

## QUEBEC-VERMONT NUMBER THEORY SEMINAR (1984-2010)

ABSTRACT. This document contains the details of QVNTS over the last thirty years!

**Speakers in the last 12 years, in our seminars and workshops, include:** J. Arthur, M. Bertolini, M. Bhargava, E. Bombieri, R. Borcherds, Jean Bourgain, J. Conway, J. Friedlander, Tim Gowers, R. Greenberg, B. Green, B. Gross, H. Iwaniec, L. Lafforgue, S. Lang, R. Langlands, E. Lindenstrauss, Alex Lubotzky, B. Mazur, P. Mihailescu, Bao Chau Ngo, C. Pomerance, B. Poonen, K. Rubin, P. Sarnak, A. Selberg, J.-P. Serre, C. Skinner, K. Soundararajan, H. Stark, Endre Szemerédi, Terry Tao, John Tate, R. Taylor, N. Vatsal, A. Venkatesh, Sir A. Wiles, S.-T. Yau, S. Zelditch, Efim Zelmanov.

### *People who have spoken often*

**Visitors:** S. Lang (26 times), Kumar Murty (23), K. Rubin (15), R. Greenberg (10), M. Bhargava (9), J.-P. Serre (9), G. Stevens (9), C. Skinner (7), A. Pal (7), D. Hayes (6), B. Mazur (6), F. Pappalardi (6), G. Anderson (5), J. Friedlander(5), J. Pila(5), N. Vatsal (5), C. Popescu (4), J. Sonn (4), M. Waldschmidt (4),...

**Locals:** David Dummit (39 times, last time: 11 Jan 2001), Ram Murty (31), H. Kisilevsky (26), J. Sands (18), H. Darmon (17), E. Goren (13), A. Iovita (13), A. Granville (9), D. Dorman (8), C. David (6), J. Labute (6), R. Foote (5),...

## FALL 2010

- Sept. 9 **Jared Weinstein** (IAS), *Local Langlands and the tower of modular curves*  
**Cristian Popescu** (UCSD), *An Equivariant Main Conjecture and Applications*  
**Antonella Perucca** (EPFL Lausanne), *The order of the reduction of points on abelian varieties*
- Sept. 23 **Fabrizio Andreatta** (Milano), *p-adic modular forms via p-adic Hodge-Tate theory*  
**Kaisa Matomaki** (University of Turku, Finland), *Distinguishing cusp forms by looking at signs of their Fourier coefficients*
- Oct. 7 **Manjul Bhargava** (Princeton), *Orbits of group representations, and arithmetic applications (I)*  
**Manjul Bhargava** (Princeton), *Orbits of group representations, and arithmetic applications (II)*
- Oct. 21 **Xevi Guitart** (McGill, Barcelona), *L-series of building blocks*  
**Manjul Bhargava** (UPC Barcelona), *From quaternion orders to generalized reduced binary quadratic forms, through Shimura curves and CM points*
- Nov. 4 **Dmitris Koukoulopoulos** (CRM), *Generalized multiplication tables of integers*  
**Nicolas Templier** (Princeton), *On the sup-norm of automorphic forms*
- Nov. 9 **David Grant** (Boulder, Concordia), *Analytic theory of genus 2 curves*
- Nov. 18 **Bruce Berndt** (UIUC), *The circle and divisor problems, Bessel series, and twisted divisor sums*  
**Alex Kontorovich** (Stony Brook), *Sieving in groups*
- Dec. 2 **Kirsten Wickelgren** (Harvard), *Etale  $\pi_1$  obstructions to rational points*  
**Joseph Rabinoff** (Harvard), *Canonical subgroups for p-divisible groups*
- Dec. 16 **Andrew Granville** (U de M), *A pretentious approach to analytic number theory*  
**David Grant** (Boulder, Concordia), *Integral division points on curves*

## WINTER 2010

- Jan. 21 **Victor Rotger** (UPC Barcelona), *Stark-Heegner points and the vanishing of Selmer groups of elliptic curves over real quadratic fields.*  
**Aaron Levin** (IAS), *Towards Schmidts Theorem for Algebraic Points of Bounded Degree*
- Jan. 28 **Kumar Murty** (U. Toronto), *The field of Fourier coefficients of a modular form*  
**Kimberly Hopkins** (UT Austin), *Higher Weight Heegner Points*
- Feb. 11 **Felipe Voloch** (U. Texas at Austin), *Local-Global principles for affine curves*  
**Adam Logan** (Montreal), *The two faces of the Kummer surface*
- Feb. 22-26 CRM/Magma Conference on  $p$ -adic  $L$ -functions
- Mar. 8-12 CRM Workshop on Graphs and Arithmetic
- Mar. 18 **Michael Larsen** (Indiana U.), *The inverse Galois problem for Mordell-Weil modules*  
**M. Ram Murty** (Queen's University), *Transcendental values of modular forms*
- Mar. 22-26 CRM Workshop on Computer Methods for  $L$ -functions and Automorphic Forms
- Apr. 1 **Danny Neftin** (Technion), *On the minimal ramification problem for semiabelian groups*
- Apr. 12-16 CRM Conference on Computer Security and Cryptography
- Apr. 19-23 CRM Workshop on Counting Points – Theory, Algorithms and Practice
- Apr. 29 **J.-F. Mestre** (Université Paris 7), *Courbes de genre 3 avec un groupe d'automorphismes isomorphe à  $S_3$*
- May 6 **G. Ricotta** (Bordeaux), *Automorphic forms as functions on  $GL(n, R)$*

## FALL 2009

- Sept. 10 **Melanie Matchett Wood** (Stanford), *Spaces for Rings and Ideals*  
**Jack Sonn** (Haifa), *On the minimal ramification problem for nilpotent groups*  
**Andrew Yang** (Dartmouth), *Low-lying zeros of Dedekind zeta functions attached to cubic number fields*
- Sept. 24 **Ignazio Longhi** (Taipei), *Coleman power series and L-functions in characteristic p*  
**Tim Dokchitser** (Cambridge), *On the parity conjecture for elliptic curves*  
**Wansu Kim** (Cambridge), *Galois deformation theory for norm fields*
- Oct. 15 **Andrew Knightly** (Maine), *Relative trace formulas on  $GL(2)$*   
**Bryden Cais** (CICMA), *Hida families for  $GL(2)$  and p-adic Hodge theory*
- Oct. 22 **Ambrus Pál** (Imperial College London), *The Manin constant of elliptic curves over function fields*  
**Tom Tucker** (Rochester), *Dynamical Manin-Mumford, dynamical Mordell-Lang*
- Nov. 5 **Chris Skinner** (Princeton), *p-adic families of automorphic forms and their applications*  
**Vladimir Berkovich** (Weizmann Institute), *Integration of 1-forms on p-adic analytic spaces*  
**Glenn Stevens** (Boston U.), *p-Adic Variation of the Jacquet-Langlands Correspondence a Geometric Approach*
- Nov. 12 **Vladimir Berkovich** (Weizmann Institute), *Introduction to Analytic Spaces (I)*  
**Bill Casselman** (UBC), *The Fundamental Lemma for  $SL(2)$*   
**Vladimir Berkovich** (Weizmann Institute), *Introduction to non-Archimedean Analytic Spaces (II)*
- Nov. 19 **Emmanuel Kowalski** (IAS and Zurich)  
**Matilde Lalin** (Edmonton and Université de Montréal), *On higher Mahler measures*  
**Hedi Daboussi** (Laval and Paris-Sud)
- Dec. 3 **Xinyi Yuan** (Harvard), *A formulation of the Dynamical Manin-Mumford conjecture*  
**Ye Tian** (Chinese Academy), *An explicit form of Waldspurgers formula.*

## WINTER 2009

- Jan. 8 **Ameya Pitale** (Oklahoma) *L-functions for  $GSp(4) \times GL(2)$*   
**JeeHoon Park** (CICMA and McGill) *Iwasawa main conjecture for CM elliptic curves at supersingular primes*
- Jan. 9 **Ameya Pitale** (Oklahoma) *L-functions and special value results*
- Jan. 14 **Mike Zieve** (IAS) *Polynomial mappings*
- Jan. 15 **Mike Zieve** (IAS) *The intersection of subfields of  $K(x)$*
- Feb. 12 **Matthew Young** (Texas) *Quadratic and cubic twists of L-functions*
- Feb. 19 **Gerard Freixas** (CICMA) *Introduction to the arithmetic Riemann-Roch theorem, I*  
**Gerard Freixas** (CICMA) *Introduction to the arithmetic Riemann-Roch theorem, II*
- Mar. 5 **Chung Pang Mok** *Heegner points and p-adic L-functions for elliptic curves over totally real fields*  
**Eyal Goren** *Canonical subgroups over Hilbert modular varieties*
- Mar. 12 **Chantal David** (CICMA) *Statistics for the traces of cyclic trigonal curves over finite fields*  
**David Zywina** (UPenn) *Explicit Hilbert Irreducibility*
- Mar. 19 **Valentin Blomer** (Toronto) *Bounding sup-norms of cusp forms*  
**Masataka Chida** (Kyoto, visiting CICMA) *Selmer groups and central values of L-functions for modular forms*
- Mar. 26 **Florian Herzig** (Northwestern) *Weight Cycling and Serre-type Conjectures*  
**Bjorn Poonen** (MIT) *Existence of rational points on smooth projective varieties*
- Apr. 16 **Alexandru Buium** *Independence of modular points on elliptic curves*  
**Min-Lung Hsieh** (McMaster) *On the main conjectures for CM fields*
- Apr. 23 **Ling Long** (Iowa) *Noncongruence modular forms and modularity*  
**Gerard Freixas** (CICMA) *On the Riemann-Roch formula in Arakelov geometry and the Jacquet-Langlands correspondence*
- May 14 **Ben Howard** (Boston College) *Hirzebruch-Zagier divisors and CM cycles on Hilbert modular surfaces*  
**Andrea Miller** (Harvard) *On Murre's conjecture for mixed Kottwitz surfaces*
- May 21 **Igor Shparlinski** (Sydney) *Fermat quotients*  
**Bill Messing** (Minnesota) *Recent Progress in the Theory of Displays (d'apres Lau)*

## FALL 2008

- Aug. 26 **Helmut Koch** (Humboldt) *The correspondence of Leonhard Euler and Christian Goldbach*  
**Jack Sonn** (Technion) *Abelian extensions of global fields with all local degrees equal to  $n$  and the  $n$ -torsion subgroup of the Brauer group*
- Sept 18 **Adrian Vasiu** (Binghamton) *Integral canonical models of Shimura varieties of Hodge type*  
**Xander Faber** (CICMA) *The Arithmetic of Orbits for Quadratic Dynamical Systems*
- Oct 2 **Jonathan Pottharst** (Boston) *Selmer groups over eigenvarieties*  
**Zeev Rudnick** (Tel Aviv) *L-functions and their statistics over function fields*
- Oct 16 **Mike Rubinstein** (Waterloo) *Lower terms in the moments of L-functions*  
**Jordan Ellenberg** (Wisconsin) *Random matrices, random permutations, conjectures of arithmetic distribution over function fields, topology of Hurwitz spaces*
- Oct 30 **Kevin James** (Clemson) *Elliptic curves and the distribution of primes*  
**Soroosh Yazhdani** (McMaster) *Local Szpiro's Conjecture*
- Nov. 10 **Roman Holowinsky** (Toronto) *The Rudnick-Sarnak Conjectures*
- Nov. 13 **Yuri Bilu** (Bordeaux and ALGANT) *Galois representations and Runge's method*  
**Donghoon Park** (Brown) *1-motives with torsion and Cartier duality*
- Nov. 27 **Alina Bucur** (MIT) *Multiple Dirichlet series*  
**Laurent Fargues** (Orsay and Princeton) *Reduction Theory for  $p$ -Adic Moduli Spaces of Abelian Varieties and  $p$ -Divisible Groups*  
**Vinayak Vatsal** (UBC) *Theta functions after Waldspurger and Mumford*
- Nov. 28 **Kiran Kedlaya** (MIT)  *$p$ -adic differential equations*
- Dec. 4 **Jayce Getz** (IAS) *Relative trace formulae with a view towards unitary groups*  
**Matt Greenberg** (Calgary) *L-invariants of modular forms and completed cohomology of Shimura curves*
- Dec. 5 **Jayce Getz** (IAS) *Trace Formulae and Locally Symmetric Spaces*
- Dec. 9 **Mirela Ciperiani** (Columbia) *Genus one curves over the rationals*
- Dec. 10 **Cristian Virdol** (Columbia) *On zeta functions of twisted modular curves*

- Dec. 11 **Cristian Virdol** (Columbia) *On the Tate conjecture for quaternionic Shimura varieties*  
**John Voight** (UVM) *Computing automorphic forms on Shimura curves*
- Dec. 17 **Ritabrata Munshi** (Rutgers) *Rational Points on Surfaces*
- Dec. 18 **Ritabrata Munshi** (Rutgers) *Nonvanishing of L-functions*  
**Xander Faber** (CICMA) *Prime factors of dynamical sequences*

