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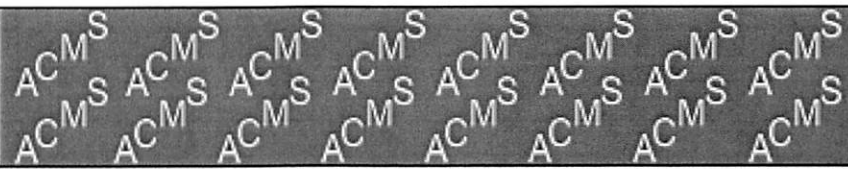
ACMS 2005: Table of Contents

Association of Christians in the Mathematical Sciences

FIFTEENTH CONFERENCE OF
THE ASSOCIATION OF CHRISTIANS IN THE
MATHEMATICAL SCIENCES

Proceedings of the Biennial Conference held at
Huntington University June 1 – 4, 2005

ACMS



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FIFTEENTH CONFERENCE OF
THE ASSOCIATION OF CHRISTIANS IN THE
MATHEMATICAL SCIENCES

Dr. Francis Jones, Editor
Dr. Win Wetherbee, Editor

Proceedings of the Biennial Conference held at
Huntington University June 1 – 4, 2005

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Introduction

The fifteenth biennial conference of the Association of Christians in the Mathematical Sciences was held June 1 – 4, 2005 on the campus of Huntington University, in Huntington, IN. There were 100 participants as well as several family members in attendance.

For a change of pace from the conference sessions, participants enjoyed a banquet followed by a screening and discussion of the movie *A Beautiful Mind*. Informal social time and self-directed exercise opportunities were also available. A tour of the University's new Science Hall was also available to interested persons.

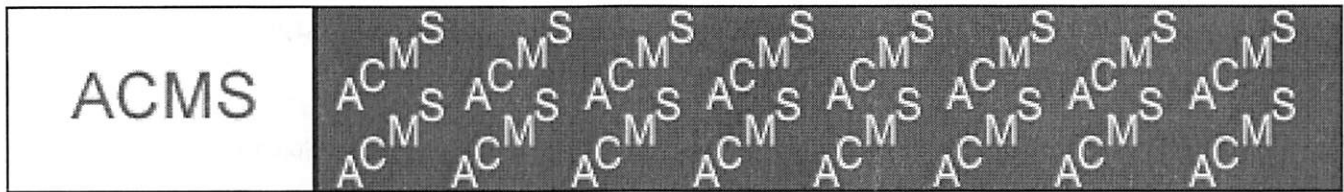
Fernando Q. Gouvêa of Colby College gave two invited addresses in mathematics, and Larry Wall (Perl Foundation) gave an invited address in computer science. Charles Peck of Earlham College presented an extended computer science session and Jeff Lehman of Huntington University conducted a computer science tutorial. There was also a panel discussion on the ACMS and Christian perspectives in mathematics.

There were six groups of contributed talks by the participants, as well as several light gems on the opening night. The six groups were Philosophy and Math, Christian Perspective and Mathematics and Computer Science, History of Mathematics, Mathematics, Computer Science, and Curricular Issues. The conference concluded with a worship service planned by Ray Rosentrater and Patrick Eggleton.

These proceedings include papers submitted by most of the speakers. A full list of the talks is included in the conference schedule.

The conference also was a good opportunity to renew old friendships as well as to make new ones. For us as hosts, it provided the opportunity to help put names with faces. We very much enjoyed hosting the Conference and look forward to attending the next one.

Francis Jones
Win Wetherbee



Association of Christians in the Mathematical Sciences

ACMS Biennial Conference 2005 Schedule
June 1-4, 2005
Huntington University
Huntington, Indiana

Wednesday, June 1

3:30 – 5:30	Arrival and Registration	Roush Hall Lobby
6am – 10pm	Open gym (Racquetball, Pool, Exercise Equipment) (Show your ACMS Name Tag)	Merillat Physical Education Recreation Center (MPERC)
5:30 – 6:30	Dinner	Habecker Dining Commons (HDC) lower level
7:00	Welcome	HDC upper level
7:15 – 8:45	Several short light talks Roberto Bencivenga -- Chaplaincy in a secular institution Russ Howell -- short review of John Byle's book entitled <i>The Divine Challenge</i> . Erich Hauenstein -- <i>The 3 handsome geniuses and the beautiful heiress</i> Charles Ford -- The German Resistance - 60 years Don Josephson -- A Curious Integration of Mathematics and Scrabble Ward Canfield – Korean Language activities	HDC upper level
9:00 – 10:00	Snacks	Roush Lounge

