Vita

Dragan Miličić
Professor of Mathematics

Birthdate: January 3, 1948
Birthplace: Zagreb, Croatia
Citizenship: USA

Academic Degrees:

B.S.	1969	University of Zagreb, Zagreb, Croatia
M.S.	1971	University of Zagreb, Zagreb, Croatia
Ph.D.	1973	University of Zagreb, Zagreb, Croatia

Professional Experience:

1969-73	Instructor, University of Zagreb, Zagreb, Croatia
1973-77	Assistant Professor, University of Zagreb, Zagreb, Croatia
1975-76	Member, Institute for Advanced Study, Princeton, NJ
1977-80	Associate Professor, University of Zagreb, Zagreb, Croatia
1979-Winter	Visitor, SFB "Theoretische Mathematik," Universität Bonn, Bonn, Germany
1980-83	Associate Professor, University of Utah
1983-Present	Professor, University of Utah
1984-Fall	Faculty Fellow, University of Utah
1985-Spring	Visitor, Forschungsinstitut für Mathematik, ETH, Zürich, Switzerland
1985-1986	Member, Institute for Advanced Study, Princeton, NJ
1987-88	Member, Mathematical Sciences Research Institute, Berkeley, CA
1990-Winter	Visiting Professor, Tata Institute of Fundamental Research, Mumbai, India
1996-Summer	Visiting Scholar, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, Austria
1998-99	Visiting Scholar, Department of Mathematics, Harvard University, Cambridge, MA
2005-Fall	Visiting Scholar, Department of Mathematics, Harvard University, Cambridge, MA
2006-January	Visiting Professor, Tata Institute of Fundamental Research, Mumbai, India
2006-February & March	Visiting Professor, Department of Mathematics, Hong Kong University of Science and Technology, Hong Kong
2013-Fall	Visiting Scholar, Department of Mathematics, Harvard University, Cambridge, MA
2014-Spring	Visiting Professor, Department of Mathematics, Hong Kong University of Science and Technology, Hong Kong

Honors: Fellow of American Mathematical Society

Specialization: Semisimple Lie Group Representations

Bibliography:

1. A note on invariant order ideals in the predual of a von Neumann algebra, Glasnik Mat., **6 (26)** (1971), 71–72.

2. On the boundary of essential spectra (with K. Veselić), Glasnik Mat., **6 (26)** (1971), 73–78.

3. Topological representation of the group C^*-algebra of $SL(2,\mathbb{R})$, Glasnik Mat., **6 (26)** (1971), 231–246.

4. The C^*-algebra of the universal covering group of $SL(2,\mathbb{R})$ (with H. Kraljević), Glasnik Mat., **7 (27)** (1972), 35–48.

5. On C^*-algebras with bounded trace, Glasnik Mat., **8 (28)** (1973), 7–22.

6. Elementary representations of the group $SO(3,2)$ (with H. Kraljević), Glasnik Mat., **9 (29)** (1974), 43–57.

7. The dual spaces of almost connected reductive groups, Glasnik Mat., **9 (29)** (1974), 273–288.

8. A note on components of parabolic subgroups, Glasnik Mat., **10 (30)** (1975), 47–50.

9. Representations of almost connected groups, Proc. Amer. Math. Soc., **47** (1975), 517–518.

10. Asymptotic behavior of matrix coefficients of the discrete series, Duke Math. Journal, **44** (1977), 59–88.

11. On the irreducibility of unitary principal series representations (with M. Primc), Math. Ann., **260** (1982), 413–421.

12. Asymptotic behavior of matrix coefficients of admissible representations (with W. Casselman), Duke Math. Journal, **49** (1982), 869–930.

13. Character identities and asymptotic behavior of matrix coefficients of discrete series (with H. Hecht), Pacific J. Math., **121** (1986), 357–369.

14. Localization and standard modules for real semisimple Lie groups I: The duality theorem (with H. Hecht, W. Schmid, J. A. Wolf), Inventiones Math., **90** (1987), 297–332.