## WINTER 2008

- Jan. 10 **Adrian Vasiu** *Good reductions of abelian varieties over number fields*  
**Shahab Shahabi** (McGill) *p-adic deformations of Shintani cycles*
- Jan. 17 **Fabrizio Andreatta** (Milano) *Fontaine's crystalline conjecture revisited*
- Jan. 21 **Matthias Strauch** (Cambridge) *p-adic Galois representations and geometric constructions of Banach space representations*
- Jan. 24 **Romyar Sharifi** (McMaster) *Investigations in the arithmetic of cyclotomic fields and modular curves*  
**Byoung-Du Kim** *Iwasawa theory of elliptic curves for supersingular primes*  
**Capi Corrales** (Madrid) *On the group of units of an order in a non-split quaternion algebra*
- Feb. 7 **Hershy Kisilevsky** *Mordell-Weil groups over cyclic quintic extensions*  
**Henri Darmon** (McGill) *Modular points on elliptic curves and cycles on Shimura varieties*
- Feb. 21 **Fernando Rodriguez-Villegas** (Austin) *Mixed Hodge polynomials of character varieties*  
**Patrick Ingram** (Toronto) *Arithmetic questions about iterates of quadratic polynomials*
- Mar. 13 **Matilde Lalin** (University of Alberta) *Mahler measures and regulators*  
**Adrian Iovita** *Jacquet-Langlands correspondence for p-adic families of modular forms*
- Mar. 20 **Cristina Ballantine** (Holy Cross) *Biregular expanders and the Ramanujan Conjecture*  
**Brooke Feigon** (Toronto) *Averages of central L-values of Hilbert modular forms*
- Apr. 17 **Tonghai Yang** (Wisconsin) *Arithmetic Intersection and the Chowla-Selberg formula*  
**Cristian Popescu** (UCSD) *On the Coates-Sinnott Conjectures*  
**Karl Mahlburg** (MIT) *Asymptotics for partitions without sequences*
- May 8 **Abhinav Kumar** (MIT) *Kummer surfaces, Shioda-Inose Structures, and real multiplication*  
**Christophe Breuil** (IHES and Columbia) *Towards a modulo p Langlands correspondence for  $GL_2(F)$*
- May 27 **Ritabrata Munshi** (Rutgers) *Counting rational points on cubics and quartics*  
**Tong Liu** (Upenn) *A bound on ramification of pn-torsion semistable representations*
- May 28 **Gaetan Chenevier** (Paris) *Zariski density of modular points for  $U(3)$*   
**Brian Conrad** (Michigan) *Finiteness of class numbers over global function fields*



FALL 2007

- Sept 20 **Payman Kassaei** (London) *Canonical subgroups of abelian varieties*  
**Wee-Teck Gan** (UCSD) *The local Langlands conjecture for  $GSp(4)$*
- Sept 29-30 Quebec-Maine conference
- Oct 4 **Joel Bellaïche** (Columbia) *Non smooth classical point on eigenvarieties*  
**Matthew Greenberg** (MPI) *Stark-Heegner points for elliptic curves over totally real fields*  
**Igor Shparlinski** (Sydney) *Lang-Trotter and Sato-Tate conjectures on average*
- Oct 18 **Jeehoon Park** (CICMA) *The Eisenstein-Siegel distribution and p-adic zeta function of real quadratic fields*  
**Bryden Cais** (CICMA) *Integral structures on the de Rham cohomology of curves and abelian varieties*
- Nov. 1 **Akshay Venkatesh** (NYU) *Analytic number theory over function fields and related questions in geometry and topology*  
**Riad Masri** (CICMA) *Average values of Hecke L-functions via Galois suborbits of Heegner points*  
**Isabelle Déchène** (Ottawa) *Uses of generalized Jacobians in cryptography*
- Nov. 15 Conference in honor of John Labute
- Nov. 22 **Ben Green** (Cambridge) *Equidistribution of nilsequences*  
**Arnaud Chadozeau**  
**Masataka Chida** (Tohoku) *On the equivariant Tamagawa number conjecture for Hecke characters*
- Dec. 6 **John Voight** (Vermont) *Shimura curves of low genus and totally real fields of small root discriminant*  
**Bei Zhang** (Columbia) *Nonvanishing mod  $p$  of Eisenstein series*

## WINTER 2007

- Jan. 18 **Tom Weston** (UMass) *Deformation theory of modular Galois representations*  
**Michael Filaseta** (USC) *Applications of Padé approximants to number theory*
- Feb. 1 **Reinier Broker** (Calgary) *p-adic class invariants*  
**Robert Carls** (Sydney) *Higher dimensional p-adic CM construction*
- Feb. 15 **Nigel Boston** (Wisconsin) *Arboreal Galois representations*
- Mar. 1 **Christian Wuthrich** (CICMA)  
**Pierre Colmez** (Jussieu) *Sur la correspondance de Langlands locale p-adique pour  $GL_2(Q_p)$*
- Mar. 15 **Aaron Levin** (Brown) *Ideal Class Groups and Rational Torsion in Jacobians of Curves*  
**Sinnou David** (IAS) *Hauteurs sur les puissances de courbes elliptiques*  
**Clifton Cunningham** (Calgary) *Remarkable properties of some perverse sheaves on p-adic groups*  
**Lassina Dembele** (Calgary) *Explicit Jacquet-Langlands for  $GSp(4)$*
- Mar. 29 **Tamar Ziegler** (Michigan) TBA  
**Andrew Knightly** (Maine) *Asymptotics of Hilbert modular Hecke eigenvalues via relative trace formula*  
**David Lehavi** (Michigan) *Isogenies between Abelian surfaces*
- Apr. 12 **John Labute** (McGill) *FABulous pro-p-groups*  
**Stephen Kudla** (Toronto) *Arithmetic special cycles for unitary groups*
- Apr. 26 **Kartik Prasanna** (Maryland and CICMA) *Non-vanishing of L-series modulo p*  
**Paul Pollack** (Dartmouth) *Simultaneous Prime Values of Polynomials in Positive Characteristic*
- July 26 **Kartik Prasanna** (Maryland and CICMA) *Algebraic cycles and Rankin L-series*  
**Kartik Prasanna** *Algebraic cycles on modular varieties and rational points on elliptic curves*

## FALL 2006

- Sept 14 **Jean-Pierre Serre** (Collège de France) *Variations avec  $p$  du nombre de solutions mod  $p$  d'un système d'équations*  
**Ram Murty** (Queens and McGill) *Introduction to the Sato-Tate conjecture*
- Sept 28 **Igor Wigman** (Montreal) *The distribution of lattice points in thin elliptic annuli*  
**Kiran Kedlaya** (MIT) *Slope filtrations for relative Frobenius: prelude to a  $(\Phi, \Gamma)$ -module theory in families*
- Oct 12 **Jeehoon Park** (Boston University)  *$p$ -adic families of half-integral weight modular forms via overconvergent Shintani lifting*  
**Henry Kim** (Toronto) *Functoriality of symmetric powers of  $GL_2$*
- Oct 26 **Solomon Friedberg** (Boston College) *Multiple Dirichlet Series attached to Weyl groups*  
**Michael Harris** (Jussieu) *Automorphic forms on  $GL_n$  and unitary groups, and related Galois representations and Hecke algebras*  
**Ambrus Pàl** (London) *On a conjecture about the cohomology of arithmetic groups*
- Nov. 9 **Glenn Stevens** (BU) *Milnor  $K$ -groups and Eisenstein Cohomology*  
**Hugh Williams** (Calgary) *Principal ideal testing*
- Nov. 16 **Bart DeSmit** (Leiden) *Entangled radicals*  
**Mirela Ciperiani** (Columbia) *Solvable points on genus one curves*
- Nov. 30 **Richard Taylor** (Harvard) *An outline of the proof of the Sato-Tate conjecture*  
**Richard Taylor** (Harvard) *Proving modularity without Ihara's lemma*  
**Adriano Marmora** (Paris 13 and CICMA)  *$p$ -adic local constants*
- Dec. 14 **Bas Edixhoven** (Leiden) *On the computation of coefficients of a modular form*  
**Bas Edixhoven** (Leiden) *Height bounds, using Arakelov theory*

## WINTER 2006

- Jan. 12 **Florian Luca** (UNAM, Mexico) *On shifted products which are powers*  
**Bill Banks** (Missouri) *Palindromes*
- Jan. 19 **Adam Logan** (Liverpool) *Descent by Richelot isogeny on the Jacobians of plane quartics*  
**Habiba Kadiri** (Montreal) *Explicit zero-free regions for L-functions and applications*  
**Andrew Granville** (Montreal) *Character Sums*
- Jan. 26 **Jorge Jimenez Urroz** (Barcelona) *Almost prime orders of elliptic curves with CM modulo  $p$*   
**Francesco Pappalardi** (University of Rome 3) *On a problem of Schinzel and Wojcik involving equalities between multiplicative orders*  
**Andrew Booker** (Michigan) *Artin L-functions and automorphic forms*
- Jan. 27 **Kartik Prasanna** (UCLA) *Elliptic curves, quadratic twists and L-values*  
**Adrian Iovita** (Concordia) *On the arithmetic of elliptic curves*
- Feb. 2 **Ernie Croot** (Georgia Institute of Technology) *Arithmetic and Geometric Progressions in Thin Sets of Integers*  
**Greg Martin** (UBC) *How unfair are prime number races?*
- Feb. 9 **Boris Moroz** (Max-Planck-Institut) *On the integer points of affine toric varieties*  
**Nathan Jones** (CICMA) *Serre curves and averages of Lang-Trotter constants*
- Feb. 16 Workshop on L-functions
- Feb. 23 **Emmanuel Royer** (Montpellier) *Quasimodular forms and applications*  
**Mark Watkins** (Bristol) *Symmetric power L-functions of elliptic curves*
- Mar. 2 **Guillaume Ricotta** (Bordeaux) *Asymptotic height of Heegner points*  
**Mark Coleman** (Manchester) *A Localised Bombieri-Vinogradov Theorem in Imaginary quadratic fields*
- Mar. 9 **Peng Gao** (Michigan)  *$N$ -level density of the low-lying zeros of quadratic Dirichlet L-functions*  
**Nathan Ng** (Ottawa) *Discrete Moments of the Riemann zeta function*
- Mar. 16 Workshop on Anatomy of Integers
- Mar. 23 **Antal Balog** (Renyi Institute) *Around the Balog-Szemerédi Theorem*  
**Javier Cilleruelo** (UAM, Madrid) *An overlapping theorem with applications*

- Apr. 20 **Jean-Marc Deshouillers** (Bordeaux) *Large subsets of  $\mathbb{Z}/p\mathbb{Z}$ , the subset-sums of which do not cover  $\mathbb{Z}/p\mathbb{Z}$*   
**John Friedlander** (Toronto) *Re-shaping negative impressions, from Judas to Siegel's zero*  
**Andrew Granville** (Montreal) *Multiplicative functions in arithmetic progressions*
- Apr. 27 **Manjul Bhargava** (Princeton) *Lecture I: An overview of Gauss composition and its generalizations*  
**Manjul Bhargava** (Princeton) *Lecture II: The parametrization of rings of low rank*
- May 2 **Manjul Bhargava** (Princeton) *Lecture III: Counting field extensions of the rational numbers*
- May 4 **Manjul Bhargava** (Princeton) *Lecture IV: Mass formulae for local fields, and global heuristics*  
**Anirban Mukhopadhyay** (Harish Chandra Research Institute) *Gap between critical zeros of Epstein zeta function*
- June 14 **Allison Pacelli** (Williams College) *Class groups with high  $n$ -rank*

## FALL 2005

- Sept 2 **Haruzo Hida** (UCLA) *Lambda-adic  $p$ -divisible groups over  $\mathbb{Q}$*   
**Elena Mantovan** (CalTech) *Admissible  $p$ -adic representations of  $GL_2(\mathbb{Q}_p)$*
- Sept 8 **Haruzo Hida** (UCLA) *Lambda-adic  $p$ -divisible groups (II) over  $\mathbb{Q}$*   
**P. Schneider** (Munster) *Admissible  $p$ -adic representations of  $GL_2(\mathbb{Q}_p)$  (study group)*
- Sept 22 **Pierre Colmez** (Paris VI) *Trianguline representations and refinements*  
**Peter Schneider** (Munster) *The Jacquet functor*
- Sept 29 **Pierre Colmez** (Paris)  *$GL_2(\mathbb{Q}_p)$ -representations attached to trianguline Galois representations*  
**Adrian Iovita** (Concordia) *Local-Global compatibility in the  $p$ -adic Langlands program*
- Oct 13 **Song Wang** (Vermont) *Dimension Data, Local and Global Conjugacy*  
**Pierre Colmez** (Paris)  *$GL_2(\mathbb{Q}_p)$ -representations attached to trianguline Galois representations II*
- Oct 20 **Alexei Skorobogatov** (Imperial College) *Rational points on certain Kummer surfaces* (joint work with Peter Swinnerton-Dyer)  
**Ronald Van Luijk** (CRM) *Explicit examples of generic K3 surfaces with infinitely many rational points*
- Oct 27 **Emrah Cakcak** (Laval) *Subfields of the function field of the Deligne-Lusztig-Ree curve and their number of rational places*  
**Maria Sabitova** (CRM and CICMA) *Root numbers of abelian varieties*
- Nov 1-3 Grass-roots workshop on the Stark conjectures
- Nov. 10 **Lin Weng** *Non-abelian  $L$ -functions*  
**Jacques Tilouine** (Paris-Nord) *Galois representations and modular forms of low weight*  
**Maria Sabitova** (CICMA) *The orbit method for  $p$ -groups and pro- $p$  groups*
- Nov. 17 **Jean-Pierre Serre** (Collège de France) *Bounds for the orders of the finite subgroups of  $G(k)$*   
**Jean-Pierre Serre** (Collège de France) *Bornes pour les ordres des sous-groupes finis de  $G(k)$  (suite)*
- Nov. 24 **Yoshitaka Hachimori** (CICMA) *A survey on the main conjecture in noncommutative Iwasawa Theory*  
**Ye Tian** (CICMA) *Heegner points over False Tate curve extensions*  
**Eknath Ghate** (Cornell) *Local splitting of ordinary Galois representations*

- Dec. 1 **Adebisi Agboola** (UCSB) *Assorted conjectures and results on Rubin's variant of the Birch and Swinnerton-Dyer conjecture for elliptic curves with complex multiplication, with special attention to elliptic curves of analytic rank zero*  
**Gonzalo Tornaria** (CICMA) *Brandt modules, Shimura correspondence, and the central values of twisted  $L$ -series*
- Dec. 8 **Matteo Longo** *On the Birch and Swinnerton-Dyer conjecture over totally real fields*  
**Vicentiu Pasol** *Weil representations and the Eisenstein distribution*
- Dec. 29 **Adrian Iovita** *The  $p$ -adic Langlands program: some New Year predictions*  
**Adrian Iovita** *The  $p$ -adic Langlands program: some New Year predictions (II)*

