

# GORDAN SAVIN'S PORTFOLIO

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## I Personal data

**Education**

Ph.D. Harvard University, 1988; Advisor: D. Kazhdan

B.S. University of Zagreb, 1984; Advisor: M. Tadić

**Professional Experience**

1988-90 Moore Instructor, MIT, Cambridge, MA  
 1990-93 Assistant Professor, Yale University, New Haven, CT  
 1993-98 Associate Professor, University of Utah  
 1998-present Professor of Mathematics, University of Utah  
 1995 Member, MSRI, Berkeley, CA  
 1996 (Spring) Visiting Senior Lecturer, HKUST, Hong Kong  
 2001 (Spring) Visiting Scholar, Harvard University, Cambridge, MA  
 2007 (Fall) Visiting Professor, National University of Singapore  
 2013 (May) Visiting Professor, HKUST, Hong Kong  
 2014 (Sep.) Member, MSRI, Berkeley, CA  
 2015 (Spring) Visiting Professor, National University of Singapore

**Specialization** Representation Theory and Number Theory

**Fellowships and Awards**

Sloan Doctoral Fellowship, 1986-87.

NSF Postdoctoral Research Fellowship, 1993-96.

Sloan Research Fellowship, 1993-95.

Student Choice Teaching Award, University of Utah, 2006.

**Conference Organization**

April 1997 Special Session on Lie Groups and Automorphic Forms  
 at the AMS Meeting, College Park, MD (with Jian-Shu Li).  
 October 1999 Lie Groups, Lie Algebras, and their Representations,  
 University of Utah (with Joe Wolf).  
 November 2001 Automorphic Forms and Representations of  $p$ -adic groups, at  
 PIMS, Banff, Canada (with Wee Teck Gan and Jiu Kang Yu).  
 July 2008 American Institute of Mathematics, Palo Alto, CA (with Wee Teck Gan).  
 June 2013 American Institute of Mathematics, Palo Alto, CA (with Wee Teck Gan  
 and Jeff Adams).

**Research Grants (as PI)**

1996-99 NSF Grant DMS-9623533  
 1998-01 NSF Grant DMS-9803806 (post-doc Goran Muic)  
 1999-02 NSF Grant DMS-9970689  
 2001-04 NSF VIGRE DMS-0091675 (co PI)  
 2001 NSA Grant MSPR-01C-176 (a conference grant)

2002-05	NSF Grant DMS-0138604
2004-06	NSF Grant DMS-0401636 (a REU supplement)
2006-09	NSF Grant DMS-0551846
2009-14	NSF Grant DMS-0852429 (5 year grant)
2014-18	NSF Grant DMS-1359774
2018-19	Simons Collaboration Grant 579347
2019-22	NSF Grant DMS-1901745
2022-	Simons Collaboration Grant 946504

## II Teaching, Research, and Service

**Undergraduate Teaching highlights**

- (1) I ran undergraduate colloquium for five years (Fall 2002 - Spring 2007).
- (2) Putnam Exam preparation with Bestivina, Fall 2005 - Fall 2013.
- (3) Student Choice Teaching Award, University of Utah, 2006.
- (4) A paper written with an undergraduate student (Rob Denomme) published in the Journal of Number Theory.
- (5) I ran 2009 Summer REU at University of Utah program.
- (6) Steven Sullivan's Honors Thesis: *Trace formula for  $G_2$* , (2013) is an original work publishable in a research journal.
- (7) Michael Zhao's Honors Thesis *Binary hermitian forms and optimal embeddings* (2017) is also an original work publishable in a research journal. Michael is a recipient of the Barry Goldwater Scholarship and Churchill Fellowship. He was accepted to graduate school at Columbia University.

