

Curriculum Vitae

Alejandro Adem

Date of birth: November 24, 1961

Place of birth: Mexico City, Mexico (US & Mexican Citizenship)

Current address: Mathematics Department
University of Wisconsin
Madison, WI 53706
(608) 263-1161

Education:

1982–1986 Ph.D., Pure Mathematics, Princeton University
Thesis Title: Finite Transformation Groups
and their Homology Representations

1979–1982 B.Sc., Pure Mathematics, Faculty of Sciences,
National University of Mexico

Fellowships & Awards:

2003 Vilas Associate Award, UW Madison

1995 H. I. Romnes Faculty Fellowship,
(Wisconsin Alumni Research Foundation)

1992 NSF Young Investigator Award (NYI)

1985 Alfred P. Sloan Doctoral Dissertation Fellowship

1982 Graduate Fellowship, National University of Mexico

Employment:

1999-2002 Chair

1996- Professor

1992-1996 Associate Professor

1989-1992 Assistant Professor
Mathematics Department
University of Wisconsin
Madison, WI

1989-1990 Member, School of Mathematics
Institute for Advanced Study
Princeton, NJ

1986-1989 Szegő Assistant Professor
Mathematics Department
Stanford University
Stanford, CA

Visiting Positions:

Fall 2004	Visiting Professor, Princeton University
Fall 2004	Member, Institute for Advanced Study, Princeton, NJ
July-August 2004	Max-Planck-Institut für Mathematik, Bonn, Germany
June 2001	Visiting Scholar, Hong Kong University of Science and Technology
June 2000	Visiting Professor, University of Paris 13 (Villetaneuse)
April-July 1998	Centre de Recerca Matematica, Barcelona, Spain
March-April 1998	Visiting Professor, University of Paris 7 (Jussieu)
August 1997-March 1998	Max-Planck Institut für Mathematik, Bonn, Germany
Sept. 1993-July 1994	ETH-Zürich, Zürich, Switzerland
June-August 1993	Matematisk Institut, Arhus University, Denmark
May-July 1990	MSRI, Berkeley CA
June 1989	Max-Planck Institut für Mathematik, Bonn, Germany

Professional Service:

1. Co-chair of the Scientific Advisory Committee for the Mathematical Sciences Research Institute (MSRI), Berkeley CA, (member since 2002). Ex-officio member of the MSRI Board of Trustees and Steering Committee, 2003-present.
2. Elected member, Divisional Committee of Physical Sciences, UW-Madison, 2003-2006.
3. Chair, cluster hiring committee in mathematical physics/string theory, UW-Madison, 2001-2003.
4. Member of external review committee for Department of Chemistry, UW-Madison (2001).

5. Member of outside advisory board for NSF VIGRE grant at the Department of Mathematics, Indiana University (2001–2003).
6. AMS Selection Committee on Summer Research Conferences (1997-2000).

Editorial Service

1. Editor, *AMS Contemporary Mathematics Volume 310*, “Orbifolds in Mathematics and Physics” (2002).
2. Editor, *AMS Contemporary Mathematics Volume 279*, “Topology, Geometry and Algebra: Interactions and New Directions” (2001).
3. Editor, *AMS Proceedings of Symposia in Pure Mathematics Volume 63*, Seattle 1996 Summer Research Institute, “Group Representations: Cohomology, Group Actions and Topology” (1998).
4. Editor, *AMS Contemporary Mathematics Volume 188* “Homotopy Theory and its Applications” (1995).

Conferences Organized:

1. *AMS Special Session “Group Cohomology and Related Topics”* (joint with J. Pakianathan), April 2004 (Lawrenceville, NJ).
2. *AMS Central Section Meeting*, Madison, WI, October 2002, main local organizer.
3. *ICM Satellite Conference on Stringy Orbifolds*, Chengdu, China, August 2002, member of the organizing committee.
4. *AMS-IMS-SIAM Joint Summer Research Conference: Groups, Representations and Cohomology*, Mt.Holyoke, June 2002, co-chair of the organizing committee.
5. *Workshop on Mathematical Aspects of Orbifold String Theory*, held at University of Wisconsin–Madison, May 2001, member of the organizing committee.
6. *Cohomology of Finite Groups: Interactions and Applications* held at Oberwolfach, Germany (July 2000), member of the organizing committee.
7. *Topology, Geometry and Algebra: Interactions and New Directions* held at Stanford University (August 1999), member of the organizing committee.
8. *American Mathematical Society Summer Institute on Cohomology of Groups* (July 1996), member of the organizing committee.
9. *AMS Special Session “Cohomology and Representations of Finite Groups”* (joint with J. Carlson), January 1995 (San Francisco).
10. *Joint AMS–IMS–SIAM Summer Research Conference “Cohomology, Representations and Actions of Finite Groups,”* (June 1992), co-organizer.