## WINTER 2005

- Jan. 6 **John Labute** (McGill) *Galois Groups of  $p$ -Extensions  $Q$  With Restricted Ramification*  
**Eyal Goren** (McGill) *Progress on the problem of constructing higher analogues of elliptic units*
- Jan. 20 **Romyar Sharifi** (McMaster) *Cup products, Iwasawa theory, and the Eisenstein ideal*  
**Alexandru Ghitza** (CICMA) *Weight 1 weirdness*  
**Jonathan Pila** (McGill) *Density of rational points*
- Feb. 3 **Wenzhi Luo** (Ohio State) *Nonvanishing theorems for automorphic  $L$ -functions on  $GL(n)$*   
**Damien Roy** (University of Ottawa) *Diophantine approximation in small degree*  
**Andrew Granville** (Universite de Montreal) *The Polya-Vinogradov Theorem revisited*
- Feb. 17 **David McKinnon** (Waterloo) *Rational approximation of rational points on varieties*  
**Denis Thérien** (McGill) *Number-theoretic issues in boolean circuit complexity*
- Mar. 3 **Farshid Hajir** (Amherst) *Finitely Ramified Iterated Monodromy Representations*  
**Jason Lucier** (Waterloo) *Differences of integers*
- Mar. 17 **Alexandru Popa** (Princeton) *Closed geodesics on modular curves and special values of  $L$ -series*  
**Jorge Devoto** (Buenos Aires) *An introduction to elliptic cohomology and  $K3$  cohomology*  
**Nora Ganter** (Urbana-Champaign) *Introduction to equivariant elliptic cohomology*
- Mar. 31 **Ali Ozluk** (University of Maine) *One-Level Density Conjecture for Quadratic Dirichlet  $L$ -functions*  
**Pierre Charollois** (Bordeaux) *Stark units and periods of Hilbert modular forms*
- Apr. 7 **John Cremona** (Nottingham) *Finding all elliptic curves with good reduction outside a given set of primes*  
**Gergely Harcos** (University of Texas) *A Burgess-like subconvex bound for twisted  $L$ -functions*  
**Nyandwi Servat** (Université de Tunis El Manar) *Moyenne de la fonction de Piltz sur les entiers sans grand facteur premier*
- Apr. 21 **David Savitt** (CICMA) *The level 1 case of Serre's conjecture (after Khare and Khare-Wintenberger) I*  
**David Savitt** (CICMA) *The level 1 case of Serre's conjecture (after Khare and Khare-Wintenberger) II*



- May 5 **R. Sujatha** (Tata Institute) *Iwasawa theory over  $p$ -adic Lie extensions*  
**Peter Clark** (CICMA) *Arithmetic of algebraic curves with Galois Belyi maps*  
**John Coates** (Cambridge) *Iwasawa Theory for the False Tate Curve Extension*
- May 26 **Gregory Freiman** (Tel Aviv)

## FALL 2004

- Sept 16 **Dino Lorenzini** (University of Georgia) *Some consequences of a theorem of M. Raynaud*  
**Kartik Prasanna** (UCLA) *Arithmetic properties of the theta correspondence and periods of modular forms*  
**Chantal David** (Concordia) *Vanishing of L-functions and Random Matrix Theory*
- Sept 23 **Haruzo Hida** (UCLA) *The integral basis problem of Eichler*  
**Ye Tian** (CICMA) *Euler systems of CM points over totally real fields*
- Oct 7 **Jean-Louis Colliot-Thelene** (Paris-Sud) *Points rationnels et zéro-cycles sur les groupes linéaires*  
**Harald Helfgott** (CICMA) *On the number of elliptic curves of a given conductor*
- Oct 14 **Payman Kassaei** (CICMA) *On classicality of overconvergent modular forms*  
**Marvin Knopp** (Temple University) *Vector Valued Modular Forms*
- Oct 28 **Guillaume Ricotta** (CICMA) *Real zeros and size of Rankin-Selberg L-functions in the level aspect*  
**Yoshikata Hachimori** (CICMA) *On Iwasawa theory for p-adic Lie extensions*
- Nov. 11 **Akshay Venkatesh** (NYU/CMI) *Equidistribution and subconvexity*  
**Manfred Einsiedler** (Universitat Wien and Princeton) *Applying measure rigidity for the Cartan action, Littlewood's conjecture and more*  
**Peter Clark** (CICMA) *Bounds for torsion on anisotropic abelian varieties*
- Dec. 9 **Mark Kisin** (Chicago) *F-crystals and crystalline representations*  
**Jordan Ellenberg** (Wisconsin) *Descent bounds for rational points on some curves and higher-dimensional varieties*  
**Gabor Kun** (Eotvos University, Budapest) *On the prime values of reducible polynomials*

## WINTER 2004

- Jan. 8 **Jean-Francois Mestre** (Université Paris 7) *Relèvements d'extensions galoisiennes*  
**Peter Clark** (CICMA) *The period-index problem and its applications to horizontal growth of the Shafarevich-Tate group*  
**Sandor Kovacs** (Washington) *Nowhere vanishing one-forms and Kodaira dimension*
- Jan. 22 **Harold Stark** (UCSD) *Class numbers and Siegel zeroes*  
**Carl Pomerance** (Dartmouth College) *Primality testing after Agrawal, Kayal and Saxena*  
**Henri Darmon** (McGill) *Hida families and rational points on elliptic curves*
- Feb. 5 **Cam Stewart** (Waterloo) *Irregularities of distribution and pseudorandom sequences*  
**Peter Schneider** (Muenster University / University of Chicago) *Duality for locally analytic representations*  
**Igor Shparlinski** (Macquarie University) *Prime divisors of shifted factorials*
- Feb. 19 **Greg Martin** (UBC) *The Mobius function to the rescue*  
**David Savitt** (CICMA) *A conjecture of Conrad, Diamond, and Taylor*
- Mar. 4 **Kiran Kedlaya** (MIT) *Monodromy of families of  $p$ -adic differential equations*  
**Scott Ahlgren** (Urbana) *Coefficients of half-integral weight modular forms modulo prime powers*  
**June Zhu** (McMaster) *Limit behavior for Zeta-functions of generic Artin-Schreier curves*
- Mar. 18 **Ben Green** (Cambridge) *The restriction phenomenon in number theory*  
**Michael Bennett** (UBC) *Powers in Recurrence Sequences*
- Apr. 1 **Alan Lauder** (Oxford) *Rigid cohomology and  $p$ -adic point counting*  
**Nike Vatsal** (UBC) *Local behaviour of ordinary representations*  
**Eyal Goren** (McGill) *Class invariants and units for quartic CM fields*
- Apr. 8 **Lucien Szpiro** (CUNY) *Mahler measure for dynamical systems*  
**Eric Urban** (Columbia) *The Eigenvariety for reductive groups  $G$  having discrete series*  
**Keith Conrad** (Connecticut) *Variation of Root Numbers*
- Apr. 15 **Gordan Savin** (Utah) *What is a minimal representation?*  
**Fernando Rodrigues Villegas** (Texas) *On the  $E$ -polynomial of a certain character variety*  
**Robert Osburn** (Queens) *Congruences for traces of singular moduli*
- Apr. 29 **Mei-Chu Chang** (UC Riverside) *On sum and product sets*  
**Chandrashekhara Khare** (Utah) *Limits of  $p$ -adic Galois representations*

## FALL 2003

- Sept 11 **Adrian Iovita** (Concordia University) *Anticyclotomic Main Conjecture for supersingular elliptic curves*  
**Jonathan Sands** (University of Vermont) *Popescu's conjecture in multi-quadratic extensions of number fields*  
**Norbert Schlomiuck** (Université de Montréal) *Remembering André Weil*
- Sept 25 **Kannan Soundararajan** (University of Michigan) *Large values of trigonometric series*  
**Valentin Blomer** (University of Toronto and Stuttgart University) *On sums of squareful numbers*  
**Jonathan Pila** (McGill University) *Some diophantine geometry of subanalytic sets*
- Oct 9 **Christopher Hughes** (American Institute of Mathematics) *Moments of the Riemann zeta function*  
**Elena Montavan** (Berkeley) *On certain PEL type Shimura varieties*
- Oct 23 **Fabrizio Andreatta** (University of Padova) *Hensel's lemma for torsors and applications to the canonical subgroup*  
**Alexandru Ghitza** (CICMA) *Siegel modular forms (mod  $p$ ) and algebraic modular forms*
- Oct 27 **John Conway** (von Neumann Professor, Princeton University) *Discrete groups and the Monster - and more*
- Nov. 6 **Habiba Kadiri** (CICMA) *Zero-free regions for the Dirichlet  $L$ -functions*  
**Gary Walsh** (University of Ottawa) *On the arithmetical structure of terms in Lucas sequences*
- Nov. 20 **Stéphane Fischler** (Ecole Normale Supérieure) *Interpolation on algebraic groups*  
**Payman Kassaei** (CICMA) *Families of modular forms on Shimura curves*  
**Jack Sonn** (Technion) *Abelian extensions of number fields with constant local degrees*
- Dec. 4 **Gil Alon** (CICMA) *Calculations on the cohomology of  $p$ -adic symmetric spaces and their associated buildings*  
**Ambrus Pal** (CICMA) *On the torsion of the Mordell-Weil group of Drinfeld modular curves*

## WINTER 2003

- Jan. 16 **Andrew Granville** (Université de Montréal) *Residue Races, and misleading things that arithmetic geometers say*  
**Adrian Iovita** (Concordia) *p-adic families of exponential maps*
- Jan. 30 **Andrew Booker** (Princeton) *Converse theorems and Artin's conjecture*  
**Ben Howard** (Harvard) *Anticyclotomic Iwasawa theory of elliptic curves*  
**Henri Darmon** (McGill) *Elliptic curves of large rank over function fields*
- Feb. 13 **Christopher Skinner** (Michigan) *p-adic L-functions and anticyclotomic main conjectures for unitary groups*  
**Tonghai Yang** (Madison) *On CM abelian varieties over an imaginary quadratic field*  
**Matthias Beck** *Dedekind sums: a geometric viewpoint*
- Feb. 20 **Jonathan Pila** (IAS and University of Melbourne) *Density of integer and rational points on curves and surfaces*  
**David Cox** (Amherst) *Why Eisenstein proved the Eisenstein Criterion and why Schnemann proved it first*  
**Andrew Granville** (Université de Montréal) *The ABC's of Goldbach*
- Feb. 21 **Jonathan Pila** (IAS and University of Melbourne) *Algorithms with curves over finite fields*
- Mar. 6 **Preda Mihailescu** *Zooming into Catalan's conjecture*  
**Preda Mihailescu** *Zooming into Catalan's conjecture*  
**Ambrus Pál** (CICMA) *Regulators and reciprocity laws on curves*
- Mar. 13 **Gebhard Boeckle** (ETH) *An Eichler-Shimura type isomorphism for Drinfeld modular forms*  
**Serge Lang** (Yale) *Spherical inversion on totally geodesic embeddings*  
**Hershy Kisilevsky** (CICMA) *Ranks of Weil curves over cyclotomic fields*
- Mar. 20 **Kristin Lauter** (Microsoft) *Complex multiplication methods for generating curves over finite fields*
- Mar. 27 **Bo-Hae Im** (Indiana) *The rank of elliptic curves over large fields*  
**Robert Pollack** (Chicago) *A missing p-adic L-function*  
**Samit Dasgupta** (Berkeley) *Elliptic units and real quadratic fields*
- Apr. 10 **Michael Rubinstein** (AIM) *Algorithms and computations in analytic number theory*  
**Andras Biro** (Hungarian Academy) *On the class number one problem for special real quadratic fields*  
**Andrew Archibald** (CICMA) *Intersection theory on surfaces – A talk for number theorists*

- Apr. 24 **Oliver Bultel** (Heidelberg) *L-adic monodromy of abelian varieties in characteristic  $p$ ,*  
**Ron Livné** (Hebrew University) *Higher dimensional analogs of Ramanujan graphs and Hilbert Modular Forms*  
**Yuri Matiyasevich** (Steklov Institute) *Hilbert's Tenth Problem Today: Main Results and Open Problems*
- May 15 **Tom Tucker** (Rochester) *TBA*  
**Alexander Brown** (Claremont) *The endomorphism algebras of modular motives*  
**Ram Murty** (Queens) *An Application of Mumford's Gap Principle*

## FALL 2002

- Sept 19 **Mak Trifkovic** (CICMA) *On  $\mu$ -Invariants of Elliptic Curves over  $\mathbb{Q}$*   
**Brian Conrad** (Michigan) *Descent theory in non-archimedean geometry*
- Oct 10 **Frauke Bleher** (Iowa) *Deformations of complexes and applications*  
**Nathan Ng** (CICMA) *Moments of the Riemann zeta function*
- Oct 16 **Alexandru Ghitza** (MIT) *Hecke eigenvalues of Siegel modular forms (mod  $p$ )*
- Oct 17 **Hui Xue** (IAS) *Central values for Rankin  $L$ -functions*  
**Stephen Kudla** (University of Maryland) *An arithmetic theta function*  
**Jànos Kollàr** (Princeton) *Rational varieties over finite fields*
- Oct 25 **Michael Larsen** (University of Indiana) *Irrationality of motivic zeta-functions*
- Oct 31 **Robert Sczech** (Rutgers Newark) *A refinement of Stark's conjecture over complex cubic number fields*  
**Ambrus Pal** (CICMA) *Rigid analytical class number formula for  $K_2$  of Drinfeld modular curves*
- Nov. 14 **Fred Diamond** (Brandeis) *Serre weights and nuclear families of Hilbert modular forms*  
**Kevin Buzzard** (Imperial College and Harvard)  
**John Friedlander** (Toronto) *Uniform Distribution, Large Periods and Cryptography*
- Nov. 19 **Ernst Gekeler** (Saarbrücken) *Frobenius distributions of elliptic curves over finite prime fields*
- Nov. 21 **Ram Murty** (Queens) *Ramanujan Graphs*
- Nov. 28 **Alina Carmen Cojocaru** (UIUC) *Elliptic curves mod  $p$*   
**Lev Borisov** (Wisconsin) *Elliptic functions and equations of modular curves*
- Dec. 5 **Adam Logan** (CICMA) *Calculating Stark-Heegner points attached to periods of Hilbert modular forms*  
**Amod Agashe** (Austin) *The Birch and Swinnerton-Dyer conjectural formula for modular abelian varieties*
- Dec. 12 **Matt Baker** (Georgia) *TBA*  
**Matt Papanikolas** (Brown) *Extensions of elliptic curves over number fields*