**Classes Taught at University of Utah** (since 2002)

Fall 2002	MATH 1250 (AP calculus), MATH 5310 (undergraduate algebra I)
Spring 2003	MATH 5320 (undergraduate algebra II)
Fall 2003	MATH 1210 (calculus I)
Spring 2004	MATH 2210 (calculus III), MATH 6350 (topics course in algebra)
Fall 2004	MATH 4400 (number theory)
Spring 2005	MATH 2210 (calculus III), MATH 6350 (topics course in algebra)
Fall 2005	MATH 3150 (differential equations), MATH 4400 (number theory)
Spring 2006	MATH 5405 (cryptography)
Fall 2006	MATH 6310 (graduate algebra I)
Spring 2007	MATH 5405 (cryptography), MATH 6320 (graduate algebra II)
Fall 2008	MATH 4030 (algebra for teachers), MATH 4400 (number theory)
Spring 2009	MATH 5405 (cryptography)
Fall 2009	MATH 4030 (algebra for teachers)
Spring 2010	MATH 1260 (AP calculus), MATH 3150 (differential equations)
Fall 2010	MATH 1030, MATH 2210 (calculus III)
Spring 2011	MATH 6370 (algebraic number theory)
Fall 2011	MATH 2210 (calculus III), MATH 5310 (undergraduate algebra I)
Spring 2012	MATH 5320 (undergraduate algebra II)
Fall 2012	MATH 2210 (calculus III), MATH 5310 (undergraduate algebra I)
Spring 2013	MATH 5320 (undergraduate algebra II)
Fall 2013	MATH 4030 (algebra for teachers), MATH 6370 (algebraic number theory)
Fall 2015	MATH 2210 (calculus III), MATH 4400 (number theory)
Spring 2016	MATH 6370 (algebraic number theory)
Fall 2016	MATH 2270 (linear algebra), MATH 5310 (undergraduate algebra I)
Spring 2017	MATH 5320 (undergraduate algebra II)
Fall 2017	MATH 6210 (real analysis)
Spring 2018	MATH 6370 (algebraic number theory)
Fall 2018	MATH 3210 (honors foundations), MATH 6210 (real analysis)

Spring 2019	MATH 5320 (undergraduate algebra II)
Fall 2019	MATH 3210 (honors foundations)
Spring 2020	MATH 5210 (undergraduate real analysis) MATH 6370 (algebraic number theory)
Fall 2020	MATH 6310 (graduate algebra)
Spring 2021	MATH 2210 (calculus III), MATH 4400 (number theory)
Fall 2022	MATH 2210 (calculus III)
Spring 2023	MATH 3220 (foundations), MATH 5210 (undergraduate real analysis)
Fall 2023	MATH 2210 (calculus III)
Spring 2024	MATH 5405 (cryptography), MATH 6370 (number theory)

### Graduate Students Advised at Utah

- (1) Domagoj Kovacevic, PhD Utah 2006.
- (2) Michael Woodbury, Masters Degree Utah, PhD Madison 2011. (We have two joint papers.)
- (3) Jason Preszler, PhD Utah 2009.
- (4) Chris Kocs, PhD Utah 2012.
- (5) Aaron Wood, PhD Utah 2013.
- (6) Shiang Tang, PhD Utah 2018.
- (7) Sabine Lang, PhD Utah 2020.

### Collaborators

Adams, Bakić, Bestvina, Chan, Denomme, Flicker, Gan, Gross, Hanzer, Huang, Jiang, Karasiewicz, Kazhdan, Khare, Kobayashi, Larsen, Liu, Loke, Ma, Magaard, Moy, Muic, Pandzic, Paul, Prasad, Weissman and Woodbury (total 27).

### Service

2020/21: Served on Instructorship, Graduate and Undergraduate committees. Helped graduate recruitment (reviewed NT/RT candidates). Co-organized NT/RT seminar. Conducted qualifying examinations in algebra and analysis.

2021/22: Sabbatical year.

2022/23: Served on Graduate Recruitment Committee. Coordinated pure upper level teaching assignments for 23/24. Co-organized NT/RT seminar.

2023/24: Served on Hiring Committee. Co-organized NT/RT seminar.

