms and Geometric Analysis", January 5–7, 2012). Tufts University, USA, 8–9 January 2012.

[286] *Stable Spectrum for non-Riemannian Locally Symmetric Spaces.* Lie Groups: Structure, Actions and Representations (in honor of Prof. Joe Wolf's 75th birthday, organized by Alan Huckleberry, Ivan Penkov and Gregg Zuckermann). Ruhr-Universität, Bochum, Germany, 11–14 January 2012.

[287] *Finite Multiplicity Theorems and Real Spherical Varieties.* Branching Laws (11-31 March 2012). Institute for Mathematical Sciences, NUS, Singapore, 19 March 2012.

[288] *Geometric Analysis on Minimal Representations.* Mathematical Physics and Representation Theory (in honor of Prof. Igor Frenkel's 60th birthday) (organized by P. Etingof, M. Khovanov, A. Kirillov Jr., A. Lachowska, A. Licata, A. Savage and G. Zuckerman). Yale University, USA, 12–16 May 2012.

[289] *Geometric Quantization of Minimal Nilpotent Orbits.* Conference in honor of Souriau's 90th birthday. Aix-en-Provence, France, 25–29 June 2012.

[290] *Geometry of Discontinuous Groups.* Mathematics XB. The University of Tokyo, Japan, 17 July 2012.

[291] *Natural Differential Operators in Parabolic Geometry and Branching Laws.* The Interaction of Geometry and Representation Theory: Exploring New Frontiers (in honor of Michael Eastwood's 60th birthday) (organized by Andreas Cap, Alan Carey, A. Rod Gover, C. Robin Graham, and Jan Slovak). ESI, Vienna, 10–14 September 2012.

[292] *Spectrum on Locally Symmetric Spaces.* Colloquium Lorrain. Université de Lorraine - Metz, France, 16 October 2012.

[293] *Finite Multiplicity Theorems and Real Spherical Varieties.* Harmonic Analysis, Operator Algebras and Representations. Centre International de Rencontres Mathématiques (CIRM), Luminy, France, 22–26 October 2012.

[294] *Global Geometry and Analysis on Locally Homogeneous Spaces.* (2 lectures), Workshop d'analyse harmonique. Reims, France, 2 November 2012.

[295] *Natural Differential Operators in Parabolic Geometry and Branching Problems.* Symposium on Representation Theory 2012. Kagoshima, Japan, 4–7 December 2012.

[296] *Finite Multiplicity Theorems and Real Spherical Varieties.* Harmonic Analysis Seminar. Charles University in Prague, Czech, 14 December 2012.

[297] *On Japanese Journal of Mathematics.* RIMS Workshop: Analysis of the Present and Future of Mathematics Journal Publishing. RIMS, Kyoto University, Japan, 26–27 December 2012.

[298] *Branching Laws for Infinite Dimensional Representations of Real Reductive Lie Groups.* (5 lectures), Mathematical Panorama Lectures in celebration of 125th birthday of Srinivasa Ramanujan. Tata Institute, India, 18–22 February 2013.

[299] *Branching Laws and F-method for Constructing Natural Differential Operators in Parabolic Geometry.* Analysis Seminar. Chalmers University of Technology and the University of Gothenburg, Sweden, 14 May 2013.

[300] *Global Geometry and Analysis on Locally Pseudo-Riemannian Homogeneous Spaces.* Colloquium. Chalmers University of Technology and the University of Gothenburg, Sweden, 20 May 2013.

[301] *Branching, Multiplicities, and Real Spherical Varieties.* Group Actions with applications in Geometry and Analysis: in honour of Toshiyuki Kobayashi 50th birthday. Reims, France, 3–6 June 2013.

[302] *Global Geometry and Analysis on Locally Pseudo-Riemannian Homogeneous Spaces.* Colloquium de Mathématiques de Rennes. Institut de Recherche mathématique de Rennes, France, 10 June 2013.

[303] *F-method to construct natural operators.* X. International Workshop: Lie Theory and Its Applications in Physics (LT-10). Varna, Bulgaria, 17–23 June 2013.