15. On the cohomological dimension of the localization functor, (with H. Hecht), Proc. Amer. Math. Soc., **108** (1990), 249-254.

16. Intertwining functors and irreducibility of standard Harish-Chandra sheaves, in "Harmonic Analysis on Reductive Groups," W. Barker, P. Sally, Editors, Progress in Mathematics, Vol. 101, Birkhäuser, Boston, 1991, 209–222.

17. Algebraic $\mathcal{D}$-modules and representation theory of semisimple Lie groups, in "Analytic Cohomology and Penrose Transform", M. Eastwood, J.A. Wolf, R. Zierau, Editors, Contemporary Mathematics, Vol. 154, Amer. Math. Soc., Providence, 1993, 133–168.

18. Equivariant derived categories, Zuckerman functors and localization (with P. Pandžić), in "Geometry and Representation Theory of Real and p-adic Lie Groups", J. Tirao, D. Vogan, J.A. Wolf, Editors, Progress in Mathematics, Vol. 158, Birkhäuser, Boston, 1997, 209–242.

19. On degeneration of the spectral sequence for the composition of Zuckerman functors (with P. Pandžić), Glasnik Matematički, **32(52)** (1997), 179–199.

20. The composition series of modules induced from Whittaker modules (with W. Soergel), Comment. Math. Helv., **72**, (1997), 503–520.

21. Bruhat filtrations and Whittaker vectors for real groups (with W. Casselman and H. Hecht), in "The Mathematical Legacy of Harish-Chandra: A Celebration of Representation Theory and Harmonic Analysis," Proc. of Symp. in Pure Math., **68** (2000), Amer. Math. Soc., pp. 151–190.

22. Twisted Harish-Chandra sheaves and Whittaker modules: The nondegenerate case (with W. Soergel), in "Developments and Retrospectives in Lie theory: Geometric and Analytic Methods" edited by G. Mason, I. Penkov and J.A. Wolf, Developments in Math, **37**, (2014), Springer, 183-196.

23. Variations on Casselman-Osborne theme, in "Developments and Retrospectives in Lie theory: Algebraic Methods", edited by G. Mason, I. Penkov and J.A. Wolf, Developments in Math, **38**, (2014), Springer, 183-196.

24. Harish-Chandra's orthogonality relations for admissible representations (with J.-S. Huang and B. Sun), J. Eur. Math. Soc., **22**, (2020), 1095-1113

To appear:

1. Localization and standard modules for real semisimple Lie groups II: Irreducibility and classification (with H. Hecht, W. Schmid, J. A. Wolf), (to appear in Pure and Applied Mathematics Quarterly in a volume dedicated to David Kazhdan).

Manuscripts in Preparation:

1. Localization and Representation Theory of Reductive Groups.

2. Lectures on Lie Groups.

3. Lectures on Derived Categories.

4. Lectures on D-modules.

Invited Lectures:

June 1977	Invited Speaker at the conference "Representations of Real Semisimple Lie Groups," Oberwolfach, Germany.
September 1977	Nato Advanced Study Institute in Group Representations and Harmonic Analysis, Liege, Belgium.
May 1978	Series of lectures at the University of Warszawa, Warszawa, Poland.
Jan.-Feb. 1979	Series of lectures at the University of Bonn, Bonn, Germany.
April 1980	Invited Speaker at Séminaire Dubreil-Malliavin, Inst. Henri Poincaré, Paris, France.
September 1980	Rutgers University, New Brunswick, NJ.
September 1980	Yale University, New Haven, CT.
November 1980	Invited Speaker at Pacific Northwest Geometry Seminar, Vancouver, BC, Canada.
November 1981	Invited Speaker at the Special Session in Group Representations, AMS Meeting, Santa Barbara, CA.
August 1983	Invited Speaker at the Research Conference on Representation Theory of Semisimple Lie Groups, San Diego, CA.
February 1984	Invited Speaker at the Sixth Annual Conference on Representation Theory and Automorphic Forms, University of Chicago, Chicago, IL.
November 1984	Invited Address at the AMS Meeting, San Diego, CA.
July 1985	Colloquium at University of Zürich, Zürich, Switzerland.
July 1985	Series of lectures at the AMS Summer Institute in Algebraic Geometry, Bowdoin College, Brunswick, ME.
August 1985	Invited Speaker at the US-Netherlands Seminar in Representations of Semisimple Lie Groups, Rijksuniversiteit Utrecht, Netherlands.
Fall 1985	Seminar "D-modules and Representation Theory of Reductive Groups" (with A. Borel and J. Bernstein), Institute for Advanced Study, Princeton, NJ.
October 1985	Rutgers University, New Brunswick, NJ.
February 1986	Massachussetts Institute of Technology, Cambridge, MA.
February 1986	Harvard-Brandeis-MIT Colloquium at Brandeis University, Waltham, MA.
February 1986	University of Maryland, College Park, MD.
May 1986	Invited speaker at the Special Session in Representations of Lie Groups, Baltimore, MD.
October 1986	Invited Speaker at the Special Session in Representations of

	Reductive Lie Groups, Logan, UT.
November 1986	Colloquium at Northwestern University, Evanston, IL.
August 1987	Invited lecture at the conference "Einhüllende Algebren, Darstellungstheorie und Differentialoperatoren," Oberwolfach, Germany.
September 1987	Evans Lecture at University of California, Berkeley, CA.
November 1987	Invited Speaker at the Special Session on Geometric Methods in Representation Theory, Los Angeles, CA.
1987-88	Seminar "Geometric Methods in Representation Theory," Mathematical Sciences Research Institute, Berkeley, CA.
April 1988	Colloquium at University of Chicago, Chicago, IL.
August 1989	Invited Speaker at the conference "Harmonic Analysis on Reductive Groups," Bowdoin College, Brunswick, ME.
March 1990	School of Mathematics, SPIC Science Foundation, Madras, India.
March 1990	Colloquium at School of Mathematics, Tata Institute of Fundamental Research, Bombay, India.
April 1990	Invited lecture at the conference "Einhüllende Algebren, Darstellungstheorie und Differentialoperatoren", Oberwolfach, Germany.
June 1990	Colloquium, University of California San Diego, La Jolla, CA.
November 1990	Invited Speaker at the Special Session on Representation Theory of Lie Groups, Denton, TX.
February 1991	Two lectures at Seminar in Enveloping Algebras at Universite de Paris VI, Paris, France.
March 1991	Colloquium at University of Michigan, Ann Arbor, MI.
July 1991	Invited lectures at AMS Summer Institute in Algebraic Groups, Pennsylvania State University, University Park, PA.
August 1991	Lecture at the conference "Harmonic Analysis on Lie Groups," University of Aarhus, Aarhus, Denmark.
January 1992	Lecture at Conference in Representation Theory at University of California, San Diego, CA.
June 1992	Invited lecture at AMS Regional Conference on Analytic Cohomology and Penrose Transform, Mt. Holyoke College, MA.
October 1992	Colloquium at the University of Arizona, Tucson, AZ.
March 1993	Short course on "Algebraic D-modules and representation theory of semisimple Lie groups," Workshop on Representation Theory of Lie Groups, International Centre for Theoretical Physics, Trieste, Italy.
May 1993	Cornell University, Ithaca, NY.
December 1993	Invited lecture at the seminar Lie Groups, Lie Algebras and Their Representations, University of California, Berkeley, CA.
October 1994	Invited lecture at the Pacific Northwest Geometry Seminar, Portland State University, Portland, OR.
November 1994	Colloquium at Oklahoma State University, Stillwater, OK.
August 1995	Series of lectures in 5th Workshop in Representation Theory,