## III Conference and lecture invitations (since 1993)

1993

January Colloquium, University of Utah, Salt Lake City, UT  
 February Colloquium, University of Minnesota, Minneapolis, MN  
 February Colloquium, University of Iowa, Iowa City, IO  
 March Seminar, Cornell University, Ithaca, NY  
 April Conference “ $p$ -adic Field of Dreams”, Iowa City, IO

1994

April Colloquium, HKUST, Hong Kong  
 June Seminar, University of Zagreb, Zagreb, Croatia  
 October Colloquium, University of Arizona, Tucson, AZ  
 October Seminar, University of Arizona, Tucson, AZ  
 November Seminar, California Institute of Technology, Pasadena, CA

1995

March Conference “Workshop on Automorphic Forms”, Berkeley, CA  
 April Colloquium, Wayne State University, Detroit, MI  
 May Number Theory Seminar, Harvard University, Cambridge, MA (three lectures)  
 November Lie Groups Seminar, MIT, Cambridge, MA  
 November Brandeis-Harvard-MIT Colloquium at Harvard University, Cambridge, MA

1996

March AMS Sectional Meeting, Iowa City, IO  
 April Conference “Workshop on Representation Theory”, Hong Kong  
 May Colloquium, HKUST, Hong Kong  
 November Number Theory Seminar, Harvard University, Cambridge, MA

1997

May Conference “Harmonische Analyse und Darstellungstheorie topologischer Gruppen”, Oberwolfach, Germany  
 July Summer Research Conference on Representation Theory of Reductive Groups, Seattle, WA (two lectures)

1998

July Conference on Representation Theory, Park City, UT

1999

February Conference “Lie Groups, Lie Algebras and their Representations”, Oklahoma State University, Stillwater, OK  
 May Conference “Workshop on representations of reductive  $p$ -adic groups”, CRM, Montreal, Canada

May	CMS Summer Meeting, Newfoundland, Canada
September	4 lectures in Dubrovnik, Croatia
2000	
March	Algebraic Geometry Seminar, Princeton University, Princeton, NJ
June	Second Croatian Mathematical Congress, Zagreb, Croatia
August	Conference "Automorphic forms on $GL(n)$ ", Trieste, Italy
2001	
April	Lie Groups Seminar, MIT, Cambridge, MA (two lectures)
April	Number Theory Seminar, Brandeis University, Waltham, MA
April	Number Theory Seminar, Harvard University, Cambridge, MA
July	Conference "Representation Theory and Automorphic Forms", China
2002	
April	Conference "Midwest workshop in Lie theory", Notre Dame, IN
June	8 lectures at Zhejiang University, Hangzhou, China
July	12 lectures at National University of Singapore, Singapore
2003	
March	Lie Groups Seminar, MIT, Cambridge, MA
June	Representation Theory Conference, Dubrovnik, Croatia
December	Lie Groups Seminar, UCSD, San Diego, CA
2004	
April	City wide Colloquium in Montreal, Canada
April	Quebec-Vermont Number Theory Seminar, Montreal, Canada
October	AMS Sectional meeting, Evanston, IL
2005	
January	Lie Groups Seminar, UCSD, San Diego, CA
January	Lie Groups Seminar, Cal-Tech, Pasadena, CA
April	Groups Seminar, University of Michigan, Ann Arbor, MI
April	Algebra Seminar, Wayne State University, Detroit, MI
June	Representation Theory Conference, Dubrovnik, Croatia
2006	
October	Number Theory Conference, Schiermonnikoog, Holland
2007	
January	AMS Annual meeting, New Orleans, LA
January	Conference "Southern California Number Theory Day", San Diego, CA
January	Lie Groups Seminar, UCSD, San Diego, CA
September	Colloquium, NUS, Singapore

## 2008

January Number Theory Seminar, UCLA, Los Angeles, CA  
 February Automorphic Forms Conference, Oberwolfach, Germany  
 April Lie Groups Seminar, UCSD, San Diego, CA  
 April Algebra Seminar, UCSD, San Diego, CA  
 July Fourth Croatian Mathematical Congress, Osijek, Croatia  
 May Number Theory Seminar, Harvard University, Cambridge, MA  
 December Number Theory Seminar, IAS/Princeton, NJ

## 2009

January Erwin Schroedinger Institut, Vienna, Austria  
 March Lie Groups Seminar, MIT, Cambridge, MA  
 April Colloquium, University of Vienna, Vienna, Austria  
 April Arithmetic Geometry Seminar, Ohio State, Columbus, OH  
 May Number Theory Seminar, UCLA, Los Angeles, CA  
 May Number Theory Conference, University of Florida, Gainesville, FL  
 July Representation Theory Conference, University of Utah, UT  
 September Colloquium, Idaho State University, Pocatello, ID  
 December Colloquium, TATA Institute, Bombay, India