[304] *Global Geometry and Analysis on Locally Pseudo-Riemannian Homogeneous Spaces.* Journée Mathématique de la Fédération de Recherche. Logis du Roy, Amiens, France, 2 July 2013.

[305] *Multiplicities in the Restriction and Real Spherical Varieties.* Representations of Reductive Groups (organized by Jeff Adams, Peter Trapa, and David Vogan Jr.). Salt Lake City, USA, 8–12 July 2013.

[306] *Global Geometry and Analysis on Locally Pseudo-Riemannian Homogeneous Spaces.* Hayama Symposium on Complex Analysis in Several Variables XVI. Kanagawa, Japan, 20–23 July 2013.

[307] *Analysis of Minimal Representations.* International summer research school of CIMPA 2013: Hypergeometric functions and representation theory. Mongolia, 5-16 August 2013.

[308] *Global Geometry and Analysis on Locally Pseudo-Riemannian Homogeneous Spaces.* Japan–Netherlands Seminar. Nagoya University, Japan, 26–30 August 2013.

[309] *Symmetry Breaking for Representations of Rank One Orthogonal Groups.* Workshop on Representations of Lie Groups and their Subgroups (organized by G. Chang). Chalmers University of Technology, Sweden, 19–20 September 2013.

[310] *"Universal sound" of anti-de Sitter manifold.* Sophus Lie Days. Cornell, USA, 10 October 2013.

[311] *Global Geometry and Analysis on Locally pseudo-Riemannian Symmetric Spaces.* Sophus Lie Days. Cornell, USA, 11 October 2013.

[312] *Global Geometry and Analysis on Locally Pseudo-Riemannian Homogeneous Spaces.* JSPS-DST Asian Academic Seminar 2013: Discrete Mathematics & its Applications. Graduate School of Mathematical Sciences, the University of Tokyo, Japan, 3–10 November 2013.

[313] *Shintani Functions, Real Spherical Manifolds, and Symmetry Breaking Operators.* Representation Theory and Analysis of Reductive Groups: Spherical Spaces and Hecke Algebras (organized by Bernhard Kroetz, Eric M. Opdam, Henrik Schlichtkrull, and Peter Trapa). Oberwolfach, Germany, 19–25 January 2014.

[314] *Shintani Functions, Real Spherical Manifolds, and Symmetry Breaking Operators.* Conference on the occasion of Professor Matsuki's 60th birthday. Tottori, Japan, 8–9, February 2014.

[315] *Branching problems of representations of real reductive Lie groups.* Representations of reductive groups: A conference dedicated to David Vogan on his 60th birthday (organized by Roman Bezrukavnikov, Pavel Etingof, George Lusztig, Monica Nevins, and Peter Trapa). MIT, USA, 19–23 May 2014.

[316] *Visible Actions and Multiplicity-free Representations.* 5 lectures, XVIth International Conference on Geometry, Integrability and Quantization. Varna, Bulgaria, 6–11 June 2014.

[317] *Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* Colloquium. The University of Tokyo, Tokyo, Japan, 11 July 2014.

[318] *Branching Problems of Representations of Real Reductive Groups.* Representation Theory and Groups Actions. The University of Tokyo, Tokyo, Japan, 12 July 2014.

[319] *Symmetry Breaking Operators for Rank One Orthogonal Groups.* Prehomogeneous Vector Spaces and Related Topics (organized by Slupinski, Soufaifi, Y. Hironaka, H. Ochiai; scientific advisors: Rubethaler and F. Sato). Rikkyo University, Tokyo, Japan, 1–5 September 2014.

[320] *Symmetry Breaking Operators and Branching Problems.* Algebraic Geometry Seminar. Zurich University, Switzerland, 6 October 2014.

[321] *Symmetry Breaking Operators and Branching Problems.* Symposium on Representation Theory 2014. Awajishima, Japan, 25–28 November 2014.

[322] *Symmetry Breaking Operators for Rank One Orthogonal Groups.* Analysis, Geometry and Representations on Lie Groups and Homogeneous Spaces (Conference in honor of Prof. Takeshi Kawazoe and Prof. Ahmed Intissar). Marrakech, Morocco, 8–12 December 2014.

[323] *Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* Colloquium. Tohoku University, Sendai, Japan, 15 December 2014.