## WINTER 2002

- Jan. 17 **D. Marshall** (McMaster) *Some relationship between Galois group and Iwasawa module structures*  
**R. Sreekantan** (Tata Inst.) *Analog of circular units for products of elliptic curves*
- Jan. 24 **Izabella Laba** (UBC) *On finite sets that tile the integers*
- Jan. 31 **J. Fleen** (UVM) *The image size of rational maps over finite fields*  
**B. Gross** (Harvard) *Automorphisms of even unimodular lattices*
- Feb. 14 **C. Greither** *Recent work on the Brumer-Stark conjecture in extensions of specified degree*  
**L. Berger** (Brandeis) *Limits of crystalline representations*
- Mar. 14 **S. Ahlgren** (UIUC) *Weierstrass points on modular curves and supersingular  $j$ -invariants*  
**A. Saikia** (CICMA) *Selmer groups of elliptic curves with complex multiplication*
- Mar. 21 **S. Lang** (Yale) *On the Bateman-Horn conjecture*  
**E. Goren** (McGill) *Local models and displays*
- Mar. 28 **K. Consani** (Toronto) *Arithmetic on a quintic threefold*  
**J. McKay** (Concordia) *Some light on Moonshine?*
- Apr. 11 **M. Spies** (Nottingham) *Logarithmic differential forms on  $p$ -adic symmetric spaces*  
**G. Shimura** (Princeton) *The relative regulator of an algebraic extension*
- Apr. 25 **M. Bhargava** (Princeton) *Higher composition laws and applications to number fields*  
**L. Smithline** (Cornell) *Compact Operators with Rational Generating Functions*



## FALL 2001

- Aug. 16 **Rachel Pries** (Columbia) *Rigidity, Reduction and Ramification*
- Aug. 23 **Abdelmejid Bayad** (Evry) *Weierstrass units and Euler Systems*
- Sept 6 **I. Vardi** (IHES) *Leading digits, lattice points and algebraic numbers*  
**I. Vardi** (IHES) *Leading digits, lattice points and algebraic numbers*
- Sept 13 **A. Prasad** (Concordia, McGill & CRM) *On Automorphic Forms for Split Semi-simple Groups on  $F_q(t)$*   
**A. Iovita** (U. Washington) *Explicit description of the  $p$ -adic local Galois representations attached to modular forms*
- Sept 20 **Alina Cojocaru** (Queens) *Elliptic curves modulo  $p$*   
**B. Moonen** (Amsterdam) *Serre-Tate theory for PEL moduli spaces*
- Oct 4 **D. Savitt** (Concordia, McGill & CICMA) *Modularity of some potentially Barsotti-Tate Galois representations*  
**M. Reid** (U. Mass) *Gross' conjecture, the local Stark conjecture and congruences*
- Oct 18 **Ambrus Pal** (Concordia, McGill & CICMA) *Heegner Cycles on Drinfeld Modular Varieties*  
**V. Vatsal** (UBC) *Distribution of Heegner Points*
- Nov. 1 **S. Wong** (U. Mass) *On the Neron-Severi Group of Fibered Varieties*  
**A. Tupan** (Concordia, McGill & CICMA) *Periodicity properties for blocks of coefficients of half integral weight modular forms*
- Nov. 15 **Fernando Rodriguez-Villegas** (Austin, Texas & Harvard) *Periods,  $L$ -functions and Knots*  
**Brian Conrey** (AIM)  *$L$ -functions and random matrix theory*
- Nov. 16 **Peter Stevenhagen** (Leiden) *Class invariants using Shimura's reciprocity law*
- Nov. 29 **Natalia Archinard** (Concordia, McGill & CICMA) *Algebraic values of hypergeometric series*  
**Dorian Goldfeld** (Columbia U) *Residues of Eisenstein series twisted by modular symbols*
- Dec. 6 **Damien Roy** (U. Ottawa) *Duality and simultaneous algebraic approximation*  
**J. Fearnley** (Concordia) *Dirichlet twists of modular  $L$ -functions*

## WINTER 2001

- Jan. 11 **M. Baker** (Harvard) *Automorphisms of Modular Curves*  
**Y. Petridis** (McGill) *Subconvexity results for L-functions and quantum unique ergodicity*  
**D. Dummit** (U Vermont) *Bicolored Steiner triple systems and a CM elliptic curve*
- Jan. 25 **R. Pries** (Columbia) *Deformations of wildly ramified covers of curves*  
**K. Murty** (Toronto) *Splitting of primes in infinite extensions*
- Feb. 15 **C.-F. Yu** (Columbia) *On the supersingular locus of Hilbert-Blumenthal varieties*  
**M. Emerton** (Chicago) *Towards a notion of p-adic automorphic representation*
- Mar. 1 **W. Duke** (UCLA) *Remarks on division fields of elliptic curves*  
**K. Ono** (Wisconsin) *The arithmetic of Borchers products and p-adic modular forms*
- Mar. 15 **S. Lang** (Yale) *Quasi-algebraic closure and rational points on Fano varieties*  
**R. Murty** (Queen's) *Pair correlation, Chebotarev and Lang-Trotter*
- Mar. 29 **M. Bhargava** (Princeton) *The representation of integers by quadratic forms*  
**Shou-Wu Zhang** (Columbia) *Gross-Zagier formula for  $GL(2)$*
- Apr. 12 **D. Thakur** (Arizona) *Patterns in finite characteristic numbers*  
**J. Ellenberg** (Princeton) *Galois representations to  $GL(2, F_9)$*
- Apr. 19 **P. Cassou-Nogues** (Bordeaux) *Quadratic forms attached to a tame covering of schemes*  
**E. Goren** (McGill) *Hilbert modular forms: Theta, U, V and filtration*
- Apr. 26 **H. Darmon** (McGill) *Elliptic curves and class fields*  
**J. Coates** (Cambridge) *Iwasawa theory of elliptic curves*
- May 10 **C. Stewart** (McGill) *Universal deformations, rigidity and Ihara's cocycle*  
**K. Srinivas** (Queen's) *On the uniform distribution of certain sequences*  
**K. Chakraborty** (Queen's) *Exponent of the class groups of cyclic cubic fields*
- May 17 **B. Mazur** (Harvard) *A question of signs in the anti-cyclotomic arithmetic of elliptic curves Quebec-Wide graduate students conference*  
**M. Waldschmidt** (Jussieu) *Algebraic relations between multiple zeta values*

## FALL 2000

- Sept 7 **D. Dummit** (U Vermont) *Introduction to the Fontaine-Mazur conjecture - I: The Serre Conjecture*  
**H. Darmon** (McGill) *Introduction to the Fontaine-Mazur conjecture - II: Overview of Taylor's paper*  
**F. Pappalardi** (Rome II), *Enumerating permutation polynomials*
- Sept 28 **I. Bouw** (U. Penn), *Modular curves and reduction of covers*  
**H. Darmon** (McGill) *Introduction to the Fontaine-Mazur conjecture - III: Overview of Taylor's paper*  
**E. Goren** (McGill) *Introduction to the Fontaine-Mazur conjecture - IV: Approximation theorems*
- Oct 12 **F. Gouvea** (Colby college) (TBC), *Where the Slopes Are*  
**D. Grant** (U. Colorado), *Singular Torsion on Elliptic Curves*  
**J. Silverman** (Brown), *Canonical Heights and Lehmer's Conjecture: Classical, Elliptic and Dynamical*
- Oct 26 **A. Ash** (Boston College), *An  $n$ -dimensional generalization of Serre's conjecture*  
**J. Friedlander** (Toronto), *Class group  $L$ -functions, amplification, and Kloosterman fractions*
- Nov. 9 **C. Popescu** (John Hopkins), *Stark's question for  $L$ -functions of order of vanishing 2 at  $s=0$  and a strong form of Brumer's Conjecture*  
**R. Jardine** (U Western Ontario), *Stacks and Transfers*
- Nov. 16 **W. Stein**, *Visibility of Shafarevich Tate groups*  
**B. Conrad**, *Breuil modules with examples I*
- Nov. 30 **E. Goren** (McGill) *Introduction to the Fontaine-Mazur conjecture - Part V: Approximation*  
**H. Kisilevsky** (Concordia) *Introduction to the Fontaine-Mazur conjecture - Part VI: Analytic continuation and functional equations of  $L$ -functions*  
**A. Rajeai** (CICMA), *Introduction to the Fontaine-Mazur conjecture - Part VII: Associating Galois representations to modular forms*
- Dec. 7 **J. Achter**, *Counting Hilbert-Blumenthal abelian varieties*  
**A. Sikora** (CRM & UQAM), *Towards unification of number theory and 3-dimensional topology*

## WINTER 2000

- Jan. 6 **R. Ramakrishna** (Cornell) *Deforming global Galois representations*  
**B. Gross** (Harvard), *Cubic fields and the construction of lattices*
- Jan. 20 **A. Akbary** (Concordia) *Descending rational points on elliptic curves to smaller fields*  
**E. Goren** (McGill) *Hilbert modular forms modulo  $p$  and applications*
- Feb. 3 **A. Pal** (Columbia) *Drinfeld modular curves, Heegner points and interpolation of special values*  
**D. Abramovich** (Boston U) *Factorization of birational maps*
- Feb. 17 **P. Gunnells** (Columbia) *Modular forms, toric varieties, and non vanishing of  $L$  functions*  
**V. Vatsal** (UBC), *Supersingular points and special values*
- Mar. 2 **A. Agboola** (Santa-Barbara) *Arithmetic class invariants*  
**Fabrizio Andreatta** (Utrecht & MIT) *Neron models of Jacobians of stable curves*
- Mar. 16 **Y. Varshavsky** (Toronto) *On the characterization of complex Shimura varieties*  
**S. Lang** (Yale), *Spectral parabolic induction on  $SL_n$*
- Mar. 30 **Ralph Greenberg** (U. Washington) *The Iwasawa invariants for elliptic curves*  
**E. Kani** (Queen's) *Equivariant Atkin-Lehner theory on  $X(N)$*
- Apr. 13 **H. Koch** (Berlin) *The theorem of Shafarevich in the theory of class formations*  
**M. Kolster** (McMaster) *Special values of zeta functions*
- Apr. 19 **M. Kolster** *The Lichtenbaum conjecture; The  $K$ -theory of  $Z$  and some classical conjectures in number theory*  
**R. Murty** (Queen's) *ABC and prime divisors of Lucas sequences*

## FALL 1999

- Sept 9 **Nikolaos Diamantis** (McMaster), *Period polynomials and derivatives of L-functions*  
**F. Diamond** (Brandeis), *Modularity of Elliptic Curves*
- Sept 23 **Masato Kuwata** (Caen), *Quadratic twists of an elliptic curve and hyperelliptic curves with split Jacobian*  
**Peter Schneider** (Muenster), *p-adic boundary values*
- Oct 7 **Catherine O'Neil** (MIT), *Curves of genus one and their Jacobians*  
**Srinath Baba** (Queen's), *Shimura curve quotients and the Cassels-Tate pairing*
- Oct 21 **Jeremy Teitelbaum** (U. Illinois at Chicago), *p-adic distributions and continuous p-adic representations*  
**C. Skinner** (IAS), *Base Change and a Problem of Serre*
- Nov. 4 **L. Lafforgue** (Paris sud), *The Langlands conjecture for  $GL_n$  over function fields*  
**H. Darmon** (McGill), *Uniformization by  $H \times H_p$  and rational points on elliptic curves*
- Nov. 18 **R. Schoof** (Universita' di Roma, Tor Vergata), *Abelian varieties over real quadratic fields with good reduction everywhere*  
**H. Farkas** (Hebrew U.), *A problem in combinatorial number theory (the mysterious sevens)*
- Dec. 2 **A. Rajaei** (CICMA), *Hilbert Modular Forms Modulo  $l$*   
**Imin Chen** (CICMA), *Explicit description of some jacobian relations*

## WINTER 1999

- Jan. 7 **Imin Chen**, (CICMA), *Mini-course: Modular Forms and Modular Curves I*  
**Saar David Hersonsky**, (Caltech), *Diophantine approximation and hyperbolic geometry*
- Jan. 14 **Imin Chen**, (CICMA), *Mini-course: Modular Forms and Modular Curves III*  
**Katia Consani**, (MIT), *Algebraic cycles and arithmetic on degenerations*
- Jan. 21 **Andreas Schweizer**, (CICMA), *Mini-course: Automorphic Forms over Function Fields I*  
**Jeff Achter**, (University of Massachusetts), *Hilbert-Siegel moduli spaces in positive characteristic*
- Jan. 28 **Andreas Schweizer**, (CICMA), *Mini-course: Automorphic Forms over Function Fields III*  
**Adrian Iovita**, (University of Washington), *The  $p$ -adic Abel-Jacobi map and  $p$ -adic  $L$ -functions of modular forms*
- Feb. 4 **Adrian Iovita**, (University of Washington), *Mini-course: Topics in  $p$ -adic Galois Representations I*  
**Neal Koblitz**, (University of Washington), *Description and Analysis of Joseph Silverman's Attack on the Elliptic Curve Discrete Logarithm Problem*
- Feb. 11 **Adrian Iovita**, (University of Washington), *Mini-course: Topics in  $p$ -adic Galois Representations III*  
**Francesco Pappalardi**, (University of Rome III), *On binary Egyptian fractions*
- Feb. 18 **Eyal Goren**, (CICMA), *Mini-course: Hilbert Modular Varieties I*  
**Eyal Goren**, (CICMA), *Mini-course: Hilbert Modular Varieties II*
- Mar. 4 **Andrew Granville**, (University of Georgia), *Mini-course: The spectrum of multiplicative values I*  
**Bill Banks**, (University of Missouri), *Some expressions for the values of the Riemann zeta function at odd positive integers*
- Mar. 11 **Daniel Lieman**, (University of Missouri), *Bounds on exponential sums and applications to cryptography*  
**Alexandru Zaharescu**, (CICMA), *Trace on  $C_p$ , generating degrees and  $p$ -adic  $L$ -functions*
- Mar. 18 **Jean-Francois Mestre**, (Université de Paris VII), *Mini-course: Polynomial Constructions, Galois Theory and Elliptic Curves I*  
**Serge Lang**, (Yale University), *Spherical Transforms, (Harish-Chandra Inversion & the Heat Kernel)*