Special Invited Addresses:

1. “*Periodic Complexes and Group Actions*,” Latin American Congress of Mathematicians, June 2004.
2. “*Finite Group Actions on Acyclic 2-Complexes*,” **Bourbaki Seminar**, November 2001.
3. “*Grupos de Simetría de las Esferas*,” plenary address, annual meeting of the *Mexican Mathematical Society*, October 1999.
4. “*Recent developments in the cohomology of finite groups*,” one hour invited plenary address, Central Section Meeting of the *American Mathematical Society*, November 1996.

Invited Lectures:

1. “*Group Cohomology I, II & III*,” lecture series at the summer school ‘Interactions Between Homotopy Theory and Algebra’, University of Chicago, August 2004.
2. “*Computations for Toroidal Orbifolds*,” Topology Seminar, University of Münster (Germany), July 2004.
3. “*Periodic Complexes and Group Actions*,” Colloquium Lecture, University of Wuppertal (Germany), July 2004.
4. “*Periodic Complexes and Group Actions*,” Colloquium Lecture, University of Göttingen (Germany), July 2004.
5. “*Periodic Complexes and Group Actions*,” Topology Seminar, Max Planck Institute (Bonn, Germany), July 2004.
6. “*Variedades de Representaciones y Teoría K*,” Topology Seminar, National University of Mexico, June 2004.
7. “*Representations and K-theory of the Braid Groups*,” Topology Seminar, Princeton University, April 2004.
8. “*Group Actions: Old Questions, Some New Answers*,” BIRS Conference on Manifolds and Homotopy Theory (Banff, Canada), March 2004.
9. “*Representations and K-theory of the Braid Groups*,” Topology Seminar, Aarhus University (Denmark), February 2004.
10. “*Representations and K-theory of the Braid Groups*,” Topology Workshop, Morelia (Mexico), January 2004.
11. “*Periodicity, Fixity and Group Actions*,” Colloquium Lecture, University of British Columbia (Vancouver, Canada), December 2003.
12. “*Representations and K-theory of the Braid Groups*,” Algebra and Topology Seminar, University of British Columbia (Vancouver, Canada), December 2003.
13. “*Periodic Methods, Fixity and Group Actions*,” Algebraic Topology Conference in honor of S.Gitler’s 60th birthday, (San Miguel, Mexico) December 2003.

14. “*Euler Classes and Group Actions*,” AMS special session on group cohomology in algebra and geometry, (Chapel Hill NC), October 2003.
15. “*Fixity and Group Actions*,” AMS special session on manifold theory (Binghamton NY), October 2003.
16. “*Periodic Methods, Fixity and Group Actions*,” Plenary speaker, Applied Homotopy Theory Conference at London, Ontario, October 2003.
17. “*Periodic Methods, Fixity and Group Actions*,” Plenary speaker, Algebraic Topology Conference at Minneapolis, September 2003.
18. “*Fixity and Group Actions*,” Plenary speaker, Conference on Transformation Groups (Poznan, Poland), August 2003.
19. “*Periodic Methods, Fixity and Group Actions*,” Plenary speaker, Helsinki Conference on Transformation Groups, August 2003.
20. “*Periodic Complexes and Group Actions I, II & III*,” Lecture series delivered at the LMS Durham Symposium on Geometry and Cohomology in Group Theory, Durham (UK), July 2003.
21. “*Cohomological and Geometric Periodicity*,” Plenary lecture, Lisbon Conference on Commutative Algebra, June 2003.
22. “*Fixity and Group Actions*,” AMS-RSME Joint Meeting, Seville, Spain, June 2003.
23. “*Fixity and Group Actions*,” Topology Seminar, Northwestern University, May 2003.
24. “*Fixity and Group Actions*,” Topology Seminar, Princeton University, April 2003.
25. “*Groups, Actions and Representations*,” Colloquium, U. Western Michigan, April 2003.
26. “*Fixity and Group Actions*,” Group Theory Seminar, University of Chicago, February 2003.
27. “*Fixity and Group Actions*,” Topology Seminar, Stanford University, January 2003.
28. “*Fixity and Group Actions*,” Topology Seminar, Indiana University Bloomington, October 2002.
29. “*Twisted Orbifold K-Theory*,” Stringy Orbifolds Conference, Chengdu, China, August 2002.
30. “*Construyendo Acciones de Grupos*,” Topology/Geometry Seminar, IMATE-UNAM, Mexico City, June 2002.
31. “*Invariantes Topológicos de las Orbidades*,” Colloquium, IMATE-UNAM, Morelia, June 2002.
32. “*Representaciones y K-Teoría de los Grupos de Trenzas*,” Topology Seminar, IMATE-UNAM, Cuernavaca, June 2002.
33. “*Representaciones y K-Teoría de los Grupos de Trenzas*,” Algebra Seminar, IMATE-UNAM, Morelia, June 2002.
34. “*Constructing and Deconstructing Group Actions*,” Conference on Manifolds, Münster, Germany, June 2002.

