Yiannis Sakellaridis

CURRICULUM VITAE

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Citizenship: US, Greek
Year of Birth: 1978

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Current and past employment:

2019 – present	Professor, Johns Hopkins University.
2014 – 2019	Associate Professor, Rutgers University – Newark.
2015 – 2017	Assistant Professor, National Technical University of Athens.
2010 – 2014	Assistant Professor, Rutgers University – Newark.
2008 – 2010	Post-doctoral fellow, University of Toronto. Faculty mentors: Henry Kim, Fiona Murnaghan, Joe Repka.
2006 – 2008	Post-doctoral fellow, Tel Aviv University. Supervisor: Joseph Bernstein.

Sponsored visiting positions:

2017 – 2018	Von Neumann Fellow and Member, Institute for Advanced Study.
Winter – Spring 2017	Visiting Associate Professor, The University of Chicago.
Fall 2014	Member, Mathematical Sciences Research Institute.
Spring 2011	Member, Institute for Advanced Study.

Higher Education:

2001 – 2006	Stanford University, Ph.D. in Mathematics. Dissertation title: *Unramified representations of p-adic groups on spherical varieties.* Thesis advisor: Daniel Bump.
1996 – 2001	National Technical University of Athens (NTUA), Diploma in Electrical and Computer Engineering. Diploma thesis: *Applications of ergodic theory to combinatorial number theory.* Thesis supervisor: Spiros Argyros.

Research interests:

Automorphic forms, number theory, representation theory.

Research articles:

[1] Yiannis Sakellaridis. A Casselman-Shalika formula for the Shalika model of GL_n. *Canad. J. Math.*, 58(5):1095–1120, 2006. doi:10.4153/CJM-2006-040-6.

[2] Yiannis Sakellaridis. On the unramified spectrum of spherical varieties over p-adic fields. *Compos. Math.*, 144(4):978–1016, 2008. doi:10.1112/S0010437X08003485.

[3] Yiannis Sakellaridis. Spherical varieties and integral representations of L-functions. *Algebra & Number Theory*, 6(4):611–667, 2012. doi:10.2140/ant.2012.6.611.

[4] Yiannis Sakellaridis. Spherical functions on spherical varieties. *Amer. J. Math.*, 135(5):1291–1381, 2013. doi:10.1353/ajm.2013.0046.

[5] Yiannis Sakellaridis. Beyond endoscopy for the relative trace formula I: local theory. In *Automorphic Representations and L-functions*, pages 521–590. Amer. Math. Soc., Providence, RI, 2013. Edited by: D. Prasad, C. S. Rajan, A. Sankaranarayanan, and J. Sengupta, Tata Institute of Fundamental Research, Mumbai, India, 2013. arXiv:1207.5761.

[6] Alexis Bouthier, Bao Châu Ngô, and Yiannis Sakellaridis. On the formal arc space of a reductive monoid. *Amer. J. Math.*, 138(1):81–108, 2016. doi:10.1353/ajm.2016.0004, Erratum: 139(1):293–295, 2017. doi:10.1353/ajm.2017.0006.

[7] Yiannis Sakellaridis. The Schwartz space of a smooth semi-algebraic stack. *Selecta Math. (N.S.)*, 22(4):2401–2490, 2016. doi:10.1007/s00029-016-0285-3, Erratum: 24(5):4961–4965, 2018. doi:10.1007/s00029-018-0445-8.

[8] Yiannis Sakellaridis. Plancherel decomposition of Howe duality and Euler factorization of automorphic functionals. In *Representation theory, number theory, and invariant theory*, volume 323 of *Progr. Math.*, pages 545–585. Birkhäuser/Springer, Cham, 2017. doi:10.1007/978-3-319-59728-7_18.

[9] Yiannis Sakellaridis. Beyond endoscopy for the relative trace formula II: global theory. *J. Inst. Math. Jussieu*, 18(2):347–447, 2019. doi:10.1017/s1474748017000032.

[10] Yiannis Sakellaridis and Akshay Venkatesh. Periods and harmonic analysis on spherical varieties. *Astérisque*, (396):360, 2017.

