CURRICULUM VITAE

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Area of Specialization – p-adic analysis, Arithmetic geometry

Birth – August 25, 1954
Glen Ridge, New Jersey

Education – Ph. D., Princeton University, 1981
M.A., Princeton University, 1977
A.B., Bowdoin College, 1976

Employment history – Assistant Professor, Boston University, 1981–1986
NSF Postdoctoral Fellow, Harvard University, 1986–1988
Visiting Assistant Professor, University of Minnesota, 1988–1990
Associate Professor, University of Florida, 1990–present

Visiting positions – Professeur d'échange, Université de Paris-Sud, May – June 1986
Professeur invité, Université de Rennes, May 1990
Visitor, Universität Köln, January – February 1993
Professeur invité, Université de Paris XIII, June 1995
Professeur invité, Université de Paris-Sud and the Institut Henri Poincaré – June 1997
Professore visitatore, Università di Padova – November 1999
Professore visitatore, Università di Padova – June 2001
Professeur invité, Université de Rennes, June 2002
JSPS fellow, Hiroshima Univ. and Chiba Univ., May-June 2004.
Professeur invité, Université de Rennes, March 2007.

Grant support – NSF, 1994-97, $71,000, PI
NSA, 2002-2004, $29,000, PI
NSA, 2006-2008, $36,000, PI
CoPI on grants for the special year in combinatorics and number theory,
NSF, NSA, Number Theory Foundation.
NSA, 2009-2010, $43,000, PI

Conferences organized – "Arithmetic Geometry, Gainesville 2005," February 2005.

Ph.D. Students – Prabhu Venkataram, Ph.D. 2008.
Yuri Morofushi, Ph.D. 2009.

Publications and preprints

[1] *Etale p-covers in characteristic p*, Compositio Mathematica **52** (1984) pp 31–45.

[2] *On torsion in the slope spectral sequence*, Compositio Mathematica **56** (1985) pp 79–86.

[3] *Nonsingular Holomorphic Flows* (with David Fried), Topology **25** (1986) pp 471–473.

[4] *Specialization of crystalline cohomology*, Duke Mathematical Journal **53** (1986) pp 749–757.

[5] *L-functions and geometric Iwasawa theory*, Inventiones Mathematicae **88** (1987) pp 395–403.

[6] *L-functions of p-adic characters and a conjecture of Katz*, in Canadian Mathematical Society publications **7** (1987) pp 37–53.

[7] *F-Isocrystals and p-adic representations*, in *Algebraic Geometry – Bowdoin 1985* Proceedings of Symposia in Pure Mathematics **37** vol. 2 (1987) pp 111–138.

[8] *Universal extensions and p-adic periods of elliptic curves*, Compositio Mathematica **73** (1990) pp 107–119.

[9] *The p-adic monodromy of the universal abelian scheme*, in *p-adic methods in Number Theory and Algebraic Geometry*, Contemporary Mathematics **133** (1992) AMS.

[10] *F-isocrystals and their monodromy groups*, Annales Scientifique de l'Ecole Normale Supérior 4^e sér. **25** (1992) pp 429–464.

[11] *Kloosterman sums and the monodromy of a p-adic hypergeometric equation*, Compositio Mathematica **91** (1994) pp 1–36.

[12] *Differential Galois theory of regular singular p-adic differential equations*, Mathematische Annalen **305** (1996) pp 45–64.

[13] *Finiteness theorems for the cohomology of an overconvergent isocrystal on a curve*, Annales Scientifique de l'Ecole Normale Supérior 4^e sér. **31** (1998) pp 717–763.

[14] *Canonical Extensions, Irregularities, and the Swan Conductor*, Mathematische Annalen **316** (2000) pp 19–37.

[15] *Crystalline Cohomology of Singular Varieties*, in *Geometric Aspects of Dwork Theory*, ed. Adolphson et al., W. de Gruyter 2004.

[16] *Arithmetic $\mathcal{D}$-modules on a formal curve*, Mathematische Annalen **336** (2006) pp 439–448.

[17] *Arithmetic $\mathcal{D}$-modules on the unit disk*, Compositio Mathematica **148** no. 1 (2012) pp. 227–268.

[18] *Rigidity and Frobenius Structure*, preprint.