35. “*Aspects of Orbifold Cohomology and K-theory*,” Colloquium, U.Munich, May 2002.
36. “*Constructing and Deconstructing Group Actions*,” Plenary Speaker, International Conference on Algebraic Topology, Evanston, March 2002.
37. “*Representations and K-theory of the Braid Groups*,” AMS Special Session, Ann Arbor, March 2002.
38. “*Representations and K-theory of the Braid Groups*,” University of Chicago Topology Seminar, January 2002.
39. “*Representations and K-theory of the Braid Groups*,” K-theory Seminar, University of Paris VII, November 2001.
40. “*Twisted Orbifold K-theory*,” Topology Seminar, University of Paris XIII, November 2001.
41. “*Representations and K-theory of the Braid Groups*,” Indiana University Topology Seminar, October 2001.
42. “*Twisted Orbifold K-theory*,” Ontario Topology Seminar, University of Western Ontario, October 2001.
43. “*Aspects of Orbifold Cohomology and K-theory*,” Oberwolfach Topology Conference, September 2001.
44. “*Periodic Complexes and Group Actions*,” Plenary speaker, Singapore International Symposium on Topology and Geometry, July 2001.
45. “*Twisted Orbifold K-theory*,” Int.Conf. on Symplectic Topology, Chengdu, China, June 2001.
46. “*Twisted Orbifold K-theory*,” Lecture series (5 talks) at Hong Kong University of Science and Technology, June 2001.
47. “*Aspects of Orbifold Cohomology and K-theory*,” Topology Seminar, Princeton University, April 2001.
48. “*Aspects of Orbifold Cohomology and K-theory*,” Topology Seminar, Stanford University, February 2001.
49. “*Aspects of Orbifold Cohomology and K-theory*,” AMS Special Session, New Orleans, January 2001.
50. “*Torsion Discreta y Cohomología de Grupos*,” Conference in honor of H.Cárdenas, Morelia, Mexico, November 2000.
51. “*K-teoría de Orbidades*,” Topology Seminar, National University of Mexico, November 2000.
52. “*Aspects of Orbifold Cohomology and K-theory*,” Midwest Topology Seminar, Bloomington Indiana, October 2000.
53. “*Periodic Complexes and Group Actions*,” Colloquium, University of Munich (Germany), July 2000.
54. “*Periodic Complexes and Group Actions*,” Topology Seminar, University of Paris XIII, June 2000.

55. “*Periodic Complexes and Group Actions*,” Colloquium, University Louis Pasteur (Amiens, France), June 2000.
56. “*Cohomology, Classifying Spaces and Actions of Finite Groups*,” lecture series in three parts at the conference ‘Representation Theory and Computational Algebra,’ held at the University of Georgia, May 2000.
57. “*Group Cohomology and Galois Groups*,” Topology Seminar, University of Minnesota, May 2000.
58. “*Periodic Complexes and Group Actions*,” Midwest Topology Seminar, Notre Dame, April 2000.
59. “*Periodic Complexes and Group Actions*,” Topology Seminar, Princeton University, March 2000.
60. “*Periodic Complexes and Group Actions*,” Topology Seminar, Stanford University, February 2000.
61. “*Periodic Complexes, Euler Classes and Group Actions*,” Colloquium, McMaster University (Canada), December 1999.
62. “*Periodic Complexes and Group Actions*,” Midwest Group Cohomology Seminar, Evanston, November 1999.
63. “*Galois Groups and Group Cohomology*,” Galois Theory Seminar, MSRI (Berkeley), November 1999.
64. “*Periodic Complexes, Euler Classes and Group Actions*,” Cascade Topology Seminar, Vancouver, October 1999.
65. “*Periodic Complexes, Euler Classes and Group Actions*,” Plenary Lecture Japan-Mexico Topology Meeting, Morelia Mexico, July 1999.
66. “*Periodicity and Group Actions*,” CRM Topology Seminar, Barcelona, July 1999.
67. “*Periodic Complexes and Group Actions*,” joint AMS-SMM meeting, special session in algebraic topology, Denton TX, May 1999
68. “*Cohomology of Finite Groups I, II, & III*,” invited lecture series at the Euroconference on Homological Methods in Representation Theory, Ioannina, Greece, March 1999.
69. “*Periodic Complexes and Group Actions*,” University of Athens (Greece), March 1999.
70. “*Periodic Complexes and Group Actions*,” Rutgers University Topology Seminar, March 1999.
71. “*Periodic Complexes, Euler Classes and Group Actions*,” Northwestern University Topology Seminar, February 1999.
72. “*Groups, Actions and Euler Classes*,” Colloquium Lecture, University of Michigan, February 1999.
73. “*Group Actions and Group Extensions*,” Topology Seminar, University of Michigan, February 1999.

