

**Proceedings  
of the  
Nineteenth Annual  
Workshop in Geometric Topology**

Calvin College  
Grand Rapids, Michigan  
June 13–15, 2002

2000 *Mathematics Subject Classification.* 57-06

Dedicated to Bob Daverman  
on the occasion of his 60th birthday



## Preface

**The workshop.** The Nineteenth Annual Workshop in Geometric Topology was held at Calvin College, in Grand Rapids, Michigan, on June 13–15, 2002. A list of the participants may be found elsewhere in these proceedings.

The principal speaker for the workshop was Professor Alexander Dranishnikov of the University of Florida. Professor Dranishnikov presented a series of three one-hour lectures titled “Dimension Theory: local and global.” A written transcript of those talks is included in these proceedings. In addition, Professor Jerzy Dydak of the University of Tennessee gave an invited one-hour talk on a related topic. His title was “The algebra of dimension theory.”

As always, the workshop included a number of shorter contributed talks by participants and concluded with a problem session. Summaries of several of the contributed talks are included in these proceedings as is a summary of the problems discussed at the problem session.

**The special session.** Robert J. Daverman has been closely associated with the Workshops in Geometric Topology since their inception. He has also played an important role in the mathematical development of the individual organizers of the series. In recognition of Daverman’s many contributions, and on the occasion of his 60th birthday, the organizers planned a special session in his honor. The special session was held after the conclusion of the regular workshop and took place on Saturday, June 15. The following mathematicians gave one-hour talks at the special session; John Bryant, James Cannon, Craig Guilbault, and William Jaco. There was a dinner in Bob’s honor on Saturday evening. The dinner was held in the Hauenstein and Pfeiffer Rooms at the Frederik Meijer Gardens.

**Support.** The workshop received its primary financial support from the National Science Foundation under grant number DMS-0104325. In addition, Calvin College provided support for the workshop and the University of Tennessee supported the special session on Saturday.

**Organizers.** The workshops are organized by Fredric Ancel, University of Wisconsin-Milwaukee; Dennis Garity, Oregon State University; Craig Guilbault, University of Wisconsin-Milwaukee; Frederick Tinsley, Colorado College; Gerard Venema, Calvin College; and David Wright, Brigham Young University. The organizers serve as editors of these proceedings.

## History of the Workshops in Geometric Topology

Year	Workshop Location	Principal Speaker
2003	Park City, Utah (BYU)	Martin Bridson
2002	Calvin College	Alexander Dranishnikov
2001	Oregon State University	Abigail Thompson
2000	Colorado College	Robert Gompf
1999	University of Wisconsin-Milwaukee	Robert Edwards
1998	Park City Utah (BYU)	Steve Ferry
1997	Oregon State University	James Cannon
1996	Colorado College	Michael Freedman
1995	University of Wisconsin-Milwaukee	Shmuel Weinberger
1994	Brigham Young University	Michael Davis
1993	Newport, Oregon (OSU)	John Bryant
1992	Colorado College	Mladen Bestvina
1991	University of Wisconsin-Milwaukee	Andrew Casson
1990	Oregon State University	Robert Daverman
1989	Brigham Young University	John Luecke
1988	Colorado College	John Hempel
1987	Oregon State University	Robert Edwards
1986	Colorado College	John Walsh
1985	Colorado College	Robert Daverman
1984	Brigham Young University	none

## List of Participants

Ancel, Ric University of Wisconsin-Milwaukee	Daverman, Bob University of Tennessee
Andrist, Kathy Utah Valley State College	Dobrowolski, Tadek Pittsburg State University
Bass, Charles Mercer Engineering Research Center	Dranishnikov, Sasha University of Florida
Bedenikovic, Tony Bradley University	Dydak, Jurek University of Tennessee
Bell, Greg University of Florida	Edwards, Bob UCLA
Born, Steve University of St. Francis	Fabel, Paul Mississippi State University
Britton, Paul University of Wisconsin-Milwaukee	Ferry, Steve Rutgers University
Brenton, Lawrence Wayne State University	Fischer, Hanspeter Ball State University
Brodsky, Nikolai University of Saskatchewan	Floyd, Bill Virginia Tech
Bryant, John Florida State University	Freden, Eric Southern Utah University
Cannon, Jim Brigham Young University	Garity, Dennis Oregon State University
Clark, Tom Calvin College	Guilbault, Craig University of Wisconsin-Milwaukee
	Halverson, Denise Brigham Young University

Henderson, Jim Colorado College	Rubin, Leonard University of Oklahoma
Hughes, Bruce Vanderbilt University	Sanders, Bud McMurry University
Im, Young Ho Pusan National University	Schori, Dick Oregon State University, University of Nevada Las Vegas, University of Nevada Reno
Ivanov, Nikolai Michigan State University	Taylor, Tara Dalhousie University
Jaco, William Oklahoma State University	Thickstun, Tom Southwest Texas State University
Johnston, Heather Vassar College	Thurston, Paul Hiwire Inc.
Kim, Minjung Kyungpook National University	Tinsley, Fred Colorado College
Kim, Yongkuk Kyungpook National University	Turner, Jim Calvin College
Koyama, Akira Osaka Kyoiku University	van Groningen, Anthony University of Wisconsin-Milwaukee
Kranjc, Marko Western Illinois University	Vasilivska, Violeta University of Tennessee
Liem, Vo Thanh University of Alabama	Venema, Gerard Calvin College
May, Maggie University of Wisconsin-Milwaukee	Walsh, John Cleveland State University
McDaniel, Mike Aquinas College	Winters, Bobby Pittsburg State University
Parry, Walter Eastern Michigan University	Wright, David Brigham Young University
Pronk, Dorette Dalhousie University	
Radcliffe, David University of Wisconsin-Milwaukee	



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