CURRICULUM VITAE
Clinton Graydon McCrory

EDUCATION:
1968 BS in Mathematics, Massachusetts Institute of Technology
1970 MA in Mathematics, Brandeis University
1972 PhD in Mathematics, Brandeis University
    Thesis: Poincaré Duality in Spaces with Singularities
    Advisor: [Jerome P. Levine](#)

ACADEMIC HONORS:
1964 Presidential Scholar from South Carolina
1968 Sigma Xi (M.I.T.)
1972 Leverhulme Fellow (United Kingdom)
1995 Beaver Teaching Award (University of Georgia)
1997 McCay Faculty Award (Mathematics Department, University of Georgia)
2007 General Sandy Beaver Teaching Professor (University of Georgia)

PROFESSIONAL APPOINTMENTS:
1972-73 Visiting Lecturer, University of Warwick
1973-74 Member, Institute for Advanced Study
1974-76 Tamarkin Instructor, Brown University
1976-80 Assistant Professor, Brown University
1980-86 Associate Professor, University of Georgia
1986-09 Professor, University of Georgia
2001-07 Director, Mathematics Department VIGRE Program, University of Georgia
2009-   Professor Emeritus, University of Georgia

VISITING POSITIONS:
1980 (Spring) University of Warwick, University of Pisa
1981 (April) Institut des Hautes Études Scientifiques
1982 (September) University of Pisa
1986 (Fall) Mathematical Sciences Research Institute
1989 (Spring) University of Warwick
1990 (October) University of Sao Paulo at Sao Carlos
1992 (Fall) Mathematical Sciences Research Institute
1993 (November) University of Sydney
1994 (December) University of Sydney
1996 (December) University of Angers
1998 (Spring) University of Angers (Chercheur Associé, CNRS)
2000 (Spring) University of Warwick, University of Angers
2004 (Spring) Mathematical Sciences Research Institute, University of Angers
2005 (Fall) Institut Henri Poincaré
2008 (June) University of Angers
2010-2011 (October and April) University of Nice

RECENT GRANT SUPPORT:
2008-13 NSF DMS-0738586, Co-Principal Investigator (with D. Nakano and J. Cantarella), VIGRE grant
(Vertical Integration of Research and Education in Mathematics).
2009-10 NSF DMS-0852505, Co-Principal Investigator (with Sa'ar Hersonsky, William Kazez, and Gordana
Matic), SM: 2009 Georgia International Topology Conference.

GRADUATE STUDENTS:
Brown University:
   Edwin Kokubun, MA 1975: The Schoenflies Theorem in Dimensions 2 and 3 in the Piecewise-Linear Category

   Karen Roothaan, MA 1978: A Regular Cell Structure on G_2R^4

   Janine Clookey, MA 1980: Introduction to Klein's Theory of the Icosahedron

   James Sheehan, MA 1981: Knots and Singularities of Plane Curves

   Barry Hill-Tout, PhD 1983: A Local Euler Invariant for Real Algebraic Singularities
University of Georgia:

   Mark Faucette, MA 1983: Intersection of Manifolds and the Cup Product

   Shoji Yokura, PhD 1984: Polar Classes and Segre Classes on Singular Projective Varieties

   Janice Brown, MA 1986: Qualitative Properties of Autonomous Systems of First Order Differential Equations

   Lazar Milin, PhD 1987: A Combinatorial Computation of the First Pontryagin Class of the Complex Projective Plane

   Chris Sligar, PhD 1990: On the Minimal V-Degree of the Generalized Jones Polynomial

   Scott Corley, MA 1995: A Discussion with Examples of the Relationship between the Euler Characteristic and Cusps of the Gauss Map

   Mu Yeol Park, PhD 1997: Classification of Stable Cut Loci of Surfaces

   Michelle LeMasurier, PhD 1998: Singularities of Second Order Implicit Differential Equations

   Eddie Fuller, PhD 1999: The Geometry and Topology of Holonomic Knots

   Val Hower, PhD 2007: Hodge Spaces of Real Toric Varieties

   Emille Lawrence, PhD 2007: Characterizing Right-Veering Homeomorphisms of the Punctured Torus via the Burau Representation