[324] *Group Actions and Representation Theory of Lie Groups: Visible Actions and Multiplicity-free Representations on Complex Manifolds.* (4 lectures). Tohoku University, Sendai, Japan, 16–19 December 2014.

[325] *Global Geometry and Analysis on Locally Symmetric Spaces: Beyond Riemannian Geometry.* Colloquium. Kyushu University, Fukuoka, Japan, 15 January 2015.

[326] *Infinite Dimensional Representations of Lie Groups.* (series lectures). Kyushu University, Fukuoka, Japan, 13–16 January 2015.

[327] *Rigidity in geometry and spectral analysis on non-Riemnnnian locally homogeneous manifolds.* Workshop: Deformation of Discrete Groups and Related Topics. Nagoya University, Nagoya, Japan, 17–18 February 2015.

[328] *Analysis on Non-Riemannian Locally Symmetric Spaces — An Application of Invariant Theory.* Harmonic Analysis, Group Representations, Automorphic Forms and Invariant Theory: in honour of Roger Howe celebrating his 70th birthday (organizers: James Cogdell, Ju-Lee Kim, David Manderscheid, Gregory Margulis, Jian-Shu Li, Cheng-Bo Zhu, and Gregg Zuckerman). Yale University, USA, 1–5 June 2015.

[329] *Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* The 11th International Workshop: Lie Theory and Its Applications in Physics (LT-11). Varna, Bulgaria, 15–21 June 2015.

[330] *Analysis of Minimal Representatinons — "Geometric Quantization" of Minimal Nilpotent Orbits.* (2 lectures). Analytic Representation Theory of Lie Groups. Kavli IPMU, the University of Tokyo, Japan, 1–4 July 2015.

[331] *Analysis on Non-Riemannian Locally Symmetric Spaces — An Application of Invariant Theory.* Seminar. Institut Élie Cartan de Lorraine, Nancy, France, 15 October 2015.

[332] *Analysis on Non-Riemannian Locally Symmetric Spaces — An Application of Branching Laws.* Workshop: Branching Laws, Quantum Ergodicity, Wave Front Sets & Resonances (organized by M. Pevzner and P. Ramacher). Reims, France, 23–24 October 2015. (2 lectures).

[333] *Analysis on Non-Riemannian Locally Symmetric Spaces — An Application of Invariant Theory.* Symposium on Representation Theory 2015. Izu-Nagaoka, Shizuoka, Japan, 17–20 November 2015.

[334] *Branching Problems in Representation Theory of Reductive Lie Groups.* Berkeley–Tokyo Winter School: Geometry, Topology and Representation Theory. University of California, Berkeley, USA, 8–19 February 2016.

[335] *F-method for Symmetry Breaking Operators, 3.* Geometry, Representation Theory, and Differential Equations. Kyushu University, 16–19 February 2016.

[336] *Symmetry breaking operators for real reductive groups.* Tutorials and Workshop on New Developments in Representation Theory. Singapore, 14 March 2016.

[337] *Branching Problems and Symmetry Breaking Operators.* (opening lecture). Journees SL2R (Strasbourg, Lorraine, Luxembourg, Reims): Théorie des Representations et Analyse Harmonique. Institut Elie Cartan de Lorraine, France, 9–10 June 2016.

[338] *Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* Analysis on Manifolds with Symmetries and Related Structures. University of Bath, UK, 28–29 June 2016.

[339] *Conformally Covariant Symmetry Breaking Operators on Differential Forms and Some Applications.* Conference on Geometry, Representation Theory and the Baum-Connes Conjecture. The Fields Institute, Toronto, Ontario, Canada, 18–22 July 2016.

[340] *Birth of New Branching Problems.* 70th anniversary lecture (featured invited talk), MSJ Autumn Meeting 2016. Kansai University, Japan, 15–18 September 2016.

[341] *Conformal Geometry and Branching Problems in Representation Theory.* Symposium on Representation Theory 2016. Okinawa, Japan, 29 November–2 December 2016. (special lectures).

[342] *Conformally Covariant Symmetry Breaking Operators on Differential Forms and Some Applications.* AMS Special Session on Harmonic Analysis (In Honor of Gestur Olafsson's 65th Birthday). Atlanta, USA, 4 January 2017.