[11] Yiannis Sakellaridis. Inverse Satake Transforms. In *Geometric Aspects of the Trace Formula*, pages 321–349, Cham, 2018. Springer International Publishing. doi:10.1007/978-3-319-94833-1_11.

[12] Patrick Delorme, Pascale Harinck, and Yiannis Sakellaridis. Paley-Wiener theorems for a p-adic spherical variety. To appear in *Memoirs of the AMS*, 107pp. arXiv:1410.2279.

[13] Yiannis Sakellaridis. The Selberg trace formula revisited. Preprint, 80pp. arXiv:1710.01866.

[14] Yiannis Sakellaridis. Relative functoriality and functional equations via trace formulas. *Acta Math. Vietnam.*, 44(2):351–389, 2019. doi:10.1007/s40306-018-0295-7.

[15] Yiannis Sakellaridis. Transfer operators and Hankel transforms between relative trace formulas, I: Character theory. Submitted, 68pp. arXiv:1804.02383.

[16] Yiannis Sakellaridis. Transfer operators and Hankel transforms between relative trace formulas, II: Rankin–Selberg theory. Submitted, 89pp. arXiv:1805.04640.

[17] Yiannis Sakellaridis. Functorial transfer between relative trace formulas in rank one. Submitted, 77pp. arXiv:1808.09358.

[18] Dipendra Prasad. Generic representations for symmetric spaces. *Adv. Math.*, 348:378–411, 2019. With an appendix by Yiannis Sakellaridis. doi:10.1016/j.aim.2019.03.016.

Awards and distinctions:

2018 – 2021	NSF continuing grant DMS-1801429 and DMS-1939672 "Trace formulas and relative functoriality", amount (recommended for 3-year period): $210,000.
2015 – 2018	NSF standard grant DMS-1502270 "Foundations of the relative Langlands program", amount: $172,527.
2011 – 2015	NSF standard grant DMS-1101471 "Spherical varieties in the Langlands program", amount: $116,376.

Ph.D. students:

2018	Junqi Wang, Rutgers University–Newark. Thesis title: "Forms of homogeneous spherical varieties."
2016	Ioan Filip, Columbia University. Thesis title: "A local relative trace formula for spherical varieties."

Synergistic activities:

July 2019	Co-organizer (with B.C. Ngô and A. Venkatesh), Conference on "L-functions and Geometric Representation Theory", Nisyros, Greece.
January 2019	Co-organizer (with B. Krötz and J. Kuit), "Sphericity 2019" workshop at CIRM, Luminy, France.
November 2018	Co-organizer (with Z. Mao), "Rutgers–Newark Junior Number Theory Days" at Rutgers University–Newark.
March 2018	Co-organizer (with A. Venkatesh and E. Lapid), Workshop on Representation Theory and Analysis on Locally Symmetric Spaces, Institute for Advanced Study.
November 2017	Co-organizer (with Z. Mao), "Rutgers–Newark Junior Number Theory Days" at Rutgers University–Newark.
July 2017	Co-organizer (with M. Harris and V. Rotger), Conference on "Automorphic Motives, Euler Systems & p-adic L-functions", Nisyros, Greece.
November 2016	Co-organizer (with Z. Mao), "Rutgers–Newark Junior Number Theory Days" at Rutgers University–Newark.
June 2016	Co-organizer (with B.C. Ngô), "2nd Nisyros conference on Automorphic Representations and related topics", Nisyros, Greece.
May 2016	Co-organizer (with P.-H. Chaudouard, V. Heiermann and D. Prasad), Conference on the "Relative Trace Formula, Periods, L-Functions and Harmonic Analysis", CIRM, Luminy, France.