- Mar. 25 **Jean-Francois Mestre**, (Université de Paris VII), *Mini-course: Polynomial Constructions, Galois Theory and Elliptic Curves III*  
**Jorge Morales**, (Louisiana State University), *On the Hasse-Witt invariant of the Killing form*
- Apr. 8 **Johan de Jong**, (MIT), *Stratification by Newton Polygon*  
**Eyal Goren**, (CICMA), *Cobordism and modular forms*
- Apr. 15 **Abdellah Sebbar**, (CICMA), *Classification theorem for congruence groups*  
**Torsten Wedhorn**, (MIT), *A generalization of Eichler-Shimura theory*
- Apr. 22 **Masato Kuwata**, (Université de Caen), *Points on elliptic curves defined over cyclic cubic fields and generalized Kummer surfaces*  
**Fiona Murnaghan**, (University of Toronto), *Mini-course: Representations of reductive  $p$ -adic groups II*
- Apr. 29 **Fiona Murnaghan**, (University of Toronto), *Mini-course: Representations of reductive  $p$ -adic groups IV*
- May 13 **Brett Tangedal**, (College of Charleston), *Computing with Stark's Rank One Abelian Conjecture*  
**David Hayes**, (University of Massachusetts at Amherst), *Aligning Brumer-Stark elements into a Hecke character*
- June 17 **Yann Bugeaud**, (Université de Strasbourg), *Autour de l'équation diophantienne  $(x^n - 1)/(x - 1) = y^q$*

## FALL 1998

- Sept. 17 **Massimo Bertolini**, (Universita de Pavia), *Mini-course: Iwasawa theory of modular forms I*  
**David Solomon**, (King's College), *Stark's Conjecture in terms of twisted Zeta-functions*
- Sept. 24 **Massimo Bertolini**, (Universita de Pavia), *Mini-course: Iwasawa theory of modular forms III*  
**Werner Bley**, (Augsburg University (RFA)), *Elliptic curves and Galois module structure*
- Oct. 1 **Alexandru Zaharescu**, (CICMA), *Mod  $p$  reduction of algebraic varieties, discrepancies and short exponential sums*  
**Stephen Kudla**, (University of Maryland), *A peculiar modular form of weight 1*
- Oct. 8 Workshop on Algebraic modular forms and modular forms mod  $p$
- Oct. 15 **Chris Skinner**, (Institute for Advanced Study), *Mini-course: Ordinary representations and modular forms I*  
**Chris Skinner**, (Institute for Advanced Study), *Mini-course: Ordinary representations and modular forms II*
- Oct. 22 **Chris Skinner**, (Institute for Advanced Study), *Mini-course: Ordinary representations and modular forms IV*  
**Henri Darmon**, (McGill University),  *$p$ -adic uniformization and the Birch Swinnerton-Dyer conjecture*
- Nov. 5 **Ram Murty**, (Queens University), *Survey of Sieve methods I*  
**C. S. Rajan**, (Tata Institute), *Mini-course: Rankin-Selberg  $L$ -functions I*
- Nov. 12 **Ram Murty**, (Queens University), *Survey of Sieve methods III*  
**C. S. Rajan**, (Tata Institute), *Mini-course: Rankin-Selberg  $L$ -functions III*
- Nov. 19 **Ram Murty**, (Queens University), *Survey of Sieve methods V*  
**Cornelius Greither**, (Laval University), *Galois - Cohen - Lenstra heuristics*
- Dec. 10 **Xavier Roblot**, (CICMA), *Stark's Conjectures and Hilbert's Twelfth Problem*  
**Jonathan Sands**, (University of Vermont), *The Story of Base Change for the Brumer-Stark Conjecture*



## WINTER 1998

- Jan. 22 **Wenzhi Luo**, (Princeton University), *On the distribution of values of symmetric square  $L$ -functions at 1*  
**Niranjan Ramachandran**, (University of Michigan), *Naive introduction to mixed Hodge structures and motives*
- Jan. 29 **Kamal Khuri-Makdisi**, (Harvard University), *On the curves associated to certain rings of automorphic forms*  
**Francesco Sica**, (McGill University), *Order of vanishing of  $L$ -functions at the center of the critical strip*
- Feb. 5 **Eyal Goren**, (CICMA), *Hilbert modular varieties in positive characteristic*  
**Greg Anderson**, (University of Minnesota), *Fermionic Fock space over a local ring*
- Feb. 19 **Georgios Pappas**, (Princeton University), *Galois modules and  $L$ -functions*  
**Ernst-Ulrich Gekeler**, (Universitat des Saarlandes), *On the cuspidal group of a Drinfeld modular curve*
- Mar. 5 **Dihua Jiang**, (Yale University), *Nonvanishing of special values of automorphic  $L$ -functions*  
**Gerhard Niklasch**, (Technische Universitat Munichen), *Unit equations*
- Mar. 19 **Tonghai Yang**, (University of Michigan), *Special Values of  $L$ -functions at the center*  
**Serge Lang**, (Yale University), *Twisting Eisenstein series with the heat kernel*
- Mar. 26 **David Goss**, (Ohio State University), *Analytic continuation of integrals in characteristic  $p$ , I*  
**David Goss**, (Ohio State University), *Analytic continuation of integrals in characteristic  $p$ , II*
- Apr. 16 **Chantal David**, (Concordia University), *Galois representations with non-surjective traces*  
**Hershy Kisilevsky**, (Concordia University), *Vanishing of twists of  $L$ -functions*
- Apr. 30 **Barry Mazur**, (Harvard University),  *$p$ -adic interpolation of modular forms*  
**Abdellah Sebbar**, (CICMA), *Weight 4 automorphic forms for some Fuchsian groups*

## FALL 1997

- Sept. 11 **Imin Chen**, (McGill University), *Relations between jacobians of certain modular curves*  
**Christian Popescu**, (University of Texas at Austin), *Stark-type conjectures  $\mathbb{Z}$*
- Sept. 25 **Hendrik Lenstra**, (University of California at Berkeley), *On the factorization of lacunary polynomials*  
**Andrew Granville**, (University of Georgia), *Mean values of multiplicative functions: Decay and Superdecay*
- Oct. 11 **Ravi Ramakrishna**, (Yale University), *Deforming an even Galois Representation*  
**Adrian Iovita**, (CICMA),  *$p$ -Adic Height Pairings for Abelian Varieties with Semistable Ordinary Reduction*
- Oct. 16 **Amir Akbary**, (Concordia University), *Non-Vanishing of Modular  $L$ -Functions with Large Level*  
**Andreas Schweizer**, (CICMA), *On elliptic curves over function fields of characteristic 2*
- Nov. 6 **Christopher Skinner**, (Institute for Advanced Study), *Ordinary modular forms and Galois representations*  
**Henri Darmon**, (McGill University), *Hyperelliptic curves, (Hilbert modular forms, and Fermat's Last theorem)*
- Nov. 20 **Nike Vatsal**, (University of Toronto), *Heegner points and hyperbolic periods*  
**Pietro Cornacchia**, (University of Pisa), *Ideal class groups of cyclotomic fields*
- Dec. 4 **David Dummit**, (University of Vermont), *Report on some work of Anderson and Das - Algebraic products of Gamma function values*  
**Gaeten Haché**, (CICMA), *Effective Riemann-Roch Theorem*

WINTER 1997

- Jan. 16 **Fred Diamond**, (MIT), *Liberating deformations of Galois representations*  
**R. Coleman**, (University of California at Berkeley), *p-adic perturbations*
- Jan. 30 **Sol Friedberg**, (Boston College / University of California at Santa Cruz), *L-functions attached to metaplectic automorphic forms*  
**Henri Darmon**, (McGill University), *Stark-Heegner points over real quadratic fields*
- Feb. 13 **David Cardon**, (Queen's University), *A Riemann Hypothesis for Metaplectic Whittaker Functions*  
**Lloyd Simons**, (Saint Michael's College), *On Demuskin Formations for  $p=2$*
- Feb. 27 **Kamal Khuri-Makdisi**, (Harvard University), *Representations of  $SL(2) \times G$  when  $SL(2) \times G$  is not quite a dual pair*  
**Helena Verrill**, (Queen's University), *The L-series of a certain pencil of K3 surfaces*
- Mar. 20 **Serge Lang**, (Yale University), *Eigenfunction expansions of the Heat Kernel on  $Pos_n/GL_n(\mathbb{Z})$*   
**René Schoof**, (Università di Roma Tor Vergata), *Wiles's criterion for complete intersections*
- Mar. 27 **Richard Taylor**, (Harvard University), *Modularity of some more elliptic curves*  
**YuanLin Li**, (Memorial University Newfoundland), *Generalized Unitary Units in Integral Group Rings*
- Apr. 10 **Glenn Stevens**, (Boston University), *p-Adic Modular Forms and Modular Curves*  
**Glenn Stevens**, (Boston University), *p-Adic Integration and Families of Modular Forms*
- Apr. 17 **Hershy Kisilevsky**, (Concordia University), *Vanishing of twists of L-values*  
**Loic Merel**, (University of California at Berkeley), *Even modular Galois representations?*
- Apr. 24 **Ram Murty**, (McGill University / Queen's University), *The exponents of class groups of imaginary quadratic fields*  
**Michael Rosen**, (Brown University), *Elliptic Surfaces - Conjectures of Nagao and Tate*
- May 1 **Eyal Goren**, (Harvard University), *Special values of theta functions of genus 2*  
**Andrew Odlyzko**, (Minnesota), *The  $10^{21}$ -st zero of the Riemann zeta function*
- June 18 **Gautami Bhowmik**, (Université de Valenciennes), *Zeta Function Associated to Subgroups of Finite Abelian Groups*  
**Chantal David**, (Concordia University), *Curves with surjective Galois representations*

## FALL 1996

- Sept. 12 **Lisa Fastenberg**, (CICMA), *Mordell-Weil groups in procyclic extensions*  
**Yiannis Petridis**, (McGill University), *Special values of nonholomorphic Eisenstein series and Rankin-Selberg convolutions*
- Sept. 26 **Massimo Bertolini**, (Università di Pavia), *p-adic uniformization and p-adic L-functions*  
**Berhnard Kock**, (Universitat Karlsruhe), *On Adams operations on locally free class groups*
- Oct. 10 **Jean-Pierre Serre**, (Collège de France), *Equipartition of Frobenius angles*  
**Doug Ulmer**, (University of Arizona), *L-series of automorphic forms over function fields*
- Oct. 24 **Lindsay Childs**, (SUNY at Albany), *Taming wild extensions with Hopf algebras*  
**Jurgens Kluners**, (Technical University (Berlin) and CICMA), *On Computing Subfields of Algebraic Number Fields*
- Nov. 7 **Daniel Goldstein**, (University of Vermont), *Tamely ramified representations of p-adic groups*  
**Ken-Ichuro Kimura**, (Queen's University),  *$K_2$  of a Fermat quotient and the value of its L-function*
- Nov. 21 **Bjorn Poonen**, (Princeton University), *Explicit descent on Jacobians of cyclic covers of the projective line*  
**Andreas Schweizer**, (CICMA), *Strong Weil curves over  $F_2(T)$*
- Dec. 5 **Anna Rio**, (Universitat Politecnica de Catalunya), *Some questions regarding the modularity of octahedral Galois representations*  
**Adrian Iovita**, (CICMA), *Good Reduction of Abelian Varieties and Fontaine's Theory*
- Dec. 19 **Ram Murty**, (McGill University / Queen's University), *Autour de ABC*  
**Omar Kihel**, (CICMA), *Pell's equation and elliptic curves*

## WINTER 1996

- Jan. 25 **Ram Murty**, (McGill University), *Artin's conjecture on primitive roots and elliptic analogues*  
**David Hayes**, (University of Massachusetts at Amherst), *Analytic continuation via Fourier analysis*
- Feb. 8 **Nigel Boston**, (University of Illinois), *Some developments in Galois representations*  
**Nigel Boston**, (University of Illinois), *Dirichlet series attached to (pro)infinite groups*
- Feb. 22 **Cornelius Greither**, (Université Laval), *Integral normal bases in tame abelian extensions of imaginary quadratic fields*  
**Werner Lutkebohmert**, (Ulm University / IAS), *The structure of proper  $p$ -adic groups*
- Mar. 7 **C.S. Rajan**, (McGill University), *Density results for characters, strong multiplicity one, and non-normal cubic lift*  
**Josep Gebel**, (CICMA), *Computing integer points on elliptic curves over the rationals with applications to Mordell's equation*
- Mar. 21 **Serge Lang**, (Yale University), *Zeta functions and Heat Kernels on Hilbert-Asai Modular varieties*  
**Serge Lang**, (Yale University), *Recent work on the Shafarevich Conjecture for  $K3$  Surfaces*
- Mar. 29 **Ravi Raghunathan**, (Yale University), *A converse theorem for Dirichet series with poles*  
**Yuri Zarhin**, (Pennsylvania State University),  *$p$ -adic abelian integrals and Neron pairings*
- Apr. 4 **Lingsueh Shu**, (University of Vermont), *Periodic and non-periodic counting sequences*  
**David Dummit**, (University of Vermont), *Two remarks: on a theorem of Armitage-Frohlich and on embedding global torsion in local torsion*
- Apr. 18 **Karl Rubin**, (Ohio State University), *Euler systems for  $p$ -adic representations I*  
**Karl Rubin**, (Ohio State University), *Euler systems for  $p$ -adic representations II*
- May 2 **Ken Kramer**, (Queen's College (CUNY)), *Bounding conductors of abelian varieties over local fields*  
**Francesco Pappalardi**, (University of Rome III), *On the existence of normal basis over finite fields related to the Gauss Sums*

