

CALL FOR PAPERS AND POSTERS

The 61st Annual Meeting
of the
American Scientific Affiliation
July 28–31, 2006
Calvin College
Grand Rapids, MI 49546

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 and scholarship), business and industry, society, and public policy?

CONFIRMED PLENARY SPEAKERS

Celia Deane-Drummond, Ph.D. (botany), Ph.D. (theology)
University College Chester, Chester, United Kingdom

Congressman Vernon J. Ehlers, Ph.D. (physics)
Michigan’s Third District, U.S. House of Representatives

PLANNED SYMPOSIA

- Human Stem Cells: Science, Ethics & Public Policy
- Stewardship, Conservation and Land Management: A Cross-Campus Checkup
- Science and Technology in Service to the Poor
- Models for the Teaching of Origins: Case Studies and Pedagogy
- Science in Context: “Putting Science in Its Place”
- Christian Values in Biotechnology
- Christian Values in Engineering, Technology, and the Physical Sciences
- Research and Scholarship General and Poster Sessions
- Undergraduate Students’ Spring and/or Summer Research Poster Session



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Publisher of *Perspectives on Science
and Christian Faith*

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September 30, 2005

Dear ASA and CSCA members and potential members,

I invite you to submit an abstract for a paper or poster presentation for our 61st Annual Meeting to be held July 28–31, 2006, on the beautiful campus of Calvin College in Grand Rapids, Michigan.

Proposals are welcome on all topics related to science and the Christian faith, but particularly on papers dealing with the primary theme of the conference, *Embedding Christian Values in Science and Technology*. This engaging conference includes prominent plenary session speakers, several symposia, and general and poster sessions, some particularly geared to early career scientists, and graduate and undergraduate students. The conference will be preceded by optional field trips during the day on Friday, July 28, for people desiring to arrive early to explore facets of west Michigan.

On the following pages are descriptions of the planned symposia and general and poster sessions, instructions and deadlines for submitting proposed abstracts, and scholarship information for early career scientists and graduate and undergraduate students in the sciences and engineering.

Please share this Call for Papers with interested colleagues and friends. For the most current information on the conference, check the ASA website at www.asa3.org.

Cordially in Christ,

Hessel ("Bud") Bouma III, Ph.D.
2006 ASA Annual Meeting Program Chair
(616) 526-6401
boum@calvin.edu

REQUIREMENTS, GUIDELINES AND DEADLINES FOR SUBMISSION OF PROPOSED ABSTRACTS

1. Regular contributions (papers and posters) must be submitted as abstracts of 300–350 words. Persons with internet access are expected to use the online submission form available at www.asa3.org and the link to the 2006 ASA Annual Meeting. Persons without internet access may request a Program Response Form from the ASA office: ASA, PO Box 668, Ipswich, MA 01938 (or 978-356-5656); mailed proposals must be postmarked no later than the deadline for submission of proposed abstracts (see below) and must include the following information as a header: Name, Address, Phone Number, and E-mail address (if any).
 - A. Your abstract should emphasize what is new and important in your presentation and contain as much detail of your work as possible within the 300–350-word limit. Your abstract and presentation should be intelligible and clear to non-specialists.
 - B. Early career scientists (within the first three years of having received your most recent degree) and graduate and undergraduate students presenting papers or posters must use the online submission form. You are encouraged to apply for one of the Scholarships for Early Career Scientists and Students in the Sciences and Engineering (see pp. 8–9).
2. Authors may present only one paper but may be included on other multiple-authored papers. All paper proposals will be reviewed and screened for quality and relevance. Limitations of program space may require some individuals submitting requests for an oral paper to present posters; the chair will notify such persons as soon as possible. Papers should be based on the author's area of expertise and experience, though exceptions may be considered for papers of exceptional creativity. Program limitations may require some papers or posters to be rejected, though these authors are strongly encouraged to attend the meeting, as discussions and friendship-building among attendees are highly valued.
3. Contributed oral papers will be accorded a time slot of 20–22 minutes plus 5 minutes for discussion.
4. A separate time and space will be assigned for poster presentations. Authors of posters must follow the detailed instructions on p. 7.
5. To be included in the final program, presenters must register for the meeting when they receive the Registration Brochure and no later than June 1, 2006. (Undergraduate students submitting proposed abstracts for the Undergraduate Students' Spring and/or Summer Research Poster Session will have their abstracts published in an addendum to the final program.)
6. Submit copies of your symposium abstract electronically (a) as an e-mail attachment to your session coordinator(s) and (b) to the ASA office using www.asa3.org and the link to the 2006 ASA Annual Meeting. All abstracts must be postmarked no later than **Monday, February 6, 2006**, with the following two exceptions:
 - Abstracts by early career scientists, graduate or undergraduate students for the Research and Scholarship General and Poster Sessions must be postmarked no later than **Monday, February 28, 2006**. These individuals are eligible and encouraged to apply for one of the Scholarships for Early Career Scientists and Students in the Sciences and Engineering (see pp. 8–9).
 - Abstracts by undergraduate students for the Undergraduate Students' Spring and/or Summer Research Poster Session must be posted by **Thursday, July 13, 2006** (online submission only). These individuals are eligible and encouraged to apply for one of the Scholarships for Undergraduates in the Sciences and Engineering (see pp. 8–9).