[343] *"Universal sounds" of anti-de Sitter manifolds.* The Kemeny lectures. Dartmouth College, USA, 3 May 2017.

[344] *Local to global—geometry of symmetric spaces with indefinite-metric.* The Kemeny lectures. Dartmouth College, USA, 4 May 2017.

[345] *Analysis on locally pseudo-Riemannian symmetric spaces.* The Kemeny lectures. Dartmouth College, USA, 5 May 2017.

[346] *Symmetry Breaking Operators for Orthogonal Groups $O(n, 1)$.* Harmonic Analysis and the Trace Formula. Oberwolfach, Germany, 21–27 May 2017.

[347] *Analysis of minimal representations—an approach to quantize nilpotent orbits.* Representation Theory at the Crossroads of Modern Mathematics: in honor of Alexandre Kirillov. Reims, France, 29 May–2 June 2017.

[348] *Symmetry Breaking Operators in Conformal Geometry.* (opening lecture). Joint meeting of X. International Symposium: Quantum Theory and Symmetries and XII. International Workshop: Lie Theory and Its Applications in Physics. Varna, Bulgaria, 19–25 June 2017.

[349] *Symmetry Breaking Operators in Conformal Geometry and Some Applications.* Sophus Lie Seminar. Göttingen, Germany, 30 June–1 July 2017.

[350] *Conformally Covariant Symmetry Breaking Operators on Differential Forms and Some Applications.* (plenary lecture), the XXXV Workshop on Geometric Methods in Physics. Bialowieza, Poland, 2–8 July 2017.

[351] *Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric — after 145 years of Klein's Erlangen Program.* Colloquium. Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany, 25 July 2017.

[352] *F-method for Constructing Symmetry Breaking Operators I. Abstract Branching Laws for Unitary Highest Weight Modules and Localness Theorem.* The 20th Hakuba Workshop on Number Theory in 2017: Automorphic Differential Operators on Siegel Modular Forms (organized by T. Ibukiyama). Nagano, Japan, 3–7 September 2017.

[353] *F-method for Constructing Symmetry Breaking Operators V. Some Further Perspectives from the General Theory.* The 20th Hakuba Workshop on Number Theory in 2017: Automorphic Differential Operators on Siegel Modular Forms (organized by T. Ibukiyama). Nagano, Japan, 3–7 September 2017.

[354] *Symmetry Breaking Operators for Orthogonal Groups $O(n, 1)$.* Symposium on Representation Theory 2017. Isawa, Yamanashi, Japan, 28 November–1 December 2017. (special lecture).

[355] *Conformally Covariant Symmetry Breaking Operators on Differential Forms and Some Applications.* Journées SL2R de théorie des représentations et analyse harmonique (en l'honneur de Hubert Rubenthaler à l'occasion de son départ à la retraite). I.R.M.A., University of Strasbourg, France, 22–23 March 2018.

[356] *Branching Problems and Symmetry Breaking Operators.* Representation theory, geometry, and quantization: the mathematical legacy of Bertram Kostant. MIT, USA, 28 May–1 June 2018.

[357] *Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* Glances at Manifolds: Conference in celebration of Aleksy Tralle for his 60th birthday. the Jagiellonian University, Krakow, Poland, 2–6 July 2018.

[358] *Branching Problems and Symmetry Breaking Operators.* (plenary lecture). the 32nd International Colloquium on Group Theoretical Methods in Physics (Group32). Czech Technical University, Prague, Czech Republic, 9–13 July 2018.

[359] *Branching Problems and Symmetry Breaking.* Conference in honor of Joachim Hilgert. Paderborn, Germany, 23–27 July 2018.

[360] *Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* (plenary lecture). The 65th Geometry Symposium. Tohoku University, Sendai, Japan, 28–31 August 2018.

[361] *Global Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* "Geometric Quantization and Applications" in honour of M. Vergne. Luminy, France, 8–12 October 2018.

[362] *From Local to Global—Geometry and Analysis on Locally Symmetric Spaces with Indefinite-metric.* Colloquium. Hiroshima University, Japan, 6 November 2018.