## FALL 1995

- Sept. 7 **Ram Murty**, (McGill University), *On the abc conjecture*  
**David Dummit**, (University of Vermont), *Computing Stark units for totally real cubic fields*
- Sept. 21 **Lingsueh Shu**, (University of Vermont), *Class numbers of cyclotomic extensions of function fields*  
**Cornelius Greither**, (Université Laval), *On Chinburg's second conjecture*
- Oct. 5 **C.S. Rajan**, (McGill University), *On the size of the Shafarevich-Tate groups of elliptic curves over function fields*  
**David Hayes**, (University of Massachusetts at Amherst), *How to use Stark's conjecture to solve  $a^2 + b^2 = p$*
- Oct. 19 **Harold Stark**, (University of California at San Diego), *Path Zeta Functions of Graphs*  
**Seon-In Kwon**, (CICMA), *Quaternion Covers of Elliptic Curves*
- Nov. 2 **Hershy Kisilevsky**, (Concordia University), *Survey talk on Iwasawa theory*  
**William Banks**, (CICMA), *The nonexistence of Siegel zeroes on  $GL(3)$*
- Nov. 16 **Barry Mazur**, (Harvard University), *Families of modular eigenforms*  
**Guenther Frei**, (Université Laval), *On the development leading to Artin's reciprocity law*
- Nov. 30 **Jiu-Kang Yu**, (Princeton University), *The Cohen-Lenstra heuristic in the function field case*  
**Li Guo**, (Institute for Advanced Study), *Special values of L-functions and Iwasawa theory*
- Dec. 14 **Damien Roy**, (University of Ottawa), *Simultaneous approximation and algebraic independence*  
**Ted Chinburg**, (University of Pennsylvania), *The inverse problem of Galois module structure theory*

## WINTER 1995

- Jan. 12 **Ram Murty** (McGill University) *The rank of  $J_0(N)$*   
**Jorge Morales** (Louisiana State University) *Gaussian periods mod  $p$  and Vandiver's conjecture*
- Jan. 26 **Chantal David** (Concordia University) *Average Frobenius Distributions of Elliptic Curves*  
**Hershy Kisilevsky** (Concordia University) *Torsion in Abelian Galois Groups*
- Feb. 9 **Jonathan Sands** (University of Vermont) *An introduction to Stark's conjectures*  
**Karl Rubin** (Ohio State University) *A refined Stark conjecture for abelian  $L$ -functions with multiple zeroes*
- Feb. 23 **Gisbert Wuestholz** (ETH and IAS) *On Faltings' Product Theorem*  
**Gisbert Wuestholz** (ETH and IAS) *Logarithms and Integrals*
- Mar. 9 **Serge Lang** (Yale University) *Heat kernels and theta inversion*  
**Serge Lang** (Yale University) *Gauss transforms and new zeta functions*
- Mar. 16 **John H. Conway** (Princeton University) *A remarkable integer sequence*  
**Ralph Greenberg** (U. of Washington) *Kummer theory of abelian varieties*
- Mar. 30 **Rene Schoof** (Universita di Roma 2 ) *Abelian varieties over cyclotomic fields with good reduction everywhere*  
**Kumar Murty** (U. of Toronto) *Weil Cycles*
- Apr. 6 **J-F. Mestre** (Universite de Paris 7), *Course*  
**Rene Schoof** (Universita di Roma 2) *On Iwasawa invariants*
- Apr. 13 **J-F. Mestre** (Universite de Paris 7), *Course*  
**J-F. Mestre** (Universite de Paris 7), *Course*
- Apr. 20 **Kevin Coombes** (U. of Maryland, College Park)  
**Tamara Lefcourt** (U. of Pennsylvania)
- Apr. 27 **J-F. Mestre** (Universite de Paris 7), *Course*  
**J-F. Mestre** (Universite de Paris 7), *Course*
- May 4 **J-F. Mestre** (Universite de Paris 7), *Course*  
**J-F. Mestre** (Universite de Paris 7), *Course*
- May 11 **J-F. Mestre** (Universite de Paris 7), *Course*  
**J-F. Mestre** (Universite de Paris 7), *Course*
- May 18 **J-F. Mestre** (Universite de Paris 7), *Course*  
**J-F. Mestre** (Universite de Paris 7), *Course*

## FALL 1994

- Aug. 31 **Joe Silverman** (Brown University) *Lehmer's conjecture, exceptional units and small Salem numbers*
- Sept. 8 **Helmut Koch** (Berlin) *Generalizations of Local Class Field Theory*  
**Farshid Hajir** (Caltech) *The Rank of Ideal Class Groups and the Fontaine-Mazur Conjecture*
- Oct. 20 **David Hayes** (U. Massachussetts at Amherst) *Computing conductors of Jacobi Sum Hecke characters via Eisenstein*  
**Andrew Granville** (University of Georgia) *It's as easy as abc*
- Oct. 27 **Liem Mai** (McGill University) *On Root Numbers*  
**Songjie Ren** (University of Vermont) *The Hilbert analogue of Henri Cohen's Eisenstein series*
- Nov. 3 **David Harbater** (University of Pennsylvania) *Galois groups with prescribed ramification*  
**Dan Goldston** (University of Toronto) *A lower bound method for primes*
- Nov. 10 **Bret Tangedal** (University of Vermont) *A question of Stark*  
**Conjeeveram S. Rajan** (McGill University) *The work of Kamienny and Merel*
- Nov. 17 **Richard Taylor** (Cambridge University), *Modular forms and Elliptic curves (d'apres Wiles)*  
**Richard Taylor** (Cambridge University), *Rings of Hecke Operators*
- 24 Nov. **Jean-Pierre Serre** (College de France), *Trace forms*  
**Jean-Pierre Serre** (College de France), *Sous-groupes finis des groupes de Lie*
- 25 Nov. **Jean-Pierre Serre** (College de France), *Quelques problhmes sur les nombres premiers*
- Dec. 1 **Massimo Bertolini** (Universite de Pavia), *More Heegner points on Mumford-Tate curves*  
**Fred Diamond** (Cambridge University), *More Rings of Hecke operators*
- Dec. 8 **Seon-In Kwon** (University of Pennsylvania) *De Rham invariant on the minimal model of an elliptic curve*  
**Shreeram Abhyankar** (Purdue University) *Nice equations for nice groups*
- Dec. 9 **Shreeram Abhyankar** (Purdue University) *Hilbert's thirteenth problem*  
**Fernando Gouvea** (Colby College) *Fermat's Last Theorem*



## WINTER 1994

- Jan. 20 **Marvin Knopp** (Temple University) *The Riemann-Hecke-Bochner Correspondence*  
**Ram Murty** (McGill University) *Some Reflections on Selberg's Conjectures*  
**Marvin Knopp** (Temple University) *Hamburger's Theorem*
- Jan. 27 **Eric Liverance** (Concordia University)  $x^3 + y^3 = p$   
**Henri Darmon** (Princeton) *Report from Hong Kong*
- Feb. 10 **Prof. Juerg Kramer** (Universite Laval) *A generalization of the Néron-Tate height*
- Mar. 3 **M. Zaidenberg** (University of Grenoble) *Cyclic Algebraic Surfaces*  
**R. Murty** (McGill University) *A reciprocity law for supersolvable Galois extensions*
- Mar. 10 **Roland Gillard** (Institut Fourier) *Construction of Flach elements in symmetric square*  
**Roland Gillard** (Institut Fourier) *About Kolyvagin's method*
- Mar. 17 **Serge Lang** (Yale University) *Explicit Formulas & Theta-invariants*  
**Serge Lang** (Yale University) *Jorgenson-Todorov's discriminant for  $K_3$  Surfaces*
- Mar. 31 **Jorge Morales** (Louisiana State University) *Systems of Quadratic Forms*
- May 5 **Yves Martin** (CRM) *Modular invariance of replicable functions*  
**Ozlem Imamoglu** (Dartmouth College) *Theta functions and the Kabota map for the symplectic group*

## FALL 1993

- Sept. 23 **H. Kisilevsky** (Concordia) *Abelian Galois Groups of Finitely Generated Fields*  
**Y. Martin** (Concordia U.) *On Multiplicative eta-quotients*
- Oct. 7 **Volker Mueller** (University of Saarland) *Computing the number of points on elliptic curves over finite fields of characteristic greater than 3*  
**David Dummit** (University of Vermont) *The Mordell-Weil groups of some CM elliptic curves*  
**Jonathan Sands** (University of Vermont) *How to express a relative class number as a determinant*
- Oct. 21 **Chantal David** (Concordia) *Average Lang-Trotter Conjecture for Drinfeld Modules*  
**Francesco Pappalardi** (CRM)
- Oct. 28 **Karl Rubin** (Ohio State University) *An overview of Wiles' proof*  
**Karl Rubin** (Ohio State University) *Selmer groups and deformations of Galois representations*  
**Karl Rubin** (Ohio State University) *The solving of Fermat's Last Theorem* (Public lecture)
- Nov. 4 **Fernando Q. Gouvea** (Colby College) *Modular deformations of Galois representations*  
**Kumar Murty** (University of Toronto) *Average values of L-functions*  
**Henri Darmon** (Princeton University) *Courbes elliptiques et equations de Fermat generalisees*  
**Jurg Kramer** (ETH, Zurich), *Le dernier Theoreme de Fermat* (conference populaire)
- Nov. 11 **A. Buium** (I.A.S., Princeton) *The ABC Theorem for Abelian Varieties*  
**S. Abdulali** (CICMA) *Algebraic Cycles on Abelian Varieties*
- Nov. 18 **Jonathan Sands** (University of Vermont) *Imaginary quadratic fields with non-trivial lambda invariants*  
**B. Mazur** (Harvard University) *Questions related to uniform bounds for numbers of rational points*
- Dec. 2 **A. Geramita** (Queen's University) *Zero-dimensional subschemes of projective n-space in the study of curves and surfaces*  
**H. Kisilevsky** (Concordia University)
- Dec. 9 **Enrico Bombieri** (I.A.S. Princeton) *Remarks on the analytic complexity of zeta functions*  
**Enrico Bombieri** (I.A.S. Princeton) *New effective methods in diophantine approximation*

## WINTER 1993

- Jan. 7 **J. Conway** (Princeton) *Understanding quadratic reciprocity without understanding squares or primes*  
**J. Conway** (Princeton) *Classifying quadratic forms without understanding ANYTHING*
- Jan. 21 **R. Murty** (McGill University) *Some new results on supersingular primes*  
**S. Shokranian** (U. of Toronto) *Cyclic Galois groups and local trace formula*
- Jan. 28 **Glenn Stevens** (Boston University) *Towards a Lambda-adic theory of automorphic forms*  
**Roland Martin** (McGill University) *An application of quantum group theory to the classification problem for Igusa local zeta functions*
- Feb. 4 **Manfred Kolster** (McMaster University) *Etale K-theory and some classical conjectures in number theory*  
**Liem Mai** (C.R.M.) *Value of L-Functions at the Critical Points*
- Feb. 18 **Jan Nekovar** (Berkeley) *p-adic cohomology and values of L-functions*  
**Juerg Kramer** (ETH, Zurich) *The arithmetic theory of Siegel-Jacobi forms*
- Mar. 11 **Serge Lang** (Yale University) *Analytic Number & Spectral Theory I*  
**Serge Lang** (Yale University) *Analytic Number & Spectral Theory II*
- Mar. 25 **F. Pappalardi** (McGill) *On a Conjecture of Zassenhaus on primes*  
**J. Borwein** (Waterloo and Dalhousie) *A History of the computation of  $\pi$*
- Apr. 8 **Michel Emsalem** (Paris VII) *Dessins d'enfant*  
**Michel Emsalem** (Paris VII) *Deformations de revêtements de  $P^1$*
- Apr. 22 **R. Murty** (McGill) *How big is sha?*  
**M. Kuwata** (McGill) *On the rank of Quadratic twists of elliptic curves*
- May 13 **H. Darmon** (Princeton University) *Stickelberger elements and S-units*  
**D. Dummit** (University of Vermont) *Computations on Some CM Elliptic Curves*

## FALL 1992

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- Oct. 8 **Pierre Cartier** (Ecole Normale Supérieure) *Naming Real Algebraic Numbers*  
**Masato Kuwata** (McGill University) *Rank of quadratic twists of elliptic curves*
- Oct. 29 **V. Jha** (Concordia University) *Stickelberger's Theorem & Applications*  
**F. Gouvea** (Colby College) *P-adic modular forms of weight zero*
- Nov. 12 **A.O.L. Atkin** (University of Illinois at Chicago) *Number of Points on Elliptic Curves*  
**A.O.L. Atkin** (University of Illinois at Chicago) *Orthogonal Polynomials in  $j$  and Supersingular Equations*
- Nov. 19 **David Ginzburg** (Ohio State University) *An Introduction to the Langlands' Analytic Conjectures*  
**David Ginzburg** (Ohio State University) *On Some Symmetric  $k$ -th power  $L$ -functions for  $GL(n)$*
- Dec. 3 **Henri Darmon** (Princeton) *Descent on  $P_1 \setminus \{0, 1, \infty\}$  and the generalized Fermat equation*
- Dec. 10 **Yasuhiro Goto** (Queen's University) *The Tate conjecture for certain weighted projective surfaces*  
**Lloyd Simons** (St. Michael's College) *The Galois-Invariant Structure of the Norm Residue Symbol for Tamely-Ramified Extensions of local fields*

## WINTER 1992

- Jan. 23 **P. Ribenboim** (Queen's University), *Squares in Lucas Sequences*  
**R. Murty** (McGill), *Brun's Sieve*
- Feb. 13 **M. Kuwata** (McGill), *Elliptic Pencils on K3 Surfaces with Large Picard Number*  
**D. Dummit** (University of Vermont), *Computing the Drinfeld Module for Hyperelliptic Curves*
- Mar. 5 **B. Berndt** (University of Illinois), *Ramanujan's Notebooks I*  
**B. Berndt** (University of Illinois), *Ramanujan's Notebooks II*
- Mar. 12 **M. Olivier** (Universite de Bordeaux), *Enumerating Algebraic Number Fields and Computing their Galois Groups*  
**F. Diaz y Diaz** (Universite de Bordeaux), *Computing Class Numbers using the Subexponential Algorithm*
- Mar. 19 **S. Lang** (Yale University), *The Heat Kernel and the Artin Formalism of L-Functions*  
**S. Lang** (Yale University), *Degeneracy of the Spectrum of the Laplace Operator and Jorgenson's Proof of a Conjecture of Deligne*
- Apr. 9 **M.S. Raghunathan** (Tata Institute), *The Congruence Subgroup Problem*  
**R. Murty** (McGill), *Euclidean Rings*
- Apr. 23 **E. Fouvry** (Paris – Orsay), *Average Behaviour of Elliptic Curves*  
**T. Stefanicki** (McGill), *Zeros of L-functions of Automorphic Forms*
- May 7 **E. De Shalit** (Princeton University), *Modular Curves and p-adic Period*  
**R. Murty** (McGill), *The Distribution of Super Singular Primes*
- May 21 **D. Rohrlich** (Maryland), *Families of elliptic curves: rank of the family and rank of the fibers*  
**M. Hindry** (Paris VII), *Hauteurs locales et globales sur les varietes abeliennes*