February 2016	Co-organizer (with F. Knop, B. Krötz and E. Opdam), "Sphericity 2016" workshop at Kloster Reute, Baden-Württemberg, Germany.
November 2015	Co-organizer (with Z. Mao), "Rutgers–Newark Junior Number Theory Days" at Rutgers University–Newark.
2015 – 2017	Organizer, Rutgers–Newark Undergraduate Math & CS Club.
July 2015	Organizer, "1st Nisyros conference on Automorphic Representations and related topics", Nisyros, Greece.
2015 – 2016	Co-organizer (with A. Kontogeorgis), "Séminaire Grothendieck – Athens".
2015 – 2016	Co-organizer (with M. Loulakis), NTUA undergraduate seminars on "Mathematical Methods" (of Classical Mechanics, Quantum Mechanics...).
Fall 2014	Co-organizer (with A. Mézard) Research seminar on "New Geometric Methods in Number Theory", MSRI.
June 2014	Co-organizer (with W.T. Gan, C.P. Mok and S. Takeda), Workshop on "The future of trace formulas" at the Banff International Research Station, Canada.
December 2013	Co-organizer (with J. Bernstein and D. Prasad), Workshop on "Automorphic periods and spherical varieties" at the Tsinghua Sanya International Mathematics Forum, China.
May 2013	Co-organizer (with F. Knop), Mini-Workshop on "Spherical varieties and automorphic representations" at the Mathematisches Forschungsinstitut Oberwolfach, Germany.
2010 – present	Co-organizer (with X. Wang), Rutgers–Newark Mathematics Colloquium.
2010 – 2015	Co-organizer (with Z. Mao), Rutgers–Newark Algebra & Number Theory Seminar.
2007 – 2008	Co-organizer (with Z. Rudnick), Tel Aviv University Number Theory Seminar.
Referee for:	Acta Math., Adv. Math., Algebra & Number Theory, Ann. Inst. Fourier, Astérisque, Canadian J. Math., Comm. Math. Helv., Compositio Math., Contemporary Math., Duke Math J., IMRN, Inventiones Math., Israel J. Math., JAMS, J. Inst. Math. Jussieu, J. Number Theory, Manuscripta Math., Math. Research Letters, Memoirs AMS, Progress in Mathematics, Publ. Math. IHES, Transf. Groups; National Science Foundation, Israel Science Foundation.

Invited talks:

April 2019	Harvard Number Theory Seminar.
March 2019	AMS Spring Central and Western Joint Sectional Meeting, University of Hawaii at Manoa.
February 2019	Duke Algebraic Geometry Seminar.
January 2019	UCLA Mathematics Colloquium.
January 2019	Workshop "On the Langlands Program: Endoscopy and Beyond", Institute for Mathematical Sciences, NU Singapore.
December 2018	Johns Hopkins University Mathematics Colloquium.
June 2018	"Groupes Réductifs et Formes Automorphes" seminar, Institut de Mathématiques de Jussieu.
June 2018	Institut de Mathématiques de Marseille (2 talks).

April 2018	Simons Symposium on Relative Trace Formulas, Schloss Elmau, Bavaria, Germany.
April 2018	Piatetski-Shapiro Memorial Lectures, Yale (2 talks).
December 2017	Institute for Advanced Study, Locally Symmetric Spaces Seminar (2 talks).
December 2017	AIM workshop on "Functoriality and the trace formula".
December 2017	Bay Area Algebraic Number Theory and Arithmetic Geometry Day, Berkeley, California.
November 2017	New York Number Theory Seminar.
November 2017	Johns Hopkins Number Theory Seminar.
November 2017	University of Maryland Lie Theory and Representation Theory Seminar.
October 2017	Institute for Advanced Study, Locally Symmetric Spaces Seminar (2 talks).
July 2017	University of Prishtina conference on "New directions in automorphic forms and L-functions".
June 2017	Weizmann Institute Conference on "Representation Theory and Algebraic Geometry" in honor of Joseph Bernstein.
May 2017	Northwestern University workshop on "Geometric Methods in Number Theory and Representation Theory".
May 2017	AMS Spring Eastern Sectional Meeting, Hunter College, New York.
May 2017	University of Wisconsin–Madison Number Theory Seminar.
April 2017	University of Minnesota Mathematics Colloquium & Lie Theory Seminar.
Winter 2017	University of Chicago Geometric Langlands Seminar (9 talks mini-course).
April 2016	Simons Symposium on Geometric Aspects of the Trace Formula, Schloss Elmau, Bavaria, Germany.
January 2016	Kyoto University Number Theory Seminar.
January 2016	Winter School 2016 in Representation Theory of Reductive Groups, University of Tokyo (7 talks).
December 2015	AIM Workshop on "Automorphic Kernel Functions".
October 2015	University of Maryland Lie Groups and Representation Theory Seminar.
September 2015	University of Pittsburgh Algebra, Combinatorics, and Geometry Seminar.
September 2015	Ohio State University Representations and Lie Theory Seminar.
June 2015	"Representation Theory, Number Theory and Invariant Theory" conference in honor of Roger Howe's 70th Birthday, Yale University.
May 2015	University of Chicago Geometric Langlands Seminar.
May 2015	Purdue Workshop on "L-functions and Trace Formula".
May 2015	Mini-course at the Field Institute's "Workshop on Representation Theory and Analysis on Lie Groups over Local Fields", University of Ottawa.
January 2015	Paris 13 Séminaire de Géométrie Arithmétique et Motivique.
January 2015	"Groupes Réductifs et Formes Automorphes" seminar, Institut de Mathématiques de Jussieu.
December 2014	Workshop on "Motivic Integration, Orbital Integrals, and Zeta-Function", Banff International Research Station, Canada.