[363] *Symmetry and Global Analysis.* (series lectures). Hiroshima University, Japan, 5–9 November 2018.

[364] *Global Geometry and Analysis on Pseudo-Riemannian Locally Symmetric Spaces.* Symposium on Representation Theory 2018. Tottori, Japan, 13–16 November 2018.

[365] *Semisimple Symmetric Spaces and Discontinuous Groups: What I Learned from Professor Toshio Oshima.* (closing lecture). Conference in honour of Professor Toshio Oshima's 70th birthday. Josai University, Tokyo, Japan, 26–27 December 2018.

[366] *Homomorphisms between Verma Modules and Symmetry Breaking Operators.* (opening lecture). Representation Theory of Reductive Lie Groups and Algebras: in honor of Hisayosi Matumoto on the occasion of his 60th birthday. the University of Tokyo, Japan, 27–29 March 2019.

[367] *Global Analysis of Locally Symmetric Spaces with Indefinite-metric.* Colloquium. Yale University, USA, 17 April 2019.

[368] *Branching Problems and Symmetry Breaking Operators.* Geometry, Symmetry and Physics. Yale University, USA, 23 April 2019.

[369] *Global Analysis of Locally Symmetric Spaces with Indefinite-metric.* Colloquium. Oklahoma State University, 3 May 2019.

[370] *Regular Representations on Homogeneous Spaces.* Dynamics of Group Actions: a conference in honor of Yves Benoist. Cetraro, Italy, 27–31 May 2019.

[371] *Global Analysis of Locally Symmetric Spaces with Indefinite-metric.* Seminar. University of Padova, Italy, 3 June 2019.

[372] *Regular Representations on Homogeneous Spaces.* (opening lecture). 13-th edition of the International Workshop: Lie Theory and Its Applications in Physics (LT-13). Varna, Blugaria, 17–23 June 2019.

[373] *Symmetry Breaking Operators: General Theory and Concrete Construction for Reductive Groups.* (opening lecture/2 lectures). Representation Theory of Lie Groups, Mathematical Physics, and Dynamical Systems. Université de Reims, France, 24–29 June 2019.

[374] *Regular Representations on Homogeneous Spaces.* (opening lecture). RIMS Workshop: Developments in Representation Theory and Related Topics (orgznizer: Yoshiki Oshima). RIMS, Kyoto University, 9–12 July 2019.

[375] *Introduction to Representation Theory of Real Reductive Lie Groups and Branching Problems.* (opening lecture/five plenary lectures). The 2nd International Undergraduate Mathematics Summer School. The University of Tokyo, Japan, 29 July–9 August 2019.

[376] *TBA*. (opening lecture). 6th Tunisian-Japanese Conference: Geometric and Harmonic Analysis on homogeneous spaces and Applications, in honor of Takaaki Nomura. Djerba, Tunisia, 16–19 December 2019. promised.

[377] *TBA*. Representation Theory inspired by the Langlands Conjectures. Denver, USA, 17 January 2020. promised.

[378] *TBA*. Representation Theory of Reductive Groups from Geometric and Analytic Methods. Kavli IPMU, Japan, 27–28 January 2020. promised.

[379] *TBA*. Journées SL_2 R - Théorie des représentations et analyse harmonique, in honor of Jacques Faraut's 80th birthday. Nancy, France, 12–13 March 2020. promised.

[380] *TBA*. Zariski Dense Subgroups, Number Theory and Geometric Applications. ICTS, Bangalore, India, 6–17 April 2020. promised.

[381] *TBA*. Noncommutative Geometry and Analysis on Homogeneous Spaces. Williamsburg, USA, 25–29 May 2020. promised.

[382] *TBA*. Periods and Branching Problems for Representations of Real, p-adic and Adeline Groups (organized by B. Speh and T. Kobayashi). The Institute of Advanced Study in Mathematics, Hangzhou, China, 18–23 October 2020. promised.

[383] *TBA*. Representations and Characters: Revisiting Some Aspects of the Works of Harish-Chandra and Weil. the Institute for Mathematical Sciences, National University of Singapore, Singapore, 7–18 December 2020. promised.