74. “*Galois Groups and Group Cohomology*,” Topology Seminar, Purdue University, January 1999.
75. “*Periodic Complexes and Group Actions*,” Topology Seminar, Indiana University, January 1999.
76. “*Group Cohomology: Computations, Applications and Related Topics*”, Max Karoubi 60th Birthday Conference, U. Paris VII (France), November 1998
77. “*Euler classes and Group Actions*”, Topology Seminar, U. Paris XIII (France), November 1998.
78. “*Euler Classes and Group Actions*”, Topology Seminar, U. Strasbourg (France), November 1998.
79. “*Groups, Fields and Topological Symmetries*”, Topology Seminar, Texas A&M, November 1998.
80. “*Euler Classes and Group Actions*,” Topology Conference, Oberwolfach, September 1998.
81. “*Groups Fields and Topological Symmetries*”, Colloquium, U. Western Ontario, August 1998.
82. “*Topological Models and the Cohomology of Galois Groups*,” Barcelona Conference on Algebraic Topology, June 1998.
83. “*Topological Models and the Cohomology of Galois Groups*,” Topology Seminar, Edinburgh University, May 1998.
84. “*Topological Models and the Cohomology of Galois Groups*,” Topology Seminar, Oxford University, May 1998.
85. “*Cohomology and Actions of Finite Groups*,” Colloquium, University of Southampton, May 1998.
86. “*Groups, Fields and Cohomology*,” Colloquium, University of Lausanne (Switzerland), April 1998.
87. “*Group Actions and Group Extensions*,” Topology Seminar, Paris-Nord, March 1998.
88. “*On the Cohomology of Certain Galois Groups*,” Algebraic K-theory Seminar, U. Paris (Jussieu), March 1998.
89. “*Topological Models for the Cohomology of Galois Groups*,” Topology Seminar, Binghamton U. (March 1998).
90. “*Groups, Fields and Cohomology*,” Colloquium, Binghamton U. (March 1998).
91. “*Topological Models and the Cohomology of Galois Groups*,” Topology Seminar, Princeton University (March 1998).
92. “*Topological Models and the Cohomology of Galois Groups*,” Oberwolfach Group Actions Meeting (February 1998).
93. “*Groups, Fields and Cohomology*,” Colloquium, Bielefeld U.(Germany), February 1998.

94. “*Groups, Fields and Topological Symmetries*,” Colloquium, Bonn University (Germany), January 1998.
95. “*The Cohomology of W -Groups*,” Workshop on Cohomology and Representations, MPIM-Bonn, January 1998.
96. “*Groups, Fields and Cohomology*,” Colloquium, Basel University (Switzerland), December 1997.
97. “*Groups, Fields and Topological Symmetries*,” Colloquium, Münster University (Germany), November 1997.
98. “*Cohomology and Group Actions*,” Colloquium, Eichstätt University (Germany), November 1997.
99. “*Groups, Fields and Topological Symmetries*,” Topology Seminar, Université Lille (France), November 1997.
100. “*Cohomology and Actions of Finite Groups*,” Oberseminar, Max-Planck-Institut für Mathematik (Germany), October 1997.
101. “*Essential Cohomology of Finite Groups*,” Topology and Geometry Seminar, Aarhus University (Denmark), August 1997.
102. “*Modelos Topológicos en la Teoría de Galois*,” Topology Seminar, National University of Mexico, June 1997.
103. “*Free Group Actions, Group Extensions and Cohomology*,” Topology Seminar, Northwestern University, May 1997.
104. “*Group Actions and Group Extensions*,” AMS Special Session, Detroit, May 1997.
105. “*A Cohomological Perspective on Finite Groups*,” Special Lecture for B. Eckmann’s 80th Birthday, ETH Zürich, April 1997.
106. “*Group Actions and Group Extensions*,” Algebraic Topology Conference (Evanston), March 1997.
107. “*Essential Cohomology and Actions of Finite Groups*,” Topology Seminar, Courant Institute (NYU), March 1997.
108. “*A Cohomological Perspective on Finite Groups*,” Colloquium, Stanford University, February 1997.
109. “*Essential Cohomology of Finite Groups*,” MIT Topology Seminar, December 1996.
110. “*Essential Cohomology of Finite Groups*,” U. Chicago Topology Seminar, October 1996.
111. “*Topological Invariants of Discrete Groups*,” Colloquium, University of Western Ontario, September 1996.
112. “*Cohomology of Finite Groups*,” Plenary Lecture, AMS Summer Institute, Seattle, July 1996.
113. “*Cohomology of Finite Groups: Calculations and Detection*,” Fields Institute, Conference on Homotopy Theory (Toronto), May 1996.