## FALL 1991

- Aug. 15 **Y. Tschinkel** (MIT), *Impressions from Seattle Motives, L-Functions, etc.*  
**D. Ramakrishnan** (Caltech), *The Tate Conjecture for Quaternionic Shimura Surfaces*
- Aug. 29 **M. Waldschmidt** (Institut Poincaré), *Logarithms of Algebraic Points on Algebraic Groups*
- Sept. 5 **Y. Zarhin** (Moscow), *Tate Conjecture for Abelian Varieties Over Finite Fields with Certain Newton Polygons*  
**L. Mai** (CRM), *Average Ranks of Certain Elliptic Curves* (d'après Fouvry)
- Sept. 19 **J. Im** (CRM), *Special Values of Symmetric Square L-Functions*  
**K. Murty** (University of Toronto), *Langland's Recipe for  $r$*
- Sept. 26 **I. Connell** (McGill), *Good Reduction of Elliptic Curves in Abelian Extensions*  
**D. Dummit** (University of Vermont), *Hecke Characters of CM Elliptic Curves*
- Oct. 10 **K. Murty** (University of Toronto), *Hodge Conjecture for Abelian Varieties*  
**D. Dorman** (Middlebury College), *What is the Analogue of Gross Zagier in Function Fields?*
- Oct. 17 **D. Goss** (Ohio State University), *Arithmetics in Function Fields*  
**D. Prasad** (Tata Institute), *Restriction of an  $SO(n)$  Representation to  $SO(n-1)$*
- Nov. 7 **K. Murty** (visiting McGill/CRM), *On the Hodge Conjectures*  
**D. Roy** (Concordia/McGill), *Simultaneous Approximation in Number Fields*
- Nov. 21 **R. Murty** (McGill), *Estimating Eigenvalues of Hecke Operators* (after Duke & Iwaniec)  
**H. Kisilevsky** (Concordia), *Abelian Galois Groups over  $\mathbb{Q}(T)$*
- Dec. 17 **J. Oesterle** (Paris VI visiting Columbia), *On the Number of Solutions of Equations mod  $p^n$*   
**J. Oesterle** (Paris VI visiting Columbia), *Elliptic Curves with Isomorphic  $p$ -torsion*

## WINTER 1991

- Jan. 10 **F. Gouvea** (Queen's University), *The Slope Decomposition of Spaces of Modular Forms*  
**D. Dummit** (University of Vermont), *Conductors of CM Elliptic Curves*
- Jan. 31 **K. Rubin** (Harvard), *Stark/Heegner points on Elliptic Curves with Complex Multiplication I*  
**K. Rubin** (Harvard), *Stark/Heegner points on Elliptic Curves with Complex Multiplication II*
- Feb. 21 **K. Murty** (University of Toronto), *Quaternionic Shimura Surfaces*  
**K. Murty** (University of Toronto), *Non-vanishing Theorems for L-Functions*
- Feb. 28 **F. Shahidi** (Purdue University), *Exterior Square L-Functions*  
**R. Murty** (McGill), *Selberg's Conjecture on L-Functions*
- Mar. 7 **H. Zimmer** (Saarbruecken), *Torsion Groups of Elliptic Curves Over Fields of Small Degree*  
**B. Singh** (Tata Institute), *Some Cases of Makai's Conjecture*
- Mar. 14 **S. Lang** (Yale University), *The Special Set of a Projective Variety*  
**S. Lang** (Yale University), *The Error Term for Nevanlinna Theory in Coverings*
- Apr. 4 **A. Selberg** (Princeton), *Old and New Conjectures about a class of Dirichlet Series*  
**C. Stewart** (Waterloo), *Polynomial Congruences, Thue Equations, and the Rank of Elliptic Curves*
- Apr. 18 **T. Zink** (University of Toronto), *p-adic Uniformization*  
**M. Rosen** (Brown University), *Automorphisms of Function Fields*
- Apr. 25 **D. Dummit** (University of Vermont), *On Rubin's Special Units*  
**R. Murty** (McGill), *Le Programme de Langlands*
- May 9 **F. Destremps** (CRM), *A Generalization of a Theorem of Sen on Extensions of p-adic Fields*  
**R. Murty** (McGill), *Converse Theory for  $GL(1)$*

## FALL 1990

- Sept. 20 **R. Borcherds** (Cambridge University), *Moonshine and Modular Forms*  
**J. Cremona** (Exeter University), *Modular Symbols and Computation of Elliptic Curves*
- Oct. 4 **H. Koch** (E. Berlin), *Integral Positive Definite Unimodular Lattices*  
**J. Labute** (McGill), *Lie Algebras and Central Series of Groups*
- Oct. 11 **J. Cremona** (Exeter University), *Modular and Elliptic Curves over Imaginary Quadratic Fields*  
**F. Destremps** (CRM), *Factorizability, Grothendieck Groups and Galois Module Structure*
- Oct. 18 **A. Parshin** (Moscow), *Inequalities in Arithmetic Surfaces*  
**H. Kisilevsky** (Concordia), *Independence in Function Fields*
- Nov. 1 **H. Koch** (Berlin), *Local Definition of Local Galois  $\epsilon$ -Factors*  
**N. Stephens** (Cardiff), *Integral Points on Elliptic Curves*
- Nov. 8 **J.F. Mestre** (Paris VI), *Hyperelliptic Curves with Real Multiplications*  
**J.F. Mestre** (Paris VI), *Regular extensions of  $Q(t)$  with Galois Group  $\tilde{A}_n$*
- Nov. 22 **A. Parshin** (Moscow), *Diophantine Algebraic Geometry*  
**H. Darmon** (Harvard), *Refined Class Number Formulas for Derivatives of L-series*
- Nov. 29 **F. Oort** (Princeton), *Newton Polygons Stratify Moduli Space*  
**R. Greenberg** (Boston University), *Proof of the Mazur-Tate-Teitelbaum Conjecture*
- Dec. 13 **F. Destremps** (CRM), *Sen's Theorem Classifying  $p$ -adic Fields*  
**J. Sands** (University of Vermont), *Semisimplicity of Iwasawa Modules*



## WINTER 1990

- Jan. 11 **M. Kuwata** (Brown University), *Diophantine Problems on Elliptic Surfaces*  
**H. Darmon** (Harvard University), *Heegner points and a Theorem of Birch-Swinnerton-Dyer Type*
- Jan. 18 **F. Oort** (Utrecht University), *Lifting Abelian Varieties from characteristic  $p$*   
**J. Top** (Queens University)
- Jan. 25 **K. Rubin** (Ohio State University), *The Main Conjectures I*  
**K. Rubin** (Ohio State University), *The Main Conjectures II*
- Feb. 8 **J. Sands**, *Travaux de Kolyvagin à la Rubin II*  
**R. Murty**, *The Sato–Tate Conjecture I*
- Feb. 15 **R. Murty**, *The Sato–Tate Conjecture II*  
**F. Thaine**, *Relations between Units and Jacobi Sums in Prime Cyclotomic Fields II*
- Mar. 1 **F. Gouvea** (Harvard University), *The Square–Free Sieve and Ranks of Elliptic Curves*  
**A. Silverberg** (Ohio State University), *Adelic Representations and Canonical Models—A Variant of the Isogeny Theorem*
- Mar. 15 **E. Friedman** (Penn. State), *Regulators of Number Fields*  
**W. Tautz** (Queens University), *Supersingular Abelian Varieties*
- Mar. 22 **L. Washington** (University of Maryland), *Quartic Fields and Modular Curves*  
**J. Sands**, *Iwasawa Invariants over Imaginary Quadratic Fields*
- Apr. 5 **P. Garrett** (University of Minnesota), *Arithmetic of Automorphic Forms and  $L$ -functions I*  
**P. Garrett** (University of Minnesota), *Arithmetic of Automorphic Forms and  $L$ -functions II*
- Apr. 12 **D. Dorman**, *A Factorization Formula for Singular Moduli of Drinfeld Modules*  
**D. Dorman**, *Topics in Elliptic Curves*
- Apr. 26 **B. Mazur** (Harvard University), *Uniform Bounds on Torsion on Elliptic Curves*  
**G. Anderson** (University of Minnesota), *Selberg Sums and Integrals*
- June 28 **D. Hayes** (UMass. Amherst), *Stark’s Conjecture and Kolyvagin Euler Systems*  
**H. Kisilevsky**, *Semisimplicity in  $\mathbb{Z}_p$ -extensions*

## FALL 1989

- Sept. 14 **R. Murty**, *Supersingular Primes*  
**J. Sands**, *Vanishing of the Iwasawa  $\mu$ -invariant*
- Oct. 6 **J. Sands**, *Vanishing of the Iwasawa  $\mu$ -invariant II*  
**H. Kisilevsky**,  *$p$ -adic Limits of Class Numbers*
- Oct. 19 **R. Gupta** (Univ. of British Columbia), *Genera of Elliptic Division Polynomials*  
**R. Murty**, *Recent work on the Density Hypothesis*
- Nov. 2 **D. Dummit**, *Formal Groups attached to Elliptic Curves*  
**H. Williams** (University of Manitoba), *Shanks' CUFFQI Algorithm*
- Nov. 16 **F. Thaine**, *Relations between Units and Jacobi Sums in Prime Cyclotomic Fields*  
**J. Top** (Queens University), *Detecting Algebraic Cycles by Reducing Mod  $p$*
- Nov. 30 **N. Elkies** (Harvard University), *Elliptic Curves and Lattices I*  
**N. Elkies** (Harvard University), *Elliptic Curves and Lattices II*
- Dec. 14 **J. Buchmann** (Saarbrücken), *Factorization Algorithms using Number Fields*  
**J. Sands**, *Travaux de Kolyvagin à la Rubin*

## WINTER 1989

- Jan. 19 **H. Kisilevsky**, *Travaux de Rubin et Kolyvagin II*  
**J. Sands**, *Arithmetic of Non-Maximal Orders*
- Jan. 26 **H. Kisilevsky**, *Travaux de Rubin et Kolyvagin III*  
**J. Pila**, *Frobenius Maps and Abelian Varieties*
- Feb. 9 **R. Murty**, *Average Values of L-series*  
**D. Dummit**, *A Result of Hayes on Hecke Characters in Function Fields I*
- Mar. 2 **S. Lang** (Yale University), *The abc Conjecture*  
**D. Dummit**, *A Result of Hayes on Hecke Characters in Function Fields II*
- Mar. 16 **R. Gupta**, *Dividing Rational Points on Elliptic Curves*  
**F. Thaine** (Institute for Advanced Study), *The Orders of Ideal Class Groups in Prime Cyclotomic Fields*
- Mar. 30 **H. Darmon** (Harvard University), *Galois Groups over  $\mathbb{Q}(t)$*   
**J. Minac** (Univ. of W. Ontario), *Witt Rings and Galois Groups*
- Apr. 20 **D. Thakur**, *title to be announced*

## FALL 1988

- Sept. 22 **R. Murty**, *Non-vanishing of L-series*  
**Rajiv Gupta** (Univ. of British Columbia), *Division Fields of CM Elliptic Curves*
- Oct. 6 **R. Murty**, *Modular Forms and the Splitting of Polynomials mod p*  
**M. Emsalem** (Paris VII), *Travaux de Michel Laurent*
- Oct. 20 **D. Dummit**, *Some Remarks on Imaginary Quadratic Fields*  
**R. Murty**, *Kolyvagin's Proof of the Finiteness of the Tate-Shafarevich Group*
- Nov. 3 **K. Rubin** (Columbia Univ.), *Travaux de Kolyvagin I (Proof of the Main Conjectures)*  
**K. Rubin** (Columbia Univ.), *Travaux de Kolyvagin II*
- Nov. 10 **H. Stark** (M.I.T.), *p-adic Dirichlet Series*  
**K. Murty** (Univ. of Toronto), *Kolyvagin's Analytic Hypothesis*
- Dec. 8 **H. Kisilevsky**, *Travaux de Rubin et Kolyvagin I*  
**D. Hayes** (U. Mass Amherst), *Are Hecke Characters Implicit in the Brumer-Stark Conjecture?*

## WINTER 1988

- Jan. 21 **G. Stevens** (Boston Univ.), *Kloosterman Sums and Poincare Series for  $GL(n)$ , I*  
**G. Stevens** (Boston Univ.), *Kloosterman Sums and Poincare Series for  $GL(n)$ , II*
- Feb. 4 **D. Dummit**, *Arithmetic of Fermat Curves III - CM and periods*  
**R. Murty**, *Remarks on Elliptic Curves*
- Feb. 18 **D. Dummit**, *Mestre's Construction of Imaginary Quadratic Fields with non-trivial 5- and 7-ranks using Elliptic Curves*  
**J. Friedlander** (Univ. of Toronto), *Primes in Arithmetic Progressions*
- Mar. 3 **K. Rubin** (Ohio State / Columbia), *The Main Conjecture for Imaginary Quadratic Fields I*  
**K. Rubin**, *The Main Conjecture for Imaginary Quadratic Fields II*
- Mar. 17 **R. Greenberg** (Univ. of Washington), *Remarks on Ramanujan's  $\tau$ -function*  
**K. Murty** (Univ. of Toronto), *The Manin-Drinfeld Theorem and the Ramanujan  $\tau$ -function*
- Mar. 24 **S. Lang** (Yale Univ.), *Open Questions in Classical Nevanlinna Theory*  
**D. Rohrlich** (Rutgers Univ.), *Non-vanishing of L-functions*  
**S. Lang**, *Higher Dimensional Nevanlinna Theory*
- Mar. 31 **G. Prasad**, *Recent Work of Margulis on Davenport's Conjecture*  
**D. Ford**, *The Number Theory Computation Software ALGEB*
- Apr. 14 **L. Washington** (Univ. of Maryland), *Real Subfields of Cyclotomic Fields with Large Class Numbers*  
**J. Sonn** (Yale Univ.), *Realizing Double Covers of  $S_n$ ,  $A_n$  as Galois Groups over Number Field*
- Apr. 28 **D. Dorman**, *Introduction to the Arithmetic of Drinfeld Modules*  
**J. Labute**, *Wingberg's Characterization of Demuskin Groups*
- May. 5 **A. Wiles** (Princeton Univ.), *Arithmetic of Totally Real Fields*  
**A. Wiles** (Princeton Univ.),  *$p$ -adic Representations for Totally Real Fields*
- May. 12 **B. Gross** (Harvard Univ.), *Serre's Conjectures on Modular Representations I*  
**B. Gross** (Harvard Univ.), *Serre's Conjectures on Modular Representations II*
- May. 19 **E. Gekeler** (I.A.S. / Max Planck Institute), *DeRham Cohomology for Drinfeld Modules*  
**K. Murty** (University of Toronto), *Zeroes of Dirichlet L-functions*