Invited Lectures

"Arithmetic of étale p-covers" Harvard University, Dec. 1981

"Slope characteristics in crytalline cohomology" MIT, Apr. 1982

"Torsion in the slope spectral sequence" University of California, Berkeley, Nov. 1982

"Global monodromy theorems in crystalline cohomology" MIT, Oct. 1982

"Global monodromy theorems in crystalline cohomology" CIRM, Luminy, France Jan. 1984

"Arithmetic of Igusa curves" Harvard University, Apr. 1985 (2 lectures)

"A geometric analogue of the Main Conjecture" CMS conference, Montreal June 1985

"Convergent and overconvergent F-isocrystals" AMS Summer Institute, Brunswick ME, July 1985

"L-functions of p-adic characters" University of Massachusetts, Amherst Oct. 1985

"L-functions of p-adic characters" MIT, Nov. 1985

"Geometric Iwasawa theory" Université de Paris-Sud (Orsay), May 1986 (3 lectures)

"Unit-root F-isocrystals" Université de Rennes May 1986

"Universal extensions and p-adic periods of elliptic curves" University of California, Berkeley, Nov. 1987

"Universal extensions and p-adic periods of elliptic curves" MIT, Feb. 1988

"Problems in the theory of p-adic differential equations", Colloquiuim, Brigham Young University, Feb. 1989

"p-adic periods", Brigham Young University, Feb. 1989

"Monodromy of p-adic differential equations" University of Minnesota, December 1989

"Monodromie des isocristaux surconvergent" Université de Rennes (France), May 1990 (4 lectures)

"Monodromie des F-isocristaux de Kloosterman" Université de Paris-Sud (Orsay), May 1990

"Monodromy of a generic abelian scheme" University of Pennsylvania, April 1991

"Finiteness questions in rigid cohomology," Mathematisches Forschungsinstitut Oberwolfach, February 1992

"Finiteness theorems for isocrystals on curves," Workshop Bielefeld – Köln – Münster – Wuppertal, (Germany) January 1993

"La cohomologie d'une isocrystal surconvergent sur une courbe," Université de Rennes (France), February 1993

"La cohomologie d'une isocrystal surconvergent sur une courbe," Université de Paris-Sud (Orsay), February 1993

"Finiteness theorems in rigid cohomology," Workshop in Crystalline cohomology and Hodge theory, MSRI & Univ. of California, Berkeley, March 1993

"Quelques questions en cohomologie rigide," Université de Paris VI, June 1995.

"Irregularités des modules différentielles p-adiques et conducteur de Swan", Université de Paris VI, April 1998.

"Adeles and autoduality of the Jacobian", University of North Carolina Charlotte (AMS Meeting 949), October 1999.

"Lectures on Swan conductors and singularities of differential equations," series of 5 lectures at the Università di Padova, November 1999.

"The p-adic Swan Representation," University of Arizona, January 2001.

"Comparison Theorems for Rigid Cohomology," Universitá di Padova, June 2001.

"Cohomologie Cristalline des Variétés singulières," Université de Rennes I, June 2002.

"Vanishing Cycles in Rigid Cohomology," AMS Meeting, Phoenix AZ February 2003.

"Algebraic Differential Equations and Irregularity," Hiroshima Univ. Mathematics Colloquium, May 2004.

"Arithmetic D-modules on the Unit disk," Hiroshima University, May 2004 (two talks).

"Arithmetic D-modules on the Unit disk," Nagoya University, June 2004.

"Arithmetic D-modules on the Unit disk," Kyoto University, June 2004.

"Arithmetic D-modules on the Unit disk," Tokyo University, June 2004.

"Arithmetic D-modules on the Unit disk," Conference on p-adic differential equations, Univ. Münser (Germany), February 2005.

"p-adic Weil II," Conference on p-adic differential equations and rigid cohomology, Univ. Rennes (France), June 2005.

"Rings of p-adic differential operators on tubes," Conference in honor of Gilles Christol, Bressanone Italy, Sept. 6–9, 2008.

"Lectures on p-adic monodromy," International Summer School on p-adic cohomology theories, University of Mainz, Germany, September 29 – October 1, 2008 (6 one hour lectures).

"Rings of p-adic differential operators on tubes," Conference on Recent Progress in Arithmetic D-modules theory, IRMA (Univ. of Strasbourg), Strasbourg France, October 3, 2008.

"Overconvergent F-isocrystals on the line," Max Planck Institute for Mathematics, Bonn, Germany, 16 Dec. 2013.