

Representations and Characters: Revisiting the Works of Harish-Chandra and André Weil

A satellite conference of the virtual ICM 2022
(01 Jul 2022–15 Jul 2022)



Venue

Hybrid
IMS Auditorium

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National University of Singapore

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All times are indicated in **GMT+8 (SINGAPORE TIME)**.

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Friday, 1 July 2022		
Time	Title	Speaker
1015–1030	Registration	
1030–1100	Opening Statement	
1100–1200	<u>Distinguished Visitor Lecture Series</u> Proper actions and representation theory (Part 1)	Toshiyuki Kobayashi The University of Tokyo, Japan
1200–1400	<i>Lunch Break</i>	
1400–1500	<u>Distinguished Visitor Lecture Series</u> The Theta Correspondence - Origins, Results, and Ramifications (Part I)	Roger Howe Yale University, USA
1500–1530	<i>Tea Break</i>	
1530–1630	Tutorial Lecture Howe to transfer Harish-Chandra characters via Weil representations (Part I)	Wee-Teck Gan National University of Singapore, Singapore
Saturday, 2 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Tutorial Lecture Howe to transfer Harish-Chandra characters via Weil representations (Part II)	Wee-Teck Gan National University of Singapore, Singapore
1000–1030	<i>Tea Break</i>	
1030–1130	<u>Distinguished Visitor Lecture Series</u> Proper actions and representation theory (Part II)	Toshiyuki Kobayashi The University of Tokyo, Japan
1130–1300	<i>Lunch Break</i>	
1300–1400	<u>Distinguished Visitor Lecture Series</u> The Theta Correspondence - Origins, Results, and Ramifications (Part II)	Roger Howe Yale University, USA

Monday, 4 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Tutorial Lecture Howe to transfer Harish-Chandra characters via Weil representations (Part III)	Wee-Teck Gan National University of Singapore, Singapore
1000–1030	<i>Tea Break</i>	
1030–1130	<i><u>Distinguished Visitor Lecture Series</u></i> Proper actions and representation theory (Part III)	Toshiyuki Kobayashi The University of Tokyo, Japan
1130–1400	<i>Lunch Break</i>	
1400	ICM Session Chair: Wee-Teck Gan (National University of Singapore, Singapore)	
1400–1445	ICM Lecture Relative trace formulae and the Gan-Gross- Prasad conjectures	Raphael Beuzart-Plessis Aix-Marseille University, France
1445–1530	<i>Tea Break</i>	
1530–1630	ICM Emmy Noether Lecture Representations of p-adic groups	Marie-France Vignéras IMJ-PRG, France
Tuesday, 5 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	A non-abelian Fourier transform for tempered unipotent representations of p-adic groups	Anne-Marie Aubert IMJ-PRG, France
1000–1030	<i>Tea Break</i>	
1030–1130	Characterization of supercuspidal representations via Harish-Chandra characters	Masao Oi Kyoto University, Japan
1130–1300	<i>Lunch Break</i>	
1300	ICM Session Chair: Roger Howe (Yale University, USA)	
1300–1345	ICM Lecture Representations of reductive groups over local fields	Tasho Kaletha University of Michigan, USA
1345–1415	<i>Tea Break</i>	
1415–1500	ICM Lecture What is an i-quantum group, and what is it good for?	Weiqiang Wang University of Virginia, USA
1500–1515	<i>Tea Break</i>	

Tuesday, 5 July 2022		
Time	Title	Speaker
1515–1535	<i>Live Streaming: IMU Award Ceremony 2022</i> Announcement of the Fields Medalists by IMU President Presentation of the Awards	
1535–1700	<i>Live Streaming: IMU Award Ceremony 2022</i> Videos and Laudatios for all Fields Medalists	

Wednesday, 6 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Harmonic analysis on GL_n over finite fields	Shamgar Gurevich University of Wisconsin–Madison, USA
1000–1030	<i>Tea Break</i>	
1030–1130	Uniform bounds of orbital integrals and affine Springer fibers	Cheng-Chiang Tsai Academia Sinica, Taipei
1130–1400	<i>Lunch Break</i>	
1400	ICM Session Chair: Anne-Marie Aubert (IMJ-PRG, France)	
1400–1445	ICM Lecture Theta lifting and Langlands functoriality	Atsushi Ichino Kyoto University, Japan
1445–1515	<i>Tea Break</i>	
1515–1600	ICM Lecture Spherical varieties, functoriality, and quantization	Yiannis Sakellaridis Johns Hopkins University, USA
1600–1630	<i>Tea Break</i>	
1630–1715	ICM Lecture (Zoom Online) PBW degenerations, quiver Grassmannians, and toric varieties	Evgeny Feigin HSE University, Russia

Thursday, 7 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Hecke algebra actions on a double flag variety	Kyo Nishiyama Aoyama Gakuin University, Japan
1000–1030	<i>Tea Break</i>	
1030–1130	Finite-group actions on reductive groups and buildings II: the unauthorized sequel	Jeff Adler American University, USA
1130–1400	<i>Lunch Break</i>	

