

61<sup>st</sup> Annual Meeting  
American Scientific Affiliation &  
Canadian Scientific & Christian Affiliation

# Embedding Christian Values in Science & Technology

Calvin College  
Grand Rapids, Michigan  
July 28-31, 2006

# Embedding Christian Values in Science and Technology

*“...be transformed by the renewing of your minds, so that you may discern what is the will of God—what is good and acceptable and perfect.”*

-Romans 12:2b

Science and technology are driven and guided by many different values. The Christian faith traditions place special values on humans as "created in the image of God," our role to be caretakers and stewards of God's creation, the responsible use of science and technology, care for the poor, the pursuit of justice, and the promotion of Christian virtues with moral discernment. How ought Christian values such as these be expressed in science and technology in the academy (from the classroom to research & scholarship), business and industry, society, and public policy?

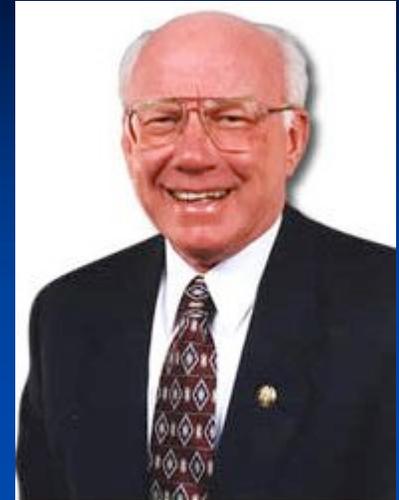
# Plenary Speakers (confirmed)



## ■ Celia Deane-Drummond, Ph.D., Ph.D.

- Ph.D. in botany and Ph.D. in theology
  - Professor of Theology and Religious Studies, University College Chester, Chester, United Kingdom
  - science & theology, environmental ethics, & creation theology
  - author: *Creation Through Wisdom: Theology and the New Biology* (T&T Clark, 2000); *Biology and Theology Today: Exploring the Boundaries* (SCM Press, 2001); *The Ethics of Nature* (Blackwells, 2004); *Brave New World: Theology, Ethics, and the Human Genome* (T&T Clark, 2005); *Genetics and Christian Ethics* (Cambridge University Press, due in 2006); and *Wonder and Wisdom: Conversations in Spirituality, Science and Theology* (due in 2006)
- speaking on how Christian values might guide our thinking about nature, the environment, and scientific research

# Plenary Speakers (confirmed)



- Congressman Vernon J. Ehlers, Ph.D.
  - U.S. Representative from Michigan's Third District
  - nuclear physicist, taught at Calvin College, ASA Fellow
  - held elected offices to Kent County Commission, Michigan House of Representatives, and Michigan Senate
  - serves on Science & Technology Subcommittee and oversees Science Education
  - co-author of two books on environmental stewardship
- speaking on Christian values and the use of science in making public policies

# Plenary Speakers (confirmed)



## ■ Rudolf Jaenisch, M.D.

- Whitehead Institute of Biomedical Research
- Professor of Biology, MIT
- pioneer in creating transgenic mouse models of human disease, cancer research, cloning and stem cells
- Fellow in the American Academy of Arts and Sciences, the American Academy of Microbiology, and the National Academy of Sciences
- recently used altered nuclear transfer (ANT) to produce of mouse embryonic stem cells from defective blastocysts

## ■ speaking on the science of stem cells

- What is currently being done? What appears feasible in the next few years? What remains elusive or at best in the distant future?

# Plenary Speakers (confirmed)



- Karen Lebacqz, Ph.D.
  - Ph.D. in theological ethics
  - 2005-06 Bioethicist-in-Residence, Yale University Interdisciplinary Center for Bioethics
  - ordained minister in United Church of Christ; former chair of Ethics Advisory Committee of Geron Corporation; former President of the Society of Christian Ethics; served on National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research
  - author: *Professional Ethics: Power and Paradox* (Abingdon, 1985); *Six Theories of Justice: perspectives from philosophical and Theological Ethics* (Augsburg, 1986); *Word, Worship, World and Wonder: Reflections on Christian Living* (Abingdon, 1997)
  - co-editor: *The Human Embryo Stem Cell Debate: Science, Ethics, and Public Policy* (MIT Press, 2001)
- speaking on bioethical issues with embryonic stem cells and human dignity

Special Symposium  
**Human Stem Cells:  
Science, Ethics & Public Policy**

- sponsored by the ASA Bioethics Commission
- Hessel Bouma III (Biology Department, Calvin College) & James C. Peterson (McMaster University Divinity College), coordinators
- papers in this symposium will focus on one of three areas:
  - What is the state-of-the-art for the derivation and application of stem cells from sources such as cord blood, adult cells or embryos?
  - How can a Christian perspective guide us through the ethical issues surrounding the derivation of stem cells?
  - What should be public policy in regard to stem cells?