November 2014	Workshop on "Categorical Structures in Harmonic Analysis", MSRI.
October 2014	Rice Algebraic Geometry Seminar.
October 2014	"New Geometric Methods in Number Theory" research seminar, MSRI.
September 2014	"Third International Workshop on Zeta Functions in Algebra and Geometry", CIMAT, Guanajuato, Mexico.
June 2014	Summer school on the Gan–Gross–Prasad conjectures, Institut de Mathématiques de Jussieu, Paris, France.
May 2014	"Periods of automorphic forms and applications to L-functions" workshop, Harvard.
April 2014	Johns Hopkins - Maryland Algebra and Number Theory Day.
April 2014	Penn State Algebra and Number Theory Seminar.
February 2014	UNC-Duke Number Theory Seminar.
November 2013	Hebrew University of Jerusalem Mathematics Colloquium and Number Theory Seminar.
November 2013	Purdue University Mathematics Colloquium.
October 2013	"Advances in the theory of automorphic forms and their L-functions", ESI, Vienna.
September 2013	Workshop on Automorphic L-functions, Xuzhou, China.
September 2013	Morningside Center of Mathematics, Beijing (2 talks).
July 2013	Friedrich–Alexander–Universität Erlangen–Nürnberg.
April 2013	Stanford Number Theory Seminar.
April 2013	Caltech Number Theory Seminar.
February 2013	Joint Princeton University/IAS Number Theory Seminar.
February 2013	University of Minnesota Lie Theory Seminar.
February 2013	University of Toronto Number/Representation Theory Seminar.
January 2013	Yale Number Theory Seminar.
November 2012	UBC Number Theory Seminar.
November 2012	MIT Number Theory Seminar.
August 2012	Conference in honor of Daniel Bump, Stanford University.
June 2012	University of Crete Algebra & Geometry Seminar.
June 2012	"Représentations des groupes réductifs p-adiques" workshop, Porquerolles, France.
June 2012	Conference in honor of Patrick Delorme on the occasion of his 60th birthday, Luminy.
June 2012	National Technical University of Athens Colloquium.
May 2012	Herbrew University of Jerusalem Number Theory Seminar (3 talks).
April 2012	Oklahoma University Karcher Special Lecture.
April 2012	Rutgers at New Brunswick Lie Groups Quantum Math Seminar.
March 2012	CUNY Collaborative Number Theory Seminar.
March 2012	Columbia University Mathematics Colloquium.