Thursday, June 2

6am – 10pm	Open gym (Racquetball, Pool, Exercise Equipment) (Show your ACMS Name Tag)	MPERC
7:00 – 7:30	Computer Lab Open	Science 164/166
7:30 – 8:30	Breakfast	HDC lower level
8:00 – 9:00	Registration continues	HDC upper level Roush Hall Lobby
8:30 – 9:00	Informal singing or other music Devotions: Matt Lunsford Welcome & announcements	HDC upper level
9:00 – 10:00	Invited address: Fernando Q. Gouvêa - "Was Cantor Surprised?"	HDC upper level
10:00 – 10:15	Break with light refreshments	HDC upper level
10:15 – 11:15	Invited address: Larry Wall	HDC upper level
11:15 – 11:30	Larry Wall Follow-up session	HDC upper level
11:30 – 11:45	Conference Photo	Lawn near HDC
11:45 – 1:15	Lunch ACMS Board Meeting	HDC lower level HDC Forrester Room
11:45 – 1:15	Computer Lab Open	Science 164/166
	Contributed Papers / Parallel Sessions	
1:30 – 2:30	Philosophy and Math 1:30 PM Jonathan Zderad (Mathematics from a World-View Perspective) 2:00 PM Russell W. Howell (Does the Success of Mathematics Defeat Naturalism?)	Science 125
1:30 – 3:00	Christian Perspective and Mathematics 1:30 PM Erich Hauenstein (Investigating Deterministic Chaos in Some Mathematical Models; Ideas and Possible Implications for Christianity and our World) 2:00 PM Gene B. Chase (Bibliography of Christianity & Math) 2:30 PM John Noonan (Mathematics and Understanding of the Nature of God)	Science 124

1:30 – 3:00	<p>History of Math</p> <p>1:30 PM Mary Wagner-Krankel (Integrating Catholic and Marianist Historical Perspectives in a Mathematics Course for Elementary Education Majors)</p> <p>2:00 PM Maria Zack (Integrating the Teaching of the History of Mathematics with Art and Architecture)</p> <p>2:30 PM Charles Ford (Scientific Socialism and the Assault on Religion)</p>	Science 121
1:30 – 3:00	<p>Just Math!</p> <p>1:30 PM Gary Raduns (Determinants and Zero Divisors in Rings of Matrices)</p> <p>2:00 PM Steven Lay (Visualizing the Fourth Dimension)</p> <p>2:30 PM Andrew Simoson (Playing Ball in Space)</p>	Science 122
1:30 – 3:00	<p>Computer Science</p> <p>1:30 PM Charles Peck (Cluster Computing for Computational Science, invited speaker) (55 minutes)</p> <p>2:30 PM Phil Armour (The Five Orders of Ignorance)</p>	Science 175/177
3:00 – 3:30	<p>Break with light refreshments</p> <p>Contributed Papers / Parallel Sessions</p>	Science Hall Atrium
3:30 – 5:00	<p>Philosophy and Math</p> <p>3:30 PM Jim Turner (Some Theological Reflections on the Nature of Mathematical Reasoning)</p> <p>4:00 PM Troy Riggs, Jeremy Case (Mathematics as Poesis: A preliminary project report)</p> <p>4:30 PM Paul Moffet (Jesus, Plato, Math, and Theology)</p>	Science 125
3:30 – 5:00	<p>Christian Perspective and Mathematics</p> <p>3:30 PM Dale McIntyre (Reflections upon the Relationship between Mathematical and Biblical Truth)</p> <p>4:00 PM Doug Phillippy & Angela Hare (Integration of Faith, Learning, and Christian Vocation with First-Year Mathematics Majors) (55 minutes)</p>	Science 124

3:30 – 5:00	History of Math 3:30 PM Sean Bird (James Clerk Maxwell and Why to Read Biographies) 4:00 PM Tim Sipka (VI. 31) 4:30 PM Henry Williams (Theistic Implications of the Pythagorean Music Scale)	Science 121
3:30 – 5:00	Just Math! 3:30 PM Hanna VanderZee (Explicit Null Space of the Discrete Laplacian) 4:00 PM Stephen Brown (The Other Side of the Equation: De-simplification, a Strong Prerequisite for Calculus II) 4:30 PM Dennis Keeler (Online Calculus Homework)	Science 122
3:30 – 4:30	Computer Science 3:30 PM Kim Kihlstrom (Asserting CS != Can't Socialize: Building Community in a Computer Science Program) 4:00 PM Longy O. Anyanwu (Object Information Repository in Christian Theory of Technology)	Science 224
5:00 – 11:00	Computer Lab Open	Science 164/166
5:30 – 7:00	Picnic Dinner	HDC Patio
6:00 – 10:00	Open gym (Racquetball, Pool, Exercise Equipment)	Merillat Physical Education Recreation Center (MPERC)
8:00 – 9:00	Choir Practice	Merillat Centre for the Arts MCA Room 110
8:30 – 9:30	Telescope Viewing (weather permitting)	Observation Deck of the Science Building (3 rd Floor)