## 2010

January Number Theory Seminar, IIT, Bombay, India  
 June Conference for Dick Gross, Harvard University, Cambridge, MA  
 June Number Theory Conference, Banff, Canada  
 July Representation Theory Conference, Banff, Canada  
 August Number Theory Conference, Goa, India

## 2011

March Automorphic Forms Conference, Oberwolfach, Germany  
 March Group Theory Seminar, University of Birmingham, Birmingham, UK  
 April 68 th Algebra Day, University of Ottawa, Canada  
 May Number Theory Seminar, UCLA, Los Angeles, CA  
 May Two lectures at the Chinese Academy of Sciences, Beijing, China  
 June International Workshop on Representation Theory and Harmonic Analysis,  
 Nankai University, Tianjin, China  
 June  $L$ -packets Conference, Banff, Canada  
 August Harmonic Analysis on Lie Groups, month long stay, Max Planck Institute, Germany  
 November Colloquium and Seminar, Purdue University, West Lafayette, IN

## 2012

January Number Theory Conference, Tata Institute, Bombay, India  
 February Erwin Schroedinger Institut, Vienna, Austria  
 March Conference, National University of Singapore, Singapore

## 2013

- June Conference, AIM, Palo Alto  
 June PRIMA Conference, Shanghai, China  
 July Representation Theory Conference, Salt Lake City, UT  
 October Conference for Jim Cogdell, ESI, Vienna, Austria
- 2014  
 January Representation Theory Conference, Oberwolfach, Germany  
 February Inverse Galois Problem Conference, Oberwolfach, Germany  
 May Colloquium, University of Minnesota, Minneapolis, MN  
 May Number Theory Conference, Harvard University, Cambridge, MA  
 June Conference for Marko Tadic, Zagreb, Croatia  
 July Conference for Toshiyuki Kobayashi, University of Tokyo, Japan  
 September MSRI, month long stay, Berkeley, CA  
 October Conference on Braids and Galois Groups, Luminy, France
- 2015  
 June Conference for Roger Howe, Yale University, New Haven, CT  
 June Representation Theory Conference, Dubrovnik, Croatia  
 July Lectures at Zhejiang University, Hangzhou, China  
 September Conference on Linear Algebraic Groups, Banff, Canada  
 November Midwest Representation Theory Conference, University of Missouri, MO
- 2016  
 February Sphericity, Reute, Germany  
 March Conference, National University of Singapore, Singapore  
 May Conference, Relative trace formula etc, Luminy, France  
 June University of Amsterdam, Netherlands  
 June Croatian Math. Congress, University of Zagreb, Croatia  
 October Seminar, Boston College, Newton, MA  
 December Conference, Varanasi, India
- 2017  
 May Seminar, Weizman Institute, Israel  
 June Lecture Series, Weizman Institute, Israel  
 July Conference in Priština, Kosovo  
 October Conference on Automorphic forms and String Theory, Banff, CA
- 2018  
 May Conference "Southern California Number Theory Day", San Diego, CA  
 December Conference in Sanya, China  
 December Conference, National University of Singapore, Singapore
- 2019  
 February Colloquium and Seminar, Purdue University, West Lafayette, IN  
 October Representations of  $p$ -adic groups, Conference, Oberwolfach, Germany

2020	Original schedule:
March	Conference for Dipendra Prasad, IIT, Bombay, India
April	Algebra Number Theory Day, John Hopkins, Baltimore, MD
May	Conference, Relative Langlands Program, Luminy, France
June	Croatian Math. Congress, University of Split, Croatia
July	Conference, Reductive Groups, Bergkloster Bestwig, Germany
November	Langlands Program Workshop, CM Oxaca, Mexico
December	Conference, IMS, National University of Singapore, Singapore
	Actual schedule, via Zoom:
November	Algebra Number Theory Day, John Hopkins, Baltimore, MD
2022	Either in person or gave a Zoom lecture:
April	Conference on my work, ESI, Vienna, Austria
June	Croatian Math. Congress, University of Split, Croatia
July	Conference, IMS, National University of Singapore, Singapore
August	Special Program, Isaac Newton Institute, Cambridge, UK
September	Conference for Toshi Kobayashi, University of Tokyo, Japan
October	Representation Theory Conference, Dubrovnik, Croatia
2023	
January	AMS Special session, Boston, MA
April	Conference, University of Amsterdam, Netherlands
June	Representation Theory Conference, Dubrovnik, Croatia
July	Conference, Orbits, Hecke algebras and Representations, Nisyros, Greece
October	Seminar, National University of Singapore, Singapore
2024	
April	Seminar, UCSC, Santa Cruz, CA
June	Conference for Marko Tadic, Zagreb, Croatia
July	Conference for Cheng Bo Zhu, Kunming, China
October	Conference for Jeff Adams, Brin MRC, MD