114. “*Automorphisms and Cohomology of Discrete Groups*,” Fields Institute, Toronto, May 1996.
115. “*Essential Cohomology of Finite Groups*,” Seminar, ETH–Zürich, June 1996.
116. “*Automorphisms, Special Cycles and Cohomology of Discrete Groups*,” Northwestern University Topology Seminar, February 1996.
117. “*Topological Invariants of Discrete Groups*,” Colloquium, Northern Illinois University, February 1996.
118. “*Automorphisms and Cohomology of Discrete Groups*,” Conference on Topological Methods in Group Theory, Oberwolfach Germany, December 1995.
119. “*Automorphisms and Cohomology of Discrete Groups*,” Basel-Freiburg-Strasbourg Algebra Seminar, Basel Switzerland, November 1995.
120. “*Topological Invariants of Discrete Groups*,” Colloquium, University of Georgia, October 1995.
121. “*Automorphisms and Cohomology of Discrete Groups*,” Algebra and Topology Seminar, ETH–Zürich, June 1995.
122. “*Automorphisms, Cohomology and K -theory of Discrete Groups*,” New Mexico Geometry and Topology Seminar, April 1995.
123. “*Topological Methods in Representation Theory (3 lectures)*,” Algebra Conference in Morelia, Mexico (January 1995).
124. “*Cohomology and K -theory of Arithmetic Groups*,” Yale University Topology Seminar, November 1994.
125. “*The Cohomology of Low Rank Simple Groups*,” Princeton University Topology Seminar, November 1994.
126. “*Vector Bundles and Arithmetic Groups*,” University of Illinois at Chicago Colloquium Lecture, November 1994.
127. “*The Cohomology of Low Rank Simple Groups*,” University of Chicago Group Theory Seminar, November 1994.
128. “*The Cohomology of Low Rank Simple Groups*,” Northwestern University Topology Seminar, October 1994.
129. “*Characters, K -theory and Cohomology of Discrete Groups*,” LMS Durham Symposium on Geometry and Cohomology in Group Theory, July 1994.
130. “*Topological Invariants of Discrete Groups*,” U. Konstanz Mathematics Colloquium, July 1994.
131. “*Cohomology of Sporadic Simple Groups*,” Heidelberg University Topology Seminar, June 1994.
132. “*Cohomology of Sporadic Simple Groups*,” U. Mainz Topology Seminar, June 1994.

133. “*Amalgamated Products, Sporadic Groups and the Plus Construction*,” Queen Mary College–U. London joint Geometry and Topology Seminar, May 1994.
134. “*Characters, K –theory and Cohomology of Arithmetic Groups*,” Cambridge University Topology Seminar, May 1994.
135. “*The Geometry and Cohomology of Finite Simple Groups*,” Oxford University Topology Seminar, May 1994.
136. “*Grothendieck Rings and Families of Finite Subgroups*,” U. Edinburgh Topology Seminar, May 1994.
137. “*Topological K –theory of Arithmetic Groups*,” Browder Topology Conference, Princeton University, March 1994.
138. “*Finite Symmetry and Cohomology of Groups*,” Basel University Mathematics Colloquium, February 1994.
139. “*Vector Bundles and Arithmetic Groups*,” Bonn University Mathematics Colloquium, February 1994.
140. “*Topological K –theory of Arithmetic Groups*,” Heidelberg University Topology Seminar, January 1994.
141. “*Cohomology of Finite Simple Groups*,” U.Geneva (Switzerland) Mathematics Seminar, December 1993.
142. “*Homotopy Invariants of Arithmetic Groups*,” Oxford University One Day Homotopy Theory Conference, December 1993.
143. “*Representations and K –theory of Discrete Groups*,” U.Paris VII Algebraic K –theory Seminar, November 1993.
144. “*Characters and K –theory of Discrete Groups I & II*,” ETH–Zürich Algebra and Topology Seminar, November 1993.
145. “*Characters and K –theory of Discrete Groups I & II*,” U.Lausanne (Switzerland) Mathematics Seminar, September 1993.
146. “*Representaciones y K –teoría de Grupos Discretos*,” Plenary Lecture, Latin American School of Mathematics (ELAM), Mexico City, August 1993.
147. “ *K –theory of Discrete Groups*,” Gitler Topology Conference, Cocoyoc, Mexico, August 1993.
148. “*Topological K –theory of Arithmetic Groups I & II*,” Arhus University (Denmark) Topology Seminar, July 1993.
149. “*Representations and K –theory of Discrete Groups*,” Stanford University Topology Seminar, May 1993.
150. “*Characters, K –theory and Cyclic Homology of Discrete Groups*,” Northwestern University Topology Seminar, April 1993.