PLANNED SYMPOSIA

1. **Human Stem Cells: Science, Ethics, and Public Policy**

Human stem cells have received ever-expanding attention for their benefits to research and their potential to be instrumental in cures for widespread chronic and lethal conditions. How the stem cells are obtained has been contentious. Papers in this symposium will focus on aspects of one of the 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? Sponsored by the ASA Bioethics Commission.

Session coordinators: Hessel Bouma III, Department of Biology, Calvin College, 3201 Burton St. SE, Grand Rapids, MI 49546; (616) 526-6401; boum@calvin.edu; and James C. Peterson, McMaster University Divinity College, 1280 Main Street West, Hamilton, ON L8S 4K1, Canada; (905) 577-4782 ext. 23052; petero@mcmaster.ca

2. **Stewardship, Conservation, and Land Management: A Cross-Campus Checkup**

The undergraduate years are emotionally intense and alumni often report a life-long bond to their campus. This sense of place, especially for the physical space in which this experience grows, has gone largely unexamined. Year after year, on land holdings ranging from a few tens to hundreds and even thousands of acres, colleges and universities are preparing the next generation of leaders for the Church and society. Speakers at this symposium will ask, "What are we doing with the land?" They will consider the barriers and bridges to effective land stewardship on Christian campuses today. Beginning with first principles of stewardship, they will examine the campus space as classroom, laboratory, functional element in the landscape, and testimony to students, the neighborhood, and the world. Focused talks will include case studies and the elements of success, failure, fatigue, and reward in campus land stewardship.

Land-based stewardship activities on campus range from traditional horticultural and landscaping, to nature centers, naturalization projects, quiet gardens, native plant gardens, ecosystem preserves, prairie restorations, constructed and restored wetlands, stream reconstructions, and community-based watershed projects. In the context of these diverse experiences, this symposium will explore common principles and practices that can make Christian college campuses effective centers of land stewardship and models for alumni to follow for their lifetimes in their personal, church, institutional, and community stewardship of land properties.

Session coordinators: John R. Wood, Department of Biology, Kings University College, 9125–50th St., Edmonton, AB T6B 2H3, Canada; (780) 465-3500, ext. 8044; John.Wood@Kingsu.ca; and Randy Van Dragt, Department of Biology, Calvin College, 3201 Burton Street SE, Grand Rapids, MI 49546; (616) 526-6497; vdra@calvin.edu

3. **Science and Technology in Service to the Poor**

Over four billion of the Earth's people live in poverty, usually experiencing a significant reduction in quality of life and life expectancy. Science and technology have much to offer to improve nutrition through better agricultural practices, access to clean water and sanitation, sources of suitable energy, more efficient means of producing goods, production of better housing, and delivery of better healthcare. These endeavors may be undertaken with secular or Christian organizations, or be independent efforts. What are the criteria to be used in selecting research projects if the goal is to help the poor? As followers of Christ, we have a special challenge to help meet the needs of persons who are poor. Papers in this symposium will focus on ways in which science and technology can be applied simply and economically to help meet these needs, the Christian values that motivate us to make this a priority, and the fruits of such work.

Session coordinators: Martin Price, ECHO Executive Director, 17391 Durrance Road, North Fort Myers, FL 33917; (239) 543-3246, ext. 218; mprice@echonet.org; and Peter Bosscher, Department of Civil and Environmental Engineering, University of Wisconsin–Madison, 1415 Engineering Drive, Room 2218, Madison, WI 53706; (608) 262-7245; bosscher@wisc.edu

4. Models for the Teaching of Origins: Case Studies and Pedagogy

How did the cosmos—the universe, life in general, and human life in particular—come to be? Christians, weighing the testimony from Scripture and science, have come to different vantage points. Educators faced with the issues of origins in high schools, colleges and universities—whether secular or faith-based institutions—must decide what to teach and how, while balancing personal convictions with others' viewpoints including those of students, parents, governing boards, and accreditation and certification agencies. Papers in this symposium will focus on case studies and pedagogies for successfully teaching aspects of origins. What are the advantages and disadvantages of courses dedicated to the issues of origins, individually taught or team-taught, single discipline or interdisciplinary? How can this be done? What are the advantages and disadvantages of integrating elements of the issues of origins across the science curriculum? How can this be done? Papers in this symposium may be segregated into educational levels (high school vs. college/university), discipline (physical sciences vs. life sciences), and/or institutional identity (secular/public vs. Christian/private).