## IV Bibliography

Journal Published:

- (1) Local Shimura correspondence, *Math. Ann.* **280** (1988), 185-190.
- (2) Limit multiplicities of cusp forms, *Invent. Math.* **95** (1989), 149-159.
- (3) Explicit realization of a metaplectic representation (with Y. Flicker and D. Kazhdan), *J. Analyse Math.* vol LV (1990), 17-39.
- (4) The smallest representation of simply laced groups (with D. Kazhdan), *Israel Math. Conf. Proceedings, Piatetski-Shapiro Festschrift* **2** (1990), 209-233.
- (5) On the tensor product of Theta representations of  $GL(3)$ , *Pacific J. Math.* **154** (1992), 369-379.
- (6) Cusp forms, *Israel J. Math.* **80** (1992), 195-205.
- (7) An analogue of the Weil representation for  $G_2$ , *J. reine angew. Math.* **434** (1993), 115-126.
- (8) A deformation of the regular representation of  $sl(2)$ , *International Mathematics Research Notices* No. **6** (1993), 147-149.
- (9) Dual pair  $\mathbf{G}_2 \times PGL_3$  and  $(\mathfrak{g}_2, SL(3))$ -modules, *International Mathematics Research Notices* No. **4** (1994), 177-184.
- (10) Dual pair  $G_{\mathcal{J}} \times PGL_2$ ;  $G_{\mathcal{J}}$  is the automorphism group of a Jordan algebra  $\mathcal{J}$ , *Invent. Math.* **118** (1994), 141-160.
- (11) New dual pair correspondences (with J. S. Huang and P. Pandžić), *Duke J. Math.* **82** (1996), 447-471.
- (12)  $K$ -types of minimal representations ( $p$ -adic case), *Glasnik Matematički*, **31(51)** (1996), 93-99.
- (13) Exceptional  $\Theta$ -correspondences I (with K. Magaard), *Compositio Math.* **107** (1997), 89-123.
- (14) The dual pair  $PGL_3 \times G_2$  (with B. Gross), *Canadian Math. Bull.* **40** (1997), 376-384.
- (15) Motives with Galois group  $G_2$  (with B. Gross), *Compositio Math.* **114** (1998), 153-217.
- (16) Unipotent representations of  $G_2$  arising from the minimal representation of  $D_4^E$  (with J. S. Huang and K. Magaard), *Crelles J.* **500** (1998), 65-81.
- (17) A class of supercuspidal representations of  $G_2$ , to *Canadian Math. Bull.* **42** (1999), 393-400.
- (18) The dual pair  $G_2 \times PU_3(D)$  ( $p$ -adic case) (with Wee-Teck Gan), *Canadian J. Math.* **51** (1999), 130-146.
- (19) Complementary series for hermitian quaternionic groups (with G. Muić), *Canadian Math. Bulletin* **43** (2000), 90-99.
- (20) Symplectic-orthogonal Theta lifts of generic discrete series (with G. Muić), *Duke Math. J.* **101** (2000), 317-334.
- (21) Fourier coefficients for  $G_2$  (with Gan and Gross), *Duke J. Math.* **115** (2002), 105-169.
- (22) Real and global lifts from  $PGL_3$  to  $G_2$ . (with W. T. Gan) *IMRN*, **50** (2003) 2699-2724.
- (23) Lectures on Representations of  $p$ -adic groups. Representations of real and  $p$ -adic groups, 19-46, Singapore Univ. Press, Singapore, 2004.

