

Proceedings
of the
Twenty-First Annual
Workshop in Geometric Topology

University of Wisconsin–Milwaukee
Milwaukee, Wisconsin
June 10-12, 2004

Preface

The Twenty-First Annual Workshop in Geometric Topology was held at the University of Wisconsin–Milwaukee on June 10-12, 2004. A list of the participants can be found later in these proceedings.

The principal speaker for the workshop was Professor Peter Teichner of the University of California, Berkeley. Professor Teichner presented a series of three one-hour lectures titled “New obstructions for embedding 2-spheres into 4-manifolds.” Some details about these lectures are included later in these proceedings.

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

Support. Financial support for the workshop was provided by the National Science Foundation (Grant DMS-0407583) and by the University of Wisconsin–Milwaukee.

Organizers. The Workshops in Geometric Topology 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 also serve as editors of these proceedings.

History of the Workshops in Geometric Topology

| Year | Workshop Location | Principal Speaker |
|-------------|------------------------------------|--------------------------|
| 2005 | Colorado College | Thomas Farrell |
| 2004 | University of Wisconsin–Milwaukee | Peter Teichner |
| 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 | Park City, Utah (BYU) | Michael Davis |
| 1993 | Oregon State Univ. and Newport, OR | 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 (2004)

| | |
|---------------------|---|
| Ric Ancel | University of Wisconsin-Milwaukee |
| Anthony Bedenokovic | Bradley University |
| Nikolay Brodskiy | University of Tennessee |
| James Cannon | Brigham Young University |
| Stephen Chan | University of California, Los Angeles |
| James Conant | University of Tennessee |
| Greg Conner | Brigham Young University |
| Bob Daverman | University of Tennessee |
| Tadek Dobrowolski | Pittsburg State University |
| Robert Edwards | University of California, Los Angeles |
| Steve Ferry | Rutgers University |
| Hanspeter Fischer | Ball State University |
| Tom Fleming | University of California, San Diego |
| Paul Fonstad | University of Wisconsin-Milwaukee |
| Dennis Garity | Oregon State University |
| Kailash Ghimire | Oregon State University |
| Brent Gorbutt | Brigham Young University |
| Craig Guilbault | University of Wisconsin-Milwaukee |
| Yusuf Z. Gurtas | Suffolk County CC |
| Denise Halverson | Brigham Young University |
| Rena Hull | University of California, Santa Barbara |
| Margaret May | University of Wisconsin-Milwaukee |
| Mark Meilstrup | Brigham Young University |
| Atish Mitra | University of Tennessee |
| Christopher Mooney | University of Wisconsin-Milwaukee |
| Boris Okun | University of Wisconsin-Milwaukee |
| David Radcliffe | University of Minnesota |
| Konstantin Salikhov | University of Maryland |
| Carrie Schermetzler | University of Wisconsin-Milwaukee |
| Rob Schneiderman | Courant Institute |

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List of Participants (continued)

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|-----------------------|------------------------------------|
| Tim Schroeder | University of Wisconsin-Milwaukee |
| David Snyder | Texas State University, San Marcos |
| Peter Teichner | University of California, Berkeley |
| Tom Thickstun | Texas State University, San Marcos |
| Mat Timm | Bradley University |
| Fred Tinsley | Colorado College |
| Anthony Van Groningen | University of Wisconsin-Milwaukee |
| Violeta Vasilevska | University of Tennessee |
| Gerard Venema | Calvin College |
| Shmuel Weinberger | University of Chicago |
| Julia Wilson | SUNY Fredonia |
| Bobby Winters | Pittsburg State University |
| David Wright | Brigham Young University |

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| Dennis Garity, Dušan Repovš, and Matjaž Željko <i>A construction of rigid Cantor sets in R^3 with simply connected complement</i> | 11 |
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