151. “*Topological Invariants of Discrete Groups*,” Special Seminar, University of Michigan, March 1993.
152. “*The Cohomology of the Mathieu Groups*,” Algebra Seminar, Instituto de Matematicas, UNAM (Morelia), Mexico, June 1992.
153. “*Representations and K -theory of Discrete Groups*,” Plenary Lecture, Conference on Topology and Representation Theory, Evanston, May 1992.
154. “*A Splitting Theorem for the K -theory of a Discrete Group*,” Princeton University Topology Seminar, March 1992.
155. “*Invariants and Cohomology of Groups*,” Conference on the Steenrod Algebra and its Applications, Oberwolfach, Germany, March 1992.
156. “*Topological Invariants of Discrete Groups*,” Colloquium, University of Basel, Switzerland, February 1992.
157. “*Cohomology and Actions of Finite Groups*,” Invited Minicourse, Topology Conference at PUCI (Rio de Janeiro, Brazil), January 1992.
158. “*Invariantes Topologicos de los Grupos Discretos*,” Plenary Lecture, Annual Meeting of the Mexican Mathematical Society, Oaxtepec, Mexico, November 1991.
159. “*Cohomology and Actions of Finite Groups*,” Colloquium, Kansas State University, October 1991.
160. “*Cohomological Non-Vanishing and Topological Invariants of Discrete Groups*,” Invited lecture, International Conference on Algebraic Topology, Oaxtepec, Mexico, July 1991.
161. “*Topological and K -theoretic Euler Characteristics for Discrete Groups*,” Heidelberg University Topology Seminar, June 1991.
162. “*Topological and K -theoretic Euler Characteristics for Discrete Groups*,” Algebra and Topology Seminar, ETH Zurich, June 1991.
163. “*On the Geometry and Cohomology of Finite Simple Groups*,” University of Toronto Topology Seminar, March 1991.
164. “*Cohomology and Actions of Finite Groups*,” ETH-U.Zurich Colloquium, February 1991.
165. “*On the Geometry and Cohomology of Finite Simple Groups*,” University of Chicago Topology Seminar, January 1991.
166. “*Free Group Actions on Products of Spheres*,” Indiana University Colloquium, Bloomington, January 1991.
167. “*The Cohomology of Finite Simple Groups*,” Indiana University Topology Seminar, Bloomington, January 1991.
168. “*Euler Characteristics and Cohomology of Discrete Groups*,” Northwestern University Topology Seminar, November 1990.
169. “*The Geometry and Cohomology of Finite Simple Groups*,” Mid-West Topology Conference, Purdue University, October 1990.

170. “*Local Structure and Cohomology of Sporadic Simple Groups*,” MSRI Topology Seminar, July 1990.
171. “*Cohomology of Sporadic Simple Groups*,” Barcelona Conference in Algebraic Topology, June 1990.
172. “*The Cohomology of Some Sporadic Simple Groups*,” Ohio State University Topology Seminar, May 1990.
173. “*Cohomology and Actions of Finite Groups*,” Cornell Topology Festival, May 1990.
174. “*Cohomology and Actions of Finite Groups*,” Colloquium, Johns Hopkins University, April 1990.
175. “*Cohomology of Finite Groups*,” Colloquium, Lehigh University, March 1990.
176. “*The Cohomology of Some Finite Simple Groups*,” Rutgers University Group Theory Seminar, February 1990.
177. “*The Cohomology of Finite Simple Groups*,” Yale University Topology Seminar, November 1989.
178. “*High Dimensional Torsion in the Cohomology of Discrete Groups*,” Princeton University Homotopy Theory Seminar, October 1989.
179. “*The Cohomology of Sporadic Simple Groups*,” Princeton University Topology Seminar, October 1989.
180. “*Exponents in the Cohomology of Discrete Groups*,” Conference on Topological Methods in Group Theory, Oberwolfach, October 1989.
181. “*The Cohomology of Sporadic Simple Groups*,” 1st Northeastern Topology Conference, Albany, NY, September 1989.
182. “*Cohomology of Discrete Groups*,” International Conference on Algebraic Topology and Global Analysis, Guanajuato, Mexico, August 1989.
183. “*Cohomology of M_{12}* ,” International Workshop on Algebraic Topology, Oaxtepec, Mexico, August 1989.
184. “*Cohomology and Actions of Finite Groups*,” (a series of three lectures), National University of Mexico, Math. Inst., July 1989.
185. “*The Cohomology of M_{12}* ,” AMS Conference on Representations and Cohomology of Finite and Algebraic Groups, Arcata, July 1989.
186. “*High-Dimensional Torsion in the Cohomology of Discrete Groups*,” Heidelberg University Topology Seminar, June 1989.
187. “*The Cohomology of Some Sporadic Simple Groups*,” Poznan International Conference on Algebraic Topology, June 1989.
188. “*Homology Representations of Finite Group Actions*,” Colloquium, University of Wisconsin at Madison, April 1988.

189. “Two Perspectives on Tate Homology,” International Conference in Homotopy Theory, Northwestern University, March 1988.
190. “Complexity and Group Actions,” Conference on Representations and Cohomology of Finite and Algebraic Groups, University of Georgia, January 1988.
191. “The Free Rank of Symmetry of $(S^n)^k$,” Princeton University Homotopy Theory Seminar, November 1987.
192. “The Free Rank of Symmetry of a Product of Spheres,” Berkeley-Stanford Topology Seminar, October 1987.
193. “The Free Rank of Symmetry of $(S^n)^k$,” CBMS-NSF Conference Group Actions on Manifolds, July 1987.
194. “Cohomological Restrictions on Finite Transformation Groups,” Arcata Algebraic Topology Conference, July 1986.
195. “Cohomological Invariants of $G - CW$ Complexes,” Courant Institute, New York University, March 1986.
196. “Cohomological Invariants of ZG -Chain Complexes,” Princeton University Seminar in Homotopy Theory, November 1985.