- July 7 **J. Manin** , *Points of Bounded Height on Abelian Varieties I*  
**J. Manin** , *Points of Bounded Height on Abelian Varieties II*
- July 22 **R. Odoni**, *Weil Numbers and CM Fields*  
**R. Murty**, *Non-vanishing of Derivatives of L-functions*
- July 30 **W. Sinnott** (Ohio State University), *Computing  $\mu$ -invariants for Arbitrary CM Fields*

## FALL 1987

- Sept. 10 **R. Murty**, *Supersingular Elliptic Curves*  
**S. Ramanan** (Tata Institute), *Embeddings of Abelian Surfaces*
- Sept. 24 **D. Dummit**, *The Arithmetic of Fermat Curves I*  
**J. Sands**, *The Ferrero-Washington Trick*
- Oct. 8 **D. Dummit**, *The Arithmetic of Fermat Curves II*  
**H. Kisilevsky**, *Kida Formulas*
- Oct. 29 **R. Bedard** (Univ. of Ottawa), *Hecke Algebras*  
**G. Anderson** (Univ. of MN / Institute for Advanced Study),  *$p$ -torsion in level  $l^n$  Fermat Jacobians*
- Nov. 12 **R. Casselman** (Univ. of British Columbia), *Kottwitz's Theorem on Tamagawa Numbers I*  
**R. Casselman**, *Kottwitz's Theorem on Tamagawa Numbers II*
- Dec. 3 **R. Murty**, *Primality Testing and Elliptic Pseudoprimes*  
**R. Foote**, *Non-monomial Characters and the Artin Conjecture*

## WINTER 1987

- Feb. 12 **K. Murty**, *Abelian Varieties with Complex Multiplication*  
**H. Kisilevsky**, *Selmer Groups*
- Feb. 19 **R. Foote**, *Lusztig-Deligne Representations of Finite Chevalley Groups*  
**D. Dummit**, *Principal Homogeneous Spaces*
- Feb. 26 **D. Dummit**, *Selmer Groups*
- Mar. 5 **H. Kisilevsky**, *Selmer Groups*
- Mar. 12 **J. Sands**, *The  $p$ -adic Artin Conjecture*  
**U. Jannsen** (MSRI),  *$L$ -adic Cohomology of Abelian Varieties and Galois Cohomology of Algebraic Number Fields*
- Apr. 2 **S. Lang** (Yale Univ.), *Vojta's Conjecture*  
**S. Lang** (Yale Univ.), *New Insights into Fermat's Last Theorem*
- Apr. 9 **G. van der Geer** (I.A.S.), *The Arithmetic of Hilbert Modular Surfaces*  
**G. van der Geer** (I.A.S.), *The Geometry of Hilbert Modular Surfaces*
- May 14 **D. Dummit**, *The Tate Transfer*  
**M. Rosen** (Brown Univ.), *Some Relations between Mathematical Invariants*
- July 21 **R. Greenberg** (Univ. of Wash./MSRI), *Ranks of Elliptic Curves in  $\mathbb{Z}_p$ -extensions I*  
**R. Greenberg** (Univ. of Wash./MSRI), *Ranks of Elliptic Curves in  $\mathbb{Z}_p$ -extensions II*
- July 23 **R. Greenberg** (Univ. of Wash./MSRI), *Iwasawa Modules and  $p$ -adic  $L$ -functions I*  
**R. Greenberg** (Univ. of Wash./MSRI), *Iwasawa Modules and  $p$ -adic  $L$ -functions II*
- Aug. 20 **G. Stevens** (Boston Univ.), *A cohomological approach to congruences between modular forms I*  
**G. Stevens** (Boston Univ.), *A cohomological approach to congruences between modular forms II*



## FALL 1986

- Sept. 11 **H. Kisilevsky**,  *$\mathbb{Z}_p$ -Extensions of Function Fields*  
**R. Murty**, *The Phragmen-Lindelof Theorem and Applications*
- Sept. 25 **R. Murty**, *The Phragmen-Lindelof Theorem and Applications II*  
**J. Sands**, *Iwasawa's Approach to Leopoldt's Conjecture*
- Oct. 9 **H. Kisilevsky**,  *$\mathbb{Z}_p$ -Extensions of Function Fields II*  
**R. Murty**, *Stark's Method for Lower Bounds for Discriminants*
- Oct. 23 **L. Simons**, *Galois Structure of the Hilbert Symbol in Tamely Ramified Abelian 2-adic Extensions*  
**A. Odlyzko** (Bell Labs), *New Analytic Algorithms in Number Theory*
- Nov. 6 **D. Dummit**, *On Results of Thaine and of Greenberg*  
**R. Foote**, *Spherical Functions*
- Nov. 21 **K. Rubin** (Ohio State / MSRI), *CM Elliptic Curves and the Shafarevich-Tate Conjecture*
- Dec. 4 **H. Iwaniec** (Rutgers Univ.), *Fourier Coefficients of Modular Forms of Half Integral Weight*  
**D. Dorman**, *Elkies' Proof of the Infinitude of Supersingular Primes for Elliptic Curves over  $\mathbb{Q}$*
- Dec. 15 **D. Dummit**, *Greenberg's Partial Converse to Coates and Wiles II*  
**J. Sands**, *Leopoldt's Conjecture in Families of Fields*

## WINTER 1986

- Jan. 16 **K. Murty**, *Modular Forms and the Tchebotarev Theorem*  
**M. Waldschmidt**, *Diophantine Equations and Transcendence Methods*
- Jan. 30 **K. Murty**, *Tate's Conjecture for Hilbert Modular Surfaces*  
**R. Murty**, *Vaughan's Proof of Bombieri's Theorem*
- Feb. 13 **H. Kisilevsky**, *p-adic L-functions*  
**K. Murty**, *An Overview of Shimura Curves*
- Feb. 27 **J. Sands** (Ohio State, U. of Maine), *The Brumer-Stark Conjecture for Abelian Fields*  
**B. Mazur** (Harvard Univ.), *Deforming Galois Groups over  $\mathbb{Q}$*
- Mar. 13 **S. Lang** (Yale Univ.), *Diophantine Geometry and Algebraic Number Theory (Heights and Nevanlinna Theory)*  
**S. Lang** (Yale Univ.), *Diophantine Geometry and Hyperbolic Geometry*
- Mar. 27 **D. Dummit**, *Leopoldt's Conjecture and Stark's Conjecture*  
**K. Murty**, *A Variant of a Theorem of Bombieri-Vinogradov*
- Apr. 17 **K. Murty**, *Holomorphy of Artin L-series*  
**S. Natarajan**, *Diophantine Approximation on Algebraic Groups*
- May 1 **D. Dummit**, *Serre's Result on the Residue of the p-adic zeta function at  $s = 1$*   
**H. Kisilevsky**, *Circular Units, Elliptic Units, and p-adic L-functions*
- May 15 **R. Langlands** (Institute for Advanced Study), *Endoscopy and Transfer*  
**J. Oesterle** (Paris VI / Harvard), *Supersingular Curves and Modular Curves*

## FALL 1985

- Sept. 12 **D. Dummit**, *Tate's Formulation of Stark's Conjecture and the Proof in the Function Field Case*  
**S. Natarajan**, *Lower Bounds for the Coefficients of Ramanujan's  $\tau$ -function*
- Sept. 19 **C. Pomerance**, *Counting Finite Groups*
- Sept. 26 **R. Murty**, *Integer Points on Curves of Genus 1*  
**J. Teitelbaum** (Harvard Univ.), *p-adic L-functions and Periods of Mumford-Schottky Curves*
- Oct. 10 **R. Murty**, *Recent Progress on Artin's Conjecture*  
**J. Labute**, *The Nilpotent Completion of the Fundamental Group of Smooth Complex Affine Varieties*
- Oct. 24 **D. Dummit**, *The Brumer-Stark Conjecture (cont.)*  
**R. Murty**, *Some Remarks on an Improvement in the Chebotarov Density Theorem*
- Nov. 1 **M. Waldschmidt** (Institute for Advanced Study), *Large Transcendence Degrees*
- Nov. 7 **H. Kisilevsky**, *The Cohen-Lenstra Heuristic*  
**R. Yager** (Oklahoma State), *Tate Constants for Elliptic Curves*
- Nov. 21 **R. Murty**, *Improvements in the Chebotarov Density Theorem*  
**W. Sinnott** (Ohio State Univ.), *On a Theorem of Washington*
- Dec. 6 **J.P. Serre** (College de France / Harvard Univ.), *Topics on L-adic Representations*  
**J.P. Serre** (College de France / Harvard Univ.), *Weil +  $\epsilon$ , Implies Fermat*

## WINTER 1985

- Jan. 17 **D. Dorman**, *Singular Values of the Elliptic Modular Function and Factorization Formulas*  
**D. Dummit**, *Reduction of Elliptic Curves and Tate Curves*
- Jan. 24 **K. Murty**, *Points of order 13 apres Mazur and Tate, I*  
**R. Coleman** (U.C. Berkeley), *Effective Chabauty*
- Feb. 7 **D. Dummit**, *Neron Models and Tate Curves*  
**K. Murty**, *Points of Order 13, II*
- Feb. 14 **K. Murty**, *On Computing Root Numbers*  
**D. Dummit**, *Tate Curves and Mestre's Construction of Class Groups in Imaginary Quadratic Fields using Elliptic Curves*
- Mar. 7 **H. Kisilevsky**, *The Iwasawa Component in Mazur-Wiles*  
**L. Simons**, *Construction of the  $p$ -adic  $L$ -series for an Elliptic Curve*
- Mar. 14 **D. Ramakrishnan** (Johns Hopkins), *Algebraic Cycles and Values of  $L$ -functions I*  
**D. Ramakrishnan** (Johns Hopkins), *Algebraic Cycles and Values of  $L$ -functions II*
- Mar. 28 **D. Dummit**, *Descent on Elliptic Curves, I*  
**J. Friedlander** (Univ. of Toronto), *Primes in Arithmetic Progressions*
- Apr. 4 **D. Dummit**, *Descent on Elliptic Curves, II - Translating Tate's Haverford Notes*  
**N. Yui** (Univ. of Toronto), *The Brauer Group of a Product of Two Curves*
- Apr. 11 **J. Arthur** (Univ. of Toronto), *Automorphic Representations and Number Theory*  
**D. Dorman**, *Heights on Abelian Varieties*
- Apr. 18 **K. Murty**, *The Euclidean Algorithm for  $S$ -integers I*  
**K. Murty**, *The Euclidean Algorithm for  $S$ -integers II*
- Apr. 25 **G. Anderson** (U.C. Berkeley), *On Gauss Sums*  
**G. Anderson**, *Hilbert-Blumenthal Drinfeld Modules*
- May 9 **R. Murty**, *Recent Results on the First Case of Fermat's Last Theorem*  
**J. Sands** (Univ. of Maine, Orono), *Stark's Conjecture and Higher Order Zeroes of  $L$ -functions at 0*
- May 16 **D. Blasius** (Columbia), *Motives for Absolute Hodge Cycles*  
**D. Blasius**, *Reciprocity Laws for Critical Values of  $L$ -functions*
- May 23 **R. Murty**, *Recent Results of Rohrlich on Values of  $L$ -functions*  
**K. Murty**, *Non-degenerate CM types*  
**D. Dorman**, *Heights, II - the local components*

## FALL 1984

- Sept. 20 **D. Dummit**, *An Introduction to Elliptic Curves as Modular Curves I*  
**D. Dummit**, *Elliptic Curves as Modular Curves II*
- Oct. 4 **H. Kisilevsky**, *Some Remarks on Friedman's Theorem in Iwasawa Theory*  
**D. Dummit**, *An Introduction to Modular Symbols*
- Oct. 8 **D. Goss** (Ohio State), *Arithmetic of Function Fields I*  
**D. Goss** (Ohio State), *Arithmetic of Function Fields II*
- Oct. 11 **D. Goss**, *Arithmetic of Function Fields III*  
**D. Goss**, *Arithmetic of Function Fields IV*
- Oct. 25 **K. Murty**  $\tau(n) = a$ , *has finitely many solutions for odd a*  
**D. Dummit**, *Modular Symbols and the  $p$ -adic  $L$ -function of an Elliptic Curve*
- Nov. 8 **L. Simons**, *Hecke Operators on  $\Gamma_0(N)$  -the Atkin-Lehner Theory*  
**J. Tunnell** (Rutgers Univ.), *Hilbert Modular Forms of Weight 1*
- Nov. 15 **R. Foote**, *Hecke Algebras*  
**K. Murty**, *Decomposing the Jacobian of  $X_0(N)$  using the Hecke Algebra*
- Nov. 29 **R. Foote**, *Hecke Algebras and the Langlands Theory*  
**K. Murty**, *Outline of Ribet's Converse of the Kummer Criterion*
- Dec. 13 **D. Dummit**, *Serre's mod  $p$  modular forms*  
**D. Dummit**,  *$p$ -adic Modular Forms and Construction of the Kubota-Leopoldt  $L$ -series*