- (24) Endoscopic lifts from  $PGL_3$  to  $G_2$  (with W. T. Gan) *Compos. Math.* **140** (2004) 793-808.
- (25) On uniqueness of the Joseph ideal (with W. T. Gan) *Math. Res. Lett.* **11** (2004), 589-597.
- (26) On unramified principal series for covering groups. *J. reine angew. Math.* **566** (2004), 111-134.
- (27) On Minimal Representations: definitions and properties (with W. T. Gan) *Represent. Theory* **9** (2005), 46-93.
- (28) Rank and matrix coefficients for simply laced groups (with H-Y Loke), *J. reine angew. Math.* **599** (2006), 201-216.
- (29) On local lifts from  $G_2(\mathbb{R})$  to  $Sp_6(\mathbb{R})$  and  $F_4(\mathbb{R})$  (with H. Y. Loke), *Israel J. of Math.* **159** (2007), 349-372.
- (30) Structure of internal modules and a formula for the spherical vector of minimal representations (with M. Woodbury), *J. of Algebra* **312** (2007), 755-772.
- (31) The center of the category of  $(\mathfrak{g}, K)$ -modules (with G. Muić), *Trans. Amer. Math. Soc.* **360** (2008), 3071-3092.
- (32) Smallest representations of non-linear covers of odd orthogonal groups (with H. Y. Loke), *American J. of Math.* **130** (2008) 763-798.
- (33) Uniqueness of the minimal representations of  $D_n$  and  $E_n$  (with H. Y. Loke), *Math. Annalen* **340** (2008) 195-208.
- (34) Functoriality and the inverse Galois problem (with C. Khare and M. Larsen), *Compositio Math.* **144** (2008) 541-564.
- (35) Lifting of generic depth zero representations of classical groups, *J. of Algebra* **319** (2008) 3244-3258.
- (36) Elliptic curve primality tests for Fermat and related primes (with R. Denomme), *J. of Number Theory* **128** (2008) 2398-2412.
- (37) Dual pair correspondences for non-linear covers of orthogonal groups (with H. Y. Loke), *J. of Funct. Analysis* **255** (2008) 184-199.
- (38) Appendix to: Restrictions of Saito-Kurokawa representations, by W. T. Gan and N. Gurevich, in proceedings of Gelbart's 60th birthday conference, *Contemporary Mathematics* **488** (2009) 95-124.
- (39) Reducing the minimal representation modulo  $\ell$ ; an exercise, *J. Ramanujan Math. Soc.* **24** No. 4 (2009) 415-425.
- (40) Functoriality and the inverse Galois problem II: groups of type  $B_n$  and  $G_2$  (with C. Khare and M. Larsen), *Ann. Fac. Sci. Toulouse Math.* (the issue in honor of Khare's *Prix Fermat*) Vol XIX, no 1 (2010), 37-70.
- (41) Modular forms on non-linear double covers of algebraic groups (with H. Y. Loke), *Trans. Amer. Math. Soc.* **362** (2010), 4901-4920.
- (42) Representations of the two fold central extension of  $SL_2(\mathbb{Q}_2)$  (with H. Y. Loke), *Pacific J. Math.* **247** (2010) 435-454.
- (43) Dichotomy for generic supercuspidal representations of  $G_2$  (with M. Wissman), *Compositio Math.* **147** (2011), 735-783.
- (44) Geometry of hermitian binary forms (with M. Bestvina), *J. Algebra* **360** (2012), 1-20.
- (45) Representations of metaplectic groups I: epsilon dichotomy and local Langlands correspondence (with W. T. Gan), *Compositio Math.* **148** (2012), 1655-1694.