Special Symposium

# Stewardship, Conservation, and Land Management: A Cross-Campus Checkup

- sponsored by the ASA Global Resources & Environmental Stewardship Commission
- John Wood (Biology Department, Kings University College) & Randall Van Dragt (Biology Department, Calvin College, coordinators)



Bunker Interpretive Center  
(built “green” to LEED Gold standard)

- will explore common principles and practices that can make college campuses effective centers of land stewardship
- to be held in the Bunker Interpretive Center adjacent to Calvin’s 90-acre Nature Preserve and the Prince Conference Center

Special Symposium

# Science and Technology in Service to the Poor

- Martin Price (ECHO Executive Director) & Peter Bosscher (Department of Civil and Environmental Engineering, University of Wisconsin—Madison), coordinators
- Science and technology have much to offer to improve nutrition, access to clean water and sanitation, sources of suitable energy, more efficient means of producing goods, production of better housing, and delivery of healthcare. Papers in this symposium will focus on ways in which science and technology can be applied simply and economically to help meet the needs of the poor, the Christian values that motivate us to make this a priority, and the fruits of such work.

Special Symposium

# The Teaching of Origins: Case Studies and Pedagogy

- Dorothy Chappell (Dean of Natural Sciences, Wheaton College) & Uko Zylstra (Dean of Natural Sciences, Calvin College), coordinators
- How did the cosmos—the universe, life in general, and human life in particular—come to be? Papers in this symposium will focus on case studies and pedagogies for successfully teaching aspects of origins.

Special Symposium

# Science in Context: “Putting Science in Its Place”

- Ted Davis (History of Science, Messiah College) & Arie Leegwater (Dept. of Chemistry & Biochemistry, Calvin College), coordinators
- When scientific practice is shaped by local conditions, it no longer is considered to be a universal undertaking but is affected by site, region and circulation. Papers in this symposium will focus on the common social analysis of science that has contributed to the “science wars,” and whether such analyses probe deep enough and do justice to the commitments of scientists

Special Symposium

# Christian Values in Biotechnology

- David Koetje (Biology Department, Calvin College) and Craig Story (Biology Department, Gordon College), coordinators
- papers in this symposium will seek to address from Christian perspectives the broad philosophical issues as well as the science, ethics and public policy of the creation and use of transgenic and chimeric organisms and the development and applications of genetic testing

Special Symposium

# Christian Values in Engineering, Technology, and the Physical Sciences

- Ruth Douglas Miller (Dept. of Electrical and Chemical Engineering, Kansas State University) & Steve VanderLeest (Dept. of Engineering, Calvin College), coordinators
- Papers in this symposium will address questions such as how does the Christian faith affect perceptions and practices in engineering, technology and the physical sciences? It will include topics such as whistle-blowing, environmental ethics, engineering design from a Christian worldview, technological norms such as justice and stewardship, appropriate technology and sustainable technology

## General and Poster Sessions

# Research and Scholarship

- Hessel Bouma III (2006 ASA Annual Meeting Program chair), coordinator
- The ASA is committed to promoting all research and scholarship by its members. Research and scholarship not fitting into one of the special symposia and particularly research and scholarship by Early Career scientists, graduate students and undergraduate students are welcomed as papers in general sessions to be organized around common themes or posters in a general poster session
- Early Career scientists, graduate students and undergraduate students are eligible for special scholarships to support their participation

Special Symposium

# Undergraduate Students' Spring and/or Summer Research Poster Session

- Steve Matheson (Biology Department, Calvin College), coordinator
- this special poster symposium will feature research in the sciences and engineering by undergraduate students performing their research during the spring or summer of 2006
- undergraduate students are eligible for special scholarships to support their participation