Research Papers

1. “ Z/p -Actions on $(S^n)^k$,” Transactions of the American Mathematical Society, 300 (1987), 791-809.
2. “The Free Rank of Symmetry of $(S^n)^k$,” (joint with W. Browder) *Inventiones Mathematicae*, 92 (1988), 431-440.
3. “Cohomological Restrictions on Finite Group Actions,” *Journal of Pure and Applied Algebra*, 54 (1988), 117-139.
4. “Homology Representations of Finite Transformation Groups,” Proceedings of the 1986 Arcata Algebraic Topology Conference, Springer-Verlag Lecture Notes No. 1370 (1989), 15-23.
5. “Cohomological Exponents of ZG -Lattices,” *Journal of Pure and Applied Algebra*, 58 (1989), 1-5.
6. “Torsion in Equivariant Cohomology,” *Commentarii Mathematici Helvetici*, 64 (1989), 401-411.
7. “On the Exponent of Cohomology of Discrete Groups,” *Bulletin of the London Mathematical Society*, 21 (1989) 585-590.
8. “Generalized Tate Homology, Homotopy Fixed-Points and the Transfer,” (joint with R. Cohen and W. Dwyer), Proceedings of the 1988 Evanston Algebraic Topology Conference, *Contemporary Mathematics* 96 (1989), 1-13.
9. “Symmetric Invariants and Cohomology of Groups,” (joint with J. Maginnis and R. J. Milgram), *Mathematische Annalen* 287 (1990), 391-411.

10. “Discrete Groups with Large Exponents in Cohomology,” (joint with J. Carlson), Journal of Pure and Applied Algebra 66 (1990), 111–120.
11. “The Geometry and Cohomology of the Mathieu Group M_{12} ,” (joint with J. Maginnis and R. J. Milgram), Journal of Algebra 139 (1991), 90–133.
12. “Cohomological Non-Vanishing for Modules over p -Groups,” Journal of Algebra 141 (1991), 376–381.
13. “Euler Characteristics and Cohomology of p -Local Discrete Groups,” Journal of Algebra 149 (1992), 183–196.
14. “On the K -theory of the Classifying Space of a Discrete Group,” Mathematische Annalen 292 (1992), 319–327.
15. “ A_5 -Invariants and the Cohomology of $L_3(4)$ and Related Extensions,” (joint with R. J. Milgram), Proceedings of the London Mathematical Society 66, Part 1 (1993), 187–224.
16. “On the Geometry and Cohomology of Finite Simple Groups,” Proceedings of the 1990 Barcelona Topology Conference, Springer-Verlag Lecture Notes in Mathematics 1509 (1992), 1–9.
17. “Representations and K -theory of Discrete Groups,” Bulletin of the American Mathematical Society Vol.28, No.1 (1993), 95–98.
18. “Characters and K -theory of Discrete Groups,” Inventiones Mathematicae 114 (1993), 489–514.
19. “Invariants and Cohomology of Groups,” (joint with R. J. Milgram), Boletín Sociedad Matemática Mexicana (Adem Memorial Volume), Vol. 37 (1995), 1–22.
20. “The Cohomology of the Mathieu Group M_{22} ,” (joint with R. J. Milgram), Topology, Vol. 34 No. 2 (1995), 389–410.
21. “Discrete Groups, Grothendieck Rings and Families of Finite Subgroups,” Contemporary Mathematics Volume 188 (1995), 1–23.
22. “Linear Maps over Abelian Group Algebras,” (joint with R. G. Swan), Journal of Pure and Applied Algebra 104 (1995) Vol.1 1–7.
23. “The Subgroup Structure and Mod 2 Cohomology of O’Nan’s Sporadic Simple Group,” (joint with R. J. Milgram), Journal of Algebra 176 (1995), 288–315.
24. “The Mod 2 Cohomology Rings of Rank 3 Simple Groups are Cohen Macaulay,” (joint with R. J. Milgram), Annals of Mathematics Studies Vol.138 (1995) 3–13.
25. “Automorphisms and Cohomology of Discrete Groups,” Journal of Algebra 182 (1996), 721–737.
26. “The Cohomology of the McLaughlin Group and Some Associated Subgroups,” (joint with R. J. Milgram), Mathematische Zeitschrift Vol. 224 No. 4 (1997) 495–517.
27. “Essential Cohomology of Finite Groups,” (joint with D. Karagueuzian), Commentarii Mathematici Helvetici 72 (1997) 101–109.