Session coordinators: Dorothy Chappell, Dean of the Natural Sciences, Wheaton College, 501 College Avenue, Wheaton, IL 60187; (630) 752-5627; Dorothy.F.Chappell@wheaton.edu; and Uko Zylstra, Dean for the Natural Sciences and Mathematics, Calvin College, 3201 Burton Street SE, Grand Rapids, MI 49546; (616) 526-6442; zylu@calvin.edu

5. Science in Context: “Putting Science in Its Place”

A sociological reading of scientific practice is presently in vogue. When scientific practice is shaped by local conditions, it is no longer considered to be a (the) universal undertaking, but is rather a provincial practice in which site, region, and circulation matter. Science does not transcend particularities; it discloses them. For all the rhetoric that scientific practice is independent of class, politics, gender, race, religion, and much else besides, the history of science belies the fact. The social reading of science, advanced during the past few decades, is in sharp contrast to earlier ways of viewing science as an intellectual enterprise which weaves a universal network of binding theories. Such social analysis has become common coin and has elicited sharp rejoinders reflected in the “science wars.” But does a social analysis of science and a focus on human interests probe deeply enough? Does such an analysis do justice to the “pre-understandings” required before observations are made, or to the “commitments” of scientists? This session will be devoted to such reflections.

Session coordinators: Edward (“Ted”) B. Davis, Box 3030, Messiah College, One College Avenue, Grantham, PA 17027; (717) 766-2511; tdavis@messiah.edu; and Arie Leegwater, Department of Chemistry and Biochemistry, Calvin College, 3201 Burton Street SE, Grand Rapids, MI 49546; (616) 526-6373; leeg@calvin.edu

6. Christian Values in Biotechnology

Scientific developments in the field of genetics over the last several decades have spawned the field of biotechnology that pushes the frontiers of ethics and public policy and calls for careful applications of Christian values. This symposium seeks to address from Christian perspectives the broad philosophical issues (e.g., respect for nature and culture, patenting vs. open source, etc.) 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.

Session coordinators: David Koetje, Department of Biology, Calvin College, 3201 Burton Street SE, Grand Rapids, MI 49546; (616) 526-7047; dkoetje@calvin.edu; and Craig Story, Department of Biology, Gordon College, Wenham, MA 01984; (978) 867-4393; craig.story@gordon.edu

7. Christian Values in Engineering, Technology, and the Physical Sciences

Papers in this symposium should focus on how our common faith affects practice in engineering, technology, and the physical sciences. This includes how we consider and implement the ethical codes of our professions, how we teach engineering and science students, and how we use our engineering and scientific talents to the glory of God by developing technology for the good of humanity, the creation, and the Kingdom. Topics such as whistleblowing, environmental ethics, engineering design from a Christian worldview, technological norms (such as justice and stewardship), appropriate technology, and sustainable technology are all welcome. Discussions of how to satisfy the ABET criterion of instilling in students an understanding of ethical practice would also be appropriate. How does the work we do look different than that of our colleagues who are not Christians? Is there such a thing as a Christian bridge or a Christian computer chip? If there were no Christians in engineering, how would our profession look different? If there were no Christians in astronomy, computer science, geology, or physics, how would our disciplines look different? We look forward to enlightening dialogue in this symposium.

Session coordinators: Ruth Douglas Miller, Department of Electrical and Chemical Engineering, Kansas State University, 261 Rathbone Hall, Manhattan, KS 66506-5204; (785) 532-4596; rdmiller@ksu.edu; and Steve VanderLeest, Department of Engineering, Calvin College, 3201 Burton Street SE, Grand Rapids, MI 49546; (616) 526-6559; svleest@calvin.edu

8. Research and Scholarship General and Poster Sessions

The ASA is committed to promoting all research and scholarship by its members. Research and scholarship, particularly that of early career scientists and graduate and undergraduate students, which does not fit into one of the special symposia above are welcomed as papers in general sessions (to be organized around common themes) or posters in a general poster session. Students who have completed sufficient research to submit a proposal by the Monday, February 28, 2006, deadline, are eligible to apply for one of the Scholarships for Students and Early Career Scientists in the Sciences and Engineering (see pp. 8–9).

9. Undergraduate Students' Spring and/or Summer Research Poster Session

Numerous undergraduate students pursuing degrees in the sciences and engineering are engaging in remarkable spring and summer research through colleges, universities, and research institutions. Much of this work does not commence until after our traditional deadlines for proposals. The work of these undergraduate students with their supervising professors or researchers conducted during the spring and/or summer of 2006 will be featured in a special poster session. The proposal deadline for this session is Thursday, July 13, 2006. Students submitting a proposal may apply for one of the Scholarships for Undergraduates in the Sciences and Engineering (see pp. 8–9).

Session coordinator: Steve Matheson, Department of Biology, Calvin College, 3201 Burton Street SE, Grand Rapids, MI 49546; (616) 526-6143; smatheso@calvin.edu

INSTRUCTIONS FOR POSTER PRESENTATIONS

General Comments

Plan your poster presentation carefully. Keep