# Field Trips



## Ecology & Geomorphology of Sand Dunes at P.J. Hoffmaster State Park on Lake Michigan

- 1,130 acre park with 2½ miles of shoreline with sand dunes & remarkable stand of virgin red and white pine tree forest on Lake Michigan's eastern shore
- guided walks featuring sand dune 1) plant ecology and 2) geomorphology
- swimming & hiking
- led by Deanna van Dijk (geomorphologist) & David Warners (plant ecologist & systematist)



# Field Trips



Tropical Conservatory

## Meijer Gardens & Sculpture Park

- 15,000 sq.ft. Lena Meijer Conservatory
- 30+ acre Sculpture Park
  - Leonardo da Vinci's horse
- led by David Koetje (plant physiologist)

*The American Horse, 1998*

### Woodland Shade Garden



# Field Trips



## Gerald R. Ford Presidential Museum

- permanent exhibits: 1970s Gallery, Constitution Crisis, Watergate Gallery, Young Jerry Ford, At Work in the Oval Office, Leadership in Diplomacy, Cabinet Room
- temporary exhibits & special events (t.b.a.)



August 9, 1974



Oval Office replica

# Field Trips

## Urban Geography

- a riding and walking tour of Grand Rapids
  - downtown revitalization—past & present
  - new urbanism
  - neighborhood identities
  - medical mile
- led by Henk Aay (geographer)



Heritage Hill Historical District



Dams & Historic Bridges on the Grand River



Van Andel Institute

# Conference Travel

## ■ by air

- Gerald R Ford International Airport (GRR) is 5 miles from Calvin College
  - served by: American Eagle/American Airlines, Continental Express, Delta Airlines/Delta Connection, Northwest Airlines, Midwest Connect, United/United Express, US Airways Express
  - direct connections to/from: Atlanta, Chicago, Cincinnati, Cleveland, Dallas/Fort Worth, Detroit, Houston, Memphis, Milwaukee, Minneapolis, New York (LaGuardia), Newark, Orlando, Philadelphia, Tampa, & Washington, DC

## ■ by car

- Calvin College is less than four miles from I-96 and I-196
- Calvin College is 160 miles from Detroit (I-96)
- Calvin College is 185 miles from Chicago (I-94 & I-96)

## ■ by train or bus

- Amtrak: *The Pere Marquette*—daily service Chicago/Grand Rapids
- Greyhound Lines

# Conference Accommodations

- Prince Conference Center

- quality hotel features



69 rooms with either king or two queen beds

- Residence Halls



- numerous hotels, motels & restaurants within 1-4 miles of campus/conference



Commons Dining Hall

# Tentative Conference Schedule

Friday, July 28th

Saturday, July 29th

Sunday, July 30th

Monday, July 31st

|      | Friday, July 28th                               | Saturday, July 29th  | Sunday, July 30th  | Monday, July 31st  |
|------|---|--|--|--|
| A.M. | Optional<br>Field<br>Trips<br>&<br>Campus Tours | Plenary Session #2<br>-----<br>3-4 Concurrent<br>Symposia Sessions | Ecumenical<br>Worship Service &<br>Fellowship<br>-----<br>Plenary Session #3 | Plenary Session #4<br>-----<br>3-4 Concurrent<br>Symposia Sessions |
| P.M. |   | 3-4 Concurrent<br>Symposia Sessions                                | 3-4 Concurrent<br>Symposia Sessions  |  |
|      | Opening Picnic                                  | Banquet  | supper   |  |
|      | Plenary Session #1                              | ASA Commissions &<br>Affiliations Meetings?                        | ASA Business<br>Meeting?   |  |

# 2006 ASA/CSCA Annual Meeting

July 28-31, 2006 @ Calvin College

## Theme

“Embedding Christian Values in Science & Technology”

- Program chair: Hessel (“Bud”) Bouma III
  - Department of Biology, Calvin College
  - [boum@calvin.edu](mailto:boum@calvin.edu)
- Local Arrangements chair: Larry Molnar
  - Department of Physics & Astronomy, Calvin College
  - [lmolnar@calvin.edu](mailto:lmolnar@calvin.edu)
- Visit [www.asa3.org](http://www.asa3.org) for complete Call for Papers, abstract guidelines, deadlines, scholarships & latest conference information