PUBLICATIONS:
1. Euler singularities and homology operations, Amer. Math. Soc. Proc. Symp. Pure Math. 27 (1975), 371-380. MR 51:14089.
2. Cone complexes and PL transversality, Trans. Amer. Math. Soc. 207 (1975), 269-291. MR 53:4078.
3. Cobordism operations and singularities of maps, Bull. Amer. Math. Soc. 82 (1976), 281-283. MR 54:3718.
4. Cone bundles, Trans. Amer. Math. Soc. 228 (1977), 157-163. MR 55:11261.
5. A characterization of homology manifolds, J. London Math. Soc. (2) 16 (1977), 146-159. MR 56:3846.
6. (with T. Banchoff) Whitney duality and singularities of projections, Geometry and Topology , Rio de Janeiro 1976, Springer Lecture Notes in Math. 597 (1977), 68-81. MR 56:6678.
7. Stratified general position, Algebraic and Geometric Topology, Santa Barbara 1977, Springer Lecture Notes in Math. 664 (1978), 142-146. MR 80m:57016.
8. Geometric homology operations, Studies in Algebraic Topology, Advances in Math. Suppl. Studies, vol. 5 (1978), 119-141. MR 80j:57016.
9. Zeeman's filtration of homology, Trans. Amer. Math. Soc. 250 (1979), 147-166. MR 81b:55002.
10. (with T. Banchoff) A combinatorial formula for normal Stiefel-Whitney classes, Proc. Amer. Math. Soc. 76 (1979), 171-177. MR 80h:57031.
11. (with J. Blanton) An axiomatic proof of Stiefel's conjecture, Proc. Amer. Math. Soc. 77 (1979), 404-414. MR 80k:55052.
12. (with R. Hardt) Steenrod operations in subanalytic homology, Compositio Math. 39 (1979), 333-371. MR 82b:55019.
13. (with T. Banchoff and T. Gaffney) Cusps of Gauss Mappings, Research Notes in Mathematics, No. 55, Pitman Publishing Ltd., London 1982. MR 84a:48001. Second edition (with Daniel Dreibelbis): online publication http://www.emis.de/monographs/CGM/.
14. On the topology of Deligne's weight filtration, Amer. Math. Soc. Proc. Symp. Pure Math. 40 (1983), part 2, 217-226. MR 85f:14020.

15. (with T. Shifrin) Cusps of the projective Gauss map, J. Diff. Geom. 19 (1984), 257-276. MR 85m:14070.

16. Massey products in singularity links, Duke Math. Journal 51 (1984), 691-697. MR 86a:32038.

17. (with T. Banchoff and T. Gaffney) Counting tritangent planes of space curves, Topology 24 (1985), 15-23. MR 86m:58028a.

18. (with T. Shifrin and R. Varley) The Gauss map of a generic hypersurface in P^4, J. Diff. Geom. 30 (1989), 689-759. MR 91f:14039.

19. Configuration spaces of simplicial spheres, IV Convegno Nazionale di Topologia, Sorrento 1988, Rend. Circolo Mat. Palermo, Suppl. ser. II, no. 24 (1990), 159-168. MR 93b:57023.

20. (with M. Adams, T. Shifrin and R. Varley), Symmetric Lagrangian singularities and Gauss maps of theta divisors, Singularity Theory and its Applications, Part I, D. Mond and J. Montaldi, eds., Springer Lecture Notes in Math. 1462 (1991), 1-26. MR 92j:14033.

21. (with T. Shifrin and R. Varley) The Gauss map of a genus three theta divisor, Trans. Amer. Math. Soc. 331 (1992), 727-750. MR 92h:14019.

22. (with M. Adams, T. Shifrin and R. Varley) Invariants of Gauss maps of theta divisors, Amer. Math. Soc. Proc. Symp. Pure Math. vol. 54, part 2 (1993) 1-8. MR 94a:00011.