March 2012	Fields Institute workshop on "Galois Representations, Shimura Varieties, and Automorphic Forms".
February 2012	University of Chicago Number Theory Seminar.
January 2012	International Colloquium, TIFR, Mumbai.
November 2011	University of Maryland Lie Groups and Representation Theory seminar.
September 2011	AMS Sectional Meeting, Ithaca, NY.
June 2011	"Group Actions in Number Theory" concluding workshop, EPF Lausanne.
May 2011	Institut de Mathématiques de Luminy (4 talks).
April 2011	Rutgers at New Brunswick Number Theory Seminar.
March 2011	IAS Galois Representations and Automorphic Forms Seminar.
March 2011	Oberwolfach workshop: "Automorphic Forms: New Directions".
February 2011	Stony Brook Number Theory Seminar.
October 2010	CUNY Representation Theory Seminar.
August 2010	Workshop on the Hitchin fibration and the Fundamental Lemma, Duntroon, Ontario.
April 2010	Cornell Lie Groups Seminar.
February 2010	University of Toronto Geometric Representation Theory Seminar.
January 2010	University of Michigan Group/Lie/Number Theory Seminar.
January 2010	University of Toronto Number/Representation Theory Seminar.
December 2009	University of Bonn.
December 2009	Colloquium, Boston College.
December 2009	Colloquium, Rutgers University at Newark.
December 2009	CMS Winter Meeting, Windsor, Ontario.
November 2009	University of Minnesota Lie Theory Seminar.
September 2009	BC–MIT Joint Number Theory Seminar.
August 2009	AIM Workshop: "Relative trace formula and periods of automorphic forms".
July 2009	University of Bonn, Arbeitsgemeinschaft Arithmetische Geometrie.
April 2009	Brown Algebra Seminar.
March 2009	UI Chicago Number Theory Seminar.
March 2009	Joint Princeton – IAS Number Theory Seminar.
February 2009	UC San Diego Representation Theory Seminar.
February 2009	Stanford Number Theory Seminar.
November 2008	Oberwolfach Mini-Workshop: "Symmetric Varieties and Involutions".
February 2008	Joint Columbia – Cuny – NYU Number Theory Seminar.
January 2008	Israel Automorphic Forms Seminar.
July 2007	Hausdorff Center for Mathematics, Bonn.
May 2007	University of Athens.

May 2007	Ben Gurion University, Beer-Sheva.
February 2007	Research Institute for Mathematical Sciences, Kyoto.
November 2006	Weizmann Institute.
September 2006	National Technical University of Athens.
September 2006	El Escorial, Madrid, International Conference on Arithmetic Algebraic Geometry.
February 2006	University of Michigan Arithmetic Seminar.
January 2006	Stanford Representation Theory Seminar.
October 2005	UC Irvine Number Theory Seminar.
May 2005	Stanford Representation Theory Seminar.

Teaching experience:

Spring 2019	Mathematics Seminar, Rutgers–Newark.
Fall 2018	Calculus 1, Rutgers–Newark.
Spring 2018	Algebraic geometry (graduate course), Rutgers–Newark.
Spring 2017	Graduate course on the trace formula, University of Chicago.
Fall 2016	Honors calculus, Rutgers–Newark.
Spring 2016	Number theory, NTUA.
Spring 2016	Linear algebra 2, NTUA.
Spring 2016	Calculus 2, NTUA.
Fall 2015	Calculus 3, Rutgers–Newark.
Fall 2015	Calculus 1, Rutgers–Newark.
Spring 2015	Lie groups and Lie algebras (graduate course), NTUA.
Spring 2015	Algebra 2, NTUA.
Spring 2015	Calculus 2, NTUA.
Spring 2014	Topics in Representation Theory (graduate course), Rutgers–Newark.
Spring 2014	Calculus 1, Rutgers–Newark.
Spring 2013	Calculus 1, Rutgers–Newark.
Fall 2012	Linear Algebra, Rutgers–Newark.
Fall 2012	Calculus 1 (large section), Rutgers–Newark.
Spring 2012	Advanced Calculus 1, Rutgers–Newark.
Spring 2012	Topics in Number Theory (graduate course), Rutgers–Newark.
Fall 2011	Topics in Representation Theory (graduate course), Rutgers–Newark.
Fall 2010	Calculus 1 (large section), Rutgers–Newark.
2009 – 2010	Instructor and coordinator, Multivariable calculus, University of Toronto.
2008 – 2009	Multivariable calculus, University of Toronto.
2007 – 2008	Introduction to Automorphic Representations (graduate course), Tel Aviv University.

2002 – 2006	Teaching assistant for various undergraduate and first-year graduate courses, Stanford University.

Languages: Greek, English, German, Spanish.