- (46) Shimura correspondence for finite groups, *Math. Res. Lett.* **19** (2012), 461-468.
- (47) Representations of metaplectic groups II: Hecke algebra correspondences (with W. T. Gan), *Represent. Theory* **16** (2012), 513-539.
- (48) On the maximal primitive ideal corresponding to the model nilpotent orbit (with H. Y. Loke), *Int. Math. Res. Not.* (2012), 5731-5743.
- (49) Twisted Barghava Cubes (with W. T. Gan), *Journal of Algebra and Number Theory*, **8** No. 8 (2014), 1913-1957.
- (50) Matching of Hecke algebras for exceptional theta correspondences (with M. Woodbury), *J. of Number Theory*, **146** (2015), 534-556.
- (51) Rational forms of exceptional dual pairs (with H. Y. Loke), *J. of Algebra*, **422** (2015), 683-696.
- (52) Global uniqueness of small representations (with T. Kobayashi), *Math. Z.* **281** (2015), 215-239.
- (53) Classical invariant theory and theta correspondence of epipelagic representations (with H. Y. Loke and Jia Jun Ma), *Math. Z.* **283** (2016), 169-196.
- (54) Raising nilpotent orbits in wave-front sets (with Dihua Jiang and Baiying Liu), *Representation Theory*. **20** (2016), 419-450.
- (55) Euler Poincare Characteristic for the Oscillator Representation (with J. Adams and Dipendra Prasad), *Representation theory, number theory, and invariant theory*, 1-22, *Progress in Mathematics* 323, Birkhauser, 2017.
- (56) Iwahori component of the Gelfand-Graev representation (with Kei Yuen Chan), *Math. Z.* **288** (2018), 125-133.
- (57) Bernstein-Zelevinsky derivatives: a Hecke Algebra approach (with Kei Yuen Chan), *Int. Math. Res. Not. Int. Math. Res. Not. IMRN* (2019), no. 3, 731-760
- (58) Duality for spherical representations in exceptional theta correspondences (with Hung Yean Loke), *Trans. Amer. Math. Soc.* 371 (2019), no. 9, 6359-6375.
- (59) Eisenstein series arising from Jordan algebras (with M. Hanzer), *Canad. J. Math.* 72 (2020), no. 1, 183-201.
- (60) Bounded contractions for affine buildings (with Bestvina), *Proc. Amer. Math. Soc.* 148 (2020), no. 2, 875-883.
- (61) Iwahori component of Bessel model spaces (with Chan), *Proc. Amer. Math. Soc.* 148 (2020), no. 4, 1487-1497.
- (62) An exceptional Siegel-Weil formula and poles of the Spin  $L$ -function of  $PGSp_6$  (with Gan), *Compositio Math.* **156** (2020), 1231-1261.
- (63) Computing finite Galois groups arising from automorphic forms (with Kay Magaard), *J. of Algebra* **561** (2020), 256-272.
- (64) A vanishing Ext-branching theorem for  $(GL_{n+1}, GL_n)$  (with Chan), *Duke Math. J.* **170** (10) (2021), 2237-2261.
- (65) Appendix to: Modular forms on indefinite orthogonal groups of rank three, by A. Pollack *J. Number Theory* **238** (2022), 611-675.
- (66) Twisted composition algebras and Arthur packets for triality  $Spin(8)$  (with Wee Teck Gan), *Pure and Applied Math. Quarterly*, **18** (2022), no. 5, 1951-2130.
- (67) The Gelfand-Graev representation of classical groups in terms of Hecke algebras (with postdoc P. Bakić), *Canadian J. Math.* 75 (2023), no. 4, 1343-1368.

- (68) Howe duality and dichotomy for exceptional theta correspondences (with Wee Teck Gan), *Inventiones Math.* 232 (2023), no.1, 1–78.
- (69) Appendix to: A local Langlands parameterization for generic supercuspidal representations of  $p$ -adic  $G_2$  by M. Harris, C. Khare and J. Thorne, *Annales Scientifiques de l'ENS*, 56 (2023) no. 1, 257–286.
- (70) The Local Langlands Conjecture for  $G_2$  (with Gan) *Forum Math. Pi* 11 (2023) 42 pp.

Recent ArXiv publications that are under consideration at various journals.

- (1) Euler-Poincare formulae for positive depth Bernstein projectors (with Allen Moy) arXiv:2006.14648, under revision.
- (2) Howe duality for a quasi-split exceptional dual pair (with Bakić) arXiv:2112.02760, to appear in *Math Annalen*.
- (3) A family of  $Spin(8)$  dual pairs: the case of real groups (with Gan, Loke and Annegret Paul) arXiv:2302.02492, submitted.
- (4) Similitude exceptional theta correspondences (with Gan and Bakić) arXiv:2308.13339, submitted.
- (5) The dual pair  $Aut(C) \times F_4$  ( $p$ -adic case) (with Ed Karasiewicz) arXiv:2312.02853, submitted.