28. “Elementary Abelian Groups Acting on Products of Spheres,” (joint with D. J. Benson), *Mathematische Zeitschrift* 228 (1998), 705–712.
29. “On the Cohomology of $SL_2(Z[1/p])$,” (joint with N. Naffah), *London Mathematical Society Lecture Note Series* 252, pp. 1–9 (1998), Cambridge University Press.
30. “Buildings, Groups Extensions and Cohomology of Congruence Subgroups,” *Contemporary Mathematics*, Volume 220, pp. 1–15 (1998).
31. “Periodic Cyclic Cohomology of Group Rings,” (joint with M. Karoubi), *Comptes Rendus de l’Academie des Sciences (Paris)*, t. 326, Série I, pp. 13–17, 1998.
32. “The Cohomology of the Lyons Group and Double Covers of the Alternating Groups,” (joint with D. Karagueuzian, R. J. Milgram and K. Umland), *Journal of Algebra* 208, pp. 452–479 (1998).
33. “Topological Models and the Cohomology of Galois Groups,” (joint with Karagueuzian and Minac), *Comptes Rendus de l’Academie des Sciences (Paris)*, t. 326, Série I, pp. 919–924 (1998).
34. “On Some Examples of Group Actions and Group Extensions,” (joint with E. Yalcin), *Journal of Group Theory* 2, pp. 69–79 (1999).
35. “On the Cohomology of Galois Groups Determined by Witt Rings,” (joint with Karagueuzian and Minac), *Advances in Mathematics* 148, pp. 105–160 (1999).
36. “On Spaces with Periodic Cohomology,” (joint with Jeff Smith), *Electronic Research Announcements of the AMS*, Vol. 6, pp. 1–6 (2000).
37. “Field Theory and the Cohomology of Some Galois Groups,” (joint with Gao, Karagueuzian and Minac), *Journal of Algebra* 235, pp. 608–635 (2001).
38. “On the Cohomology of Central Frattini Extensions,” (joint with J. Pakianathan), *Journal of Pure and Applied Algebra* 159, pp. 1–14 (2001)
39. “The Cohomology of the Sylow 2-subgroup of the Higman–Sims Group,” (joint with Carlson, Karagueuzian and Milgram), *Journal of Pure and Applied Algebra* 164, pp. 275–305 (2001)
40. “Periodic Complexes and Group Actions,” (joint with Jeff Smith), *Annals of Mathematics* 154, pp. 407–435 (2001).
41. “Twisted Orbifold K -theory,” (joint with Y.Ruan), *Communications in Mathematical Physics* 237, pp. 533–556 (2003).
42. “On Representations and K -theory of the Braid Groups,” (joint with D.Cohen and F.Cohen), *Mathematische Annalen* 326, pp. 515–542 (2003).
43. “Constructing and Deconstructing Group Actions,” *Contemporary Mathematics* 346, pp. 1–8 (2004).
44. “Fixity and Free Group Actions on Products of Spheres,” (joint with J.Davis and Ö.Ünlü), to appear in *Commentarii Mathematici Helvetici*.
45. “Toroidal Orbifolds, Gerbes and Group Cohomology,” (joint with J.Pan), preprint 2004.

Books:

Cohomology of Finite Groups, Springer Verlag Grundlehren Volume 309 (first edition–1994, second edition–2004), joint with R. J. Milgram.

Expository and Review Work

1. “*El trabajo de José Adem en la topología algebraica*,” based on a lecture delivered at José Adem’s memorial conference in Mexico City, June 1991, in the *Collected Works of José Adem*, published by El Colegio Nacional (Mexico) 1993.
2. “*Las Relaciones de Adem*,” *Boletín de la Sociedad Matemática Mexicana* Vol 36 (1991) pp. 1–5.
3. “*Cohomology and Actions of Finite Groups*,” lecture notes based on an invited mini–course given for Topology Conference at PUCI–Rio (Rio de Janeiro, Brazil, January 1992), *Contemporary Mathematics* Volume 161 (1994), pp. 123–141.
4. Book Review: *Cohomological Methods in Transformation Groups* (by C. Allday and V. Puppe), *Bulletin of the AMS*, Vol. 31, No.2 (1994), pp. 254–257.
5. Book Review: *Cohomological Methods in Transformation Groups* (by C. Allday and V. Puppe), *Bulletin of the London Math. Society*, Vol. 27 (1995), pp. 409–410.
6. “*Recent Developments in the Cohomology of Finite Groups*,” *Notices of the American Mathematical Society*, Vol. 44, No. 7 (1997), pp. 806–815.
7. “*Topics in Transformation Groups*,” survey paper in **Handbook of Geometric Topology**, Elsevier (2001), pp. 1–56 (joint with J. Davis).
8. “*Finite Group Actions on Acyclic 2–Complexes*”, Bourbaki Lecture No. 894, in **Astérisque**, Vol. 290 (2003), pp. 1–17.

Graduate Students:

D. Juan–Pineda (Ph.D. 1994), M. Ghazel (Ph.D.1995), E. Berkove (Ph.D.1996), E. Yalcin (Ph.D.1998), J. Ziebarth (Ph.D.2000), T. Vovkivsky (Ph.D. 2001), B. Uribe (Ph.D. 2002), O. Unlu (Ph.D. 2004), C. Dwyer, J. Leida, N. Petrosyan, E. Torres.

Postdoctoral Fellows:

Dikran Karagueuzian, NSF Postdoctoral Fellow U. Wisconsin–Madison 1995–1999.

Research Grants (Principal Investigator):

National Science Foundation Grants “*Cohomology and Actions of Finite Groups*,” (1989–1992, 1992–1995, 2000–2003, 2003–2006).

National Science Foundation Young Investigator Award (1992–1999).

National Security Agency Grant “*Cohomology of Finite Groups and Applications*,” (1997–2000).