Thursday, 7 July 2022		
Time	Title	Speaker
1400	ICM Session Chair: Toshiyuki Kobayashi (The University of Tokyo, Japan)	
1400–1445	ICM Lecture Points of Shimura varieties modulo primes	Sug Woo Shin The University of California, Berkeley, USA
1445–1630	<i>Tea Break</i>	
1630–1715	ICM Lecture Theta correspondence and the orbit method	Binyong Sun Zhejiang University, China Chen-Bo Zhu National University of Singapore, Singapore
Friday, 8 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Zoom Online On the local character expansion	Monica Nevins University of Ottawa, Canada
1000–1030	<i>Tea Break</i>	
1030–1130	The orbit method and normality of closures of nilpotent orbits	Dan Barbasch Cornell University, USA
1130–1400	<i>Lunch Break</i>	
1400–1500	Zoom Online Localization and higher branching laws for Harish-Chandra modules	Wen-Wei Li BICMR, Peking University, China
1500–1530	<i>Tea Break</i>	
1530–1630	Conformally invariant differential operators on Heisenberg groups and minimal representations	Jan Frahm Aarhus University, Denmark
Saturday, 9 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	<i>Distinguished Visitor Lecture Series</i> Harish-Chandra's admissibility theorem and beyond	Toshiyuki Kobayashi The University of Tokyo, Japan
1000–1030	<i>Tea Break</i>	
1030–1130	On the local Gross-Prasad conjecture	Cheng Chen University of Minnesota, USA
1130–1400	<i>Lunch Break</i>	

Saturday, 9 July 2022		
Time	Title	Speaker
1400–1500	Zoom Online Representations of p-adic groups – with a twist	Jessica Fintzen University of Cambridge, UK

Tuesday, 12 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Zoom Online Projection of elliptic orbits and branching laws	Hongyu He Louisiana State University, USA
1000–1030	<i>Tea Break</i>	
1030–1130	Zoom Online Bernstein projectors for unrefined types	Gordan Savin University of Utah, USA
1130–1330	<i>Lunch Break</i>	
1330–1430	In between finite and p-adic groups in type A	Max Gurevich Technion - Israel Institute of Technology, Israel
1430–1500	<i>Tea Break</i>	
1500–1600	From symmetry breaking toward holography in representation theory	Michael Pevzner Laboratoire de Mathématiques de Reims (LMR) - CNRS UMR 9008, France
1600–1630	<i>Tea Break</i>	
1630–1730	Zoom Online Endo-parameters for classical groups and splittings	Shaun Stevens University of East Anglia, UK

Wednesday, 13 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Zoom Online The Capelli eigenvalue problem for Lie algebras and beyond	Hadi Salmasian University of Ottawa, Canada
1000–1030	<i>Tea Break</i>	
1030–1130	Dual pairs in an orhosymplectic Lie supergroup and double commutant theorem for complex pairs	Allan Merino University of Ottawa, Canada
1130–1330	<i>Lunch Break</i>	

Wednesday, 13 July 2022		
Time	Title	Speaker
1330–1430	The fundamental lemma for spherical Hecke algebras and motivic integration	Jorge Enrique Cely Garcia Vietnam Institute for Advanced Study in Mathematics, Vietnam
1430–1500	<i>Tea Break</i>	
1500–1600	The Iwahori-fixed part of the Gelfand-Graev representation of a covering group	Edmund Karasiewicz University of Utah, USA
1600–1630	<i>Tea Break</i>	
1630–1730	Dirac operators for the standard BGG category O	Spyridon Afentoulidis-Alampanis Charles University, Czech Republic

Thursday, 14 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Zoom Online Explicit character formulæ for tame supercuspidals via asymptotic expansions	Loren Spice Texas Christian University, USA
1000–1030	<i>Tea Break</i>	
1030–1130	Zoom Online Relations between Kazhdan-Lusztig polynomials for real and p-adic classical groups	Peter Trapa University of Utah, USA
1130–1330	<i>Lunch Break</i>	
1330–1430	Generic Hecke algebra and theta correspondence over finite fields	Jia-Jun Ma Xiamen University, China
1430–1500	<i>Tea Break</i>	
1500–1600	Theta correspondence and Arthur packets: the Adams conjecture	Petar Bakic University of Utah, USA

Friday, 15 July 2022		
Time	Title	Speaker
0845–0900	Registration	
0900–1000	Zoom Online Dimensions for the spaces of Siegel cusp forms of degree 2 and level 4	Manami Roy Fordham University, USA
1000–1030	<i>Tea Break</i>	
1030–1130	The modular distinction problems	Hengfei Lu Universität Wien, Austria
1130–1330	<i>Lunch Break</i>	

Friday, 15 July 2022		
Time	Title	Speaker
1330–1430	Siegel Fixed Vectors in Depth Zero Supercuspidal Representations of $\mathrm{GSp}(4)$	Jonathan Cohen University of North Texas, USA
1430–1500	<i>Tea Break</i>	
1500–1600	Zoom Online On nilpotent orbits in good characteristic	Jiu Kang Yu The Chinese University of Hong Kong, China