	Cordoba, Argentina.
June 1996	Invited lecture at Schrödiger Institute for Mathematical Physics, Vienna, Austria.
July 1996	Invited lecture at International Centre for Theoretical Physics, Trieste, Italy.
July 1996	Invited lecture at First Croatian Mathematical Congress, Zagreb, Croatia.
September 1997	Invited series of lectures at the conference Functional Analysis V, Dubrovnik, Croatia.
January 1998	Invited speaker at the Special Session in Representation Theory and Noncommutative Harmonic Analysis honoring the memory of Harish-Chandra, AMS Annual Meeting, Baltimore, MD.
November 1998	Colloquium at Rutgers University, New Brunswick, NJ.
November 1998	Seminar at Rutgers University, New Brunswick, NJ.
November 1998	Seminar at MIT, Cambridge, MA.
December 1998	Harvard-Brandeis-MIT-Northeastern Colloquium at Brandeis University, Waltham, MA.
June 2000	Invited lecture at Second Croatian Mathematical Congress, Zagreb, Croatia
May 2001	Invited speaker at Midwest Lie Theory Workshop, University of Michigan, Ann Arbor, MI.
May 2002	Series of talks at Northwestern University, Evanston, IL.
June 2003	Series of talks at the conference Functional Analysis VIII, Dubrovnik, Croatia.
May 2004	Colloquium at Hong Kong University of Science and Technology, Hong Kong.
May 2004	Seminar at Hong Kong University of Science and Technology, Hong Kong.
December 2004	Seminar at Cornell University, Ithaca, NY.
June 2005	Talk at the conference Functional Analysis IX, Dubrovnik, Croatia.
October 2005	Invited lecture at the conference Lie Groups, Lie Algebras and Their Representations, Eugene, OR.
January 2006	Talk at the conference "Representation Theory of Reductive Groups", Tata Institute of Fundamental Research, Mumbai, India.
March 2006	Colloquium at Hong Kong University of Science and Technology, Hong Kong.
March 2006	Seminar at Hong Kong University, Hong Kong.
June 2008	Talk at the conference Functional Analysis X, Dubrovnik, Croatia.
December 2010	Invited Speaker at the Special Session on p-adic Groups, Automorhic Forms and Geometry at Winter CMS Meeting, Vancouver, BC.
February 2011	Invited lecture at the conference Lie Groups, Lie Algebras and Their Representations, Baton Rouge, LA.
June 2011	Talk at the conference Representation Theory XII, Dubrovnik, Croatia.
October 2011	Invited Speaker at the Special Session on Reductive Groups and Hecke Algebras at sectional AMS Meeting, Salt Lake City, UT.

January 2013	Invited speaker at the conference Geometric methods in representation theory and number theory, Tsinghua International Mathematics Forum, Sanya, PR China.
June 2013	Talk at the conference Representation Theory XIII, Dubrovnik, Croatia.
March 2014	Invited speaker at the conference on Geometry and Lie theory, University of Hong Kong, Hong Kong.
June 2014	Talk at the conference Hodge theory and unitary representations of reductive Lie groups, Jacobs University, Bremen, Germany.
June 2014	Talk at the conference in honor of Marko Tadić, University of Zagreb, Zagreb, Croatia.
June 2015	Talk at the conference Representation Theory XIV, Dubrovnik, Croatia.
June 2017	Talk at the conference Representation Theory XV, Dubrovnik, Croatia.
December 2017	Invited series of talks at the conference D-modules, representation theory and arithmetic applications, Clay Mathematical Institute, Oxford University, Oxford, England.
June 2018	Invited talk at the conference Vertex algebras and related topics, University of Zagreb, Croatia.
June 2018	Invited talk at the conference Dirac Operators and Representation Theory, University of Zagreb, Croatia.
June 2019	Invited talk at the conference Representation Theory XVI, Dubrovnik, Croatia.
October 2019	Invited talk at the conference Advances and Perspectives in Representation Theory, Shandong University, Qingdao, PR China.
February 2020	Invited talk at the conference Future Directions in Representation Theory in Mooloolaba, Queensland, Australia.