Friday, June 3

6am – 10pm	Open gym (Racquetball, Pool, Exercise Equipment) (Show your ACMS Name Tag)	MPERC
7:00 – 7:30	Computer Lab Open	Science 164/166
7:30 – 8:30	Breakfast	HDC lower level
8:30 – 9:00	Informal singing or other music Devotions: Sharon Robbert Welcome & announcements	HDC upper level
9:00 – 10:00	Invited address: Fernando Q. Gouvêa Nicole Oresme and His Mathematics	HDC upper level
10:00 – 10:15	Break with light refreshments	HDC upper level
10:15 – 10:45	Follow up with Fernando Q. Gouvêa	HDC upper level
	Contributed Papers / Parallel Sessions	
11:00 – 11:30	Christian Perspectives and Mathematics Dave Klanderma & Jeffrey Barrett (A Christian Constructivist? The Impact of Worldview on Learning Theories and the Mathematics Education Research Community.)	Science 125
11:00 – 11:30	Curricular Issues Roberto Bencivenga (Do Opposites Attract? Innovation at the Two Ends of the Math Teaching Spectrum.)	Science 121
11:00 – 11:30	Just Math! Michael Stob (Is the Continuum Hypothesis True or False?)	Science 122
11:00 – 11:30	Computer Science Derek Schuurman (Artificial Intelligence: Can We Create Machines in Our Own Image?)	Science 124
11:45 – 1:15	Computer Lab Open	Science 164/166
11:45 – 1:15	Lunch	HDC lower level

Contributed Papers / Parallel Sessions

- 1:30 – 3:00 **Christian Perspective and Mathematics** Science 125
- 1:30 PM Saburo Matsumoto (Call for a Non-Euclidean, Post-Cantorian Theology)
- 2:00 PM Tim Rogalski (Blaise Pascal – Mathematician, Mystic, and Disciple)
- 2:30 PM Gene B. Chase (Filtering Spam and Filtering the Bible)
- 1:30 – 3:00 **Curricular Issues** Science 121
- 1:30 PM Darrell E. Allgaier (A Christian Perspective for a First Course in Calculus)
- 2:00 PM Dave Klanderman & Gary Talsma (Writing Math Lessons that Integrate Christian Beliefs: The Kuyers Institute Grant Project)
- 2:30 PM David E. Boliver (Reaching Out to the Entire Campus through Mathematics)
- 1:30 – 3:00 **Just Math!** Science 122
- 1:30 PM David Neuhouser (C. S. Lewis and Mathematics)
- 2:00 PM Jeremy Case (Mathematics on Stage)
- 2:30 PM David Horrocks (Playing Nim on a Simplicial Complex)
- 1:30 – 3:00 **Computer Science** Science 175/177
- 1:30 PM Jeff Lehman (Exploring the World of Knoppix – A tutorial 55 minutes)
- 2:30 PM Cary G. Gray (Technology and Formation: How Does Computing Shape Us?)

3:00 – 4:00	Tour of Science Building	Science Hall Atrium
3:00 – 6:00	Free time	
3:00 – 10:00	Open gym (Racquetball, Pool, Exercise Equipment)	Merillat Physical Education Recreation Center (MPERC)
4:00 – 5:00	Choir Practice	MCA 110
5:00 – 11:00	Computer Lab Open	Science 164/166
6:00 – 6:30	Punch & Reception	HDC upper level
6:30 – 8:00	Banquet	HDC upper level
8:00 – 10:30	Movie & discussion – A Beautiful Mind	Norm’s Place

Saturday, June 4

7:30 – Noon	Computer Lab Open	Science 164/166
7:30 – 8:30	Breakfast	HDC lower level
8:30 – 8:45	Singing and announcements	HDC upper level
8:45 – 9:15	Business Meeting	HDC upper level
9:15 – 10:30	Panel Discussion: James Bradley, Paul Zwier, Jonathan Zderad, Troy Riggs (ACMS & Christian perspective on mathematics)	HDC upper level
10:30 – 11:00	Break with light refreshments	HDC upper level
11:00 – 12:00	Worship Speaker: Patrick Eggleton, Huntington university (Called to wash feet)	HDC upper level
12:00	Conference ends	
Noon to 2:00	Room Check-Out (Check-out will be available all morning as well.)	Roush Hall Lobby