23. (with Juan J. Nuno Ballesteros and M. Carmen Romero-Fuster) Self-translation surfaces, Matematica Contemporanea 5 (1993), 61-76.

24. (with G. Kennedy and S. Yokura) Natural transformations from constructible functions to homology, C. R. Acad. Sci. Paris, Série I, 319 (1994), 969-973. MR 96a:57059.

25. (with T. Shifrin and R. Varley) Siegel modular forms generated by invariants of cubic hypersurfaces, J. Algebraic Geometry, 4 (1995), 527-556. MR 95m:14018.

26. (with J. Fu) Stiefel-Whitney classes and the conormal cycle of a real analytic variety, Trans. Amer. Math. Soc. 349 (1997), 809-835. MR 97h:32009.

27. (with A. Parusiński) Complex monodromy and the topology of real algebraic sets, Compositio Math. 106 (1997), 211-233. MR 98d:14075.

28. (with A. Parusiński) Algebraically constructible functions, Ann. Sci. École Norm. Sup. Paris 30 (1997), 527-552. MR 98f:14047.

29. (with M. Adams, T. Shifrin, and R. Varley) Conic Lagrangian singularities, Topology and Its Applications 88 (1998), 155-178. MR 99i:57049.

30. (with A. Parusiński) Topology of real algebraic sets of dimension 4: necessary conditions, Topology 39 (2000), 495-523. MR 2000m:14060.

31. How to show a set is not algebraic, in Algorithmic and Quantitative Real Algebraic Geometry (S. Basu and L. Gonzalez-Vega, eds.), DIMACS Series, vol. 60, Amer. Math. Soc. 2003, 77-82. MR 2004d:14085.

32. (with A. Parusiński) Virtual Betti numbers of real algebraic varieties, Comptes Rendus Acad. Sci. Paris, Ser. I, 336 (2003), 763-768. MR 2004e:14087.

33. (with F. Bihan, M. Franz, and J. van Hamel) Is every toric variety an M-variety?, Manuscripta Math. 120 (2006), 217-232. MR 2008b:14082a.

34. (with A. Parusiński) Algebraically constructible functions: real algebra and topology, Panoramas & Syntheses 23, Soc. Math. France 2007, 68-85. MR 2009k:14112.

35. (with A. Parusiński) The weight filtration for real algebraic varieties, in Topology of Stratified Spaces, MSRI Pub. 58, Cambridge University Press, New York 2011, 121-160. MR2796410. Correction, June 2014.

36. (with A. Parusiński) The weight filtration for real algebraic varieties II: classical homology, Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas 108 (2014), 63-94. MR3183108.

UNPUBLISHED NOTES:

1. Lectures on homology operations, Brown University 1976.

2. Profiles of surfaces, University of Warwick 1980.

3. Generic curves and surfaces in 3-space: contact with lines and planes, University of Warwick 1980.

4. Secant planes of space curves, MSRI 1992.

5. References on Stiefel-Whitney classes, University of Nice 2013.

RECENT INVITED LECTURES
2003 Winter School: RAAG & Motivic Integration (CNRS Centre Paul Langevin, Aussois), Southeast Geometry Conference (College of Charleston), Scuola Normale Superiore (Pisa), Georgia Institute of Technology, Brown University.
2004 MSRI Workshop on Topology of Real Algebraic Varieties, University of Rennes, CIRM Conference on Stratifications (Luminy)
2005 AMS Joint Mathematics Meetings – Special Session on Algorithmic Algebraic and Analytic Geometry (Atlanta), University of Chambéry
2006 European Mathematical Society (University of Nantes)
2008 Workshop in Real Algebraic Geometry (University of Angers), MSRI Workshop on the Topology of Stratified Spaces
2009 Conference on Real Singularities in Analysis and Geometry (University of Rennes)
2010 Georgia Institute of Technology
2011 Kyoto University, Kagoshima University
2012 University of Nice, CIRM Conference on the Topology and Geometry of Singular Spaces (Luminy)
2013 Franco-Japanese-Vietnamese Symposium on Singularities (University of Nice)
2015 CIRM Conference, Thematic Month on Singularities and Applications (Luminy)

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