Other Professional Activities:

1995-2002	Editor, Glasnik Matematički (published by Croatian Mathematical Society)
1997-2002	Editor, Representation Theory (electronic journal published by American Mathematical Society)
2002-2009	Managing Editor, Representation Theory
February 2004	Member, NSF panel for Algebra, Number Theory and Combinatorics
2011-	Member of Advisory Board, Glasnik Matematički (published by Croatian Mathematical Society)

Conference Organization:

April 1982	Organizer (with H. Hecht and P. Trombi) of the Conference on Representation Theory of Reductive Groups, Park City, UT.
April 1988	Organizer (with H. Hecht, W. Schmid, D. Vogan, J. A. Wolf) of the Workshop on Geometric Methods in Representation Theory, Salt Lake City, UT.
April 1995	Organizer (with W. Soergel) of the Arbeitsgemeinschaft Oberwolfach meeting on "Representations of Reductive Lie Groups",

	Oberwolfach, Germany.
October 2002	Organizer (with P. Trapa) of the Special Session on Representation Theory of Semisimple Lie Groups, at the regional AMS meeting in Salt Lake City, UT.
May 2006	One of the organizers and principal speakers (with B. Casselman and P. Trapa) of the Mini-course on Representation Theory of $SL(2,\mathbb{R})$ at the University of Utah.
January 2013	One of the organizers (with W. Schmid and S. Miller) and a speaker at the conference Geometric methods in representation theory and number theory, Tsinghua International Mathematics Forum, Sanya, PR China
May 2013	One of the organizers (with B. Casselman, D. Goldfeld, B. Gross, M. Kisin, S. Miller, P. Trapa, S.-T. Yau) of the conference Representation Theory, Automorphic Forms, and Complex Geometry, Harvard University, Cambridge.

Departmental Duties:

1982-83	Member of the Instructorship Committee
1983-84	Chairman of the Instructorship Committee
1984-85	Colloquium Chairman
1986-87	Colloquium Chairman
1988-89	Chairman of the Hiring Committee
1989-90	Member of Curriculum Committee
1990-94	Member of Board of Trustees, Mathematical Sciences Research Institute, Berkeley, Ca.
1990-91	Member of Instructional Computing Committee
1990-91	Member of Scientific Computing Committee
1990-91	Instructional Software and Equipment Manager
1990-91	Preliminary Exams Committee
1991-92	Member of the Instructorship Committee
1991-92	Member of Instructional Computing Committee
1992-93	Member of the Instructorship Committee
1993-94	Member of the Graduate Committee
1993-94	Member of the Curriculum Committee
1994-95	Member of the Graduate Committee
1994-95	Colloquium Chairman
1996-97	Member of the Instructorship Committee
1997-98	Member of the Executive Committee
1997-98	Chairman of the Instructorship Committee
1999-2000	Chairman of the Instructorship Committee
1999-2001	Colloquium Chairman
2001-02	Library Committee Chairman
1999-	Director of Computing
2003-04	Member of the Graduate Committee
2004-05	Member of the College RPT Committee

2006-07	Member of the College RPT Committee
2006-07	Member of the Hiring Committee
2007-08	Chair of the College RPT Committee
2007-08	Chair of the Instructorship Committee
2008-09	Member of the Hiring Committee
2009-10	Chair of the Instructorship Committee
2010-11	Chair of the Hiring Committee
2011-14	Academic Senate
2012-13	Member of the College RPT Committee
2012-13	Member of the Instructorship Committee
2013-14	Chair of the Hiring Committee
2017-20	Academic Senate
2017-	Chair of College of Science TLT Committee

Thesis Supervision:

At University of Zagreb:

Mirko Primc,	University of Zagreb, Zagreb, Croatia
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At University of Utah:

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Mladen Božičević,	University of Zagreb, Croatia.
Robert Shalla,	Lehman Brothers, New York.
Pavle Pandžić,	University of Zagreb, Croatia.
Arthur Lim,	University of Minnesota, Minneapolis, MN.
Denis Lukić,	Northwestern University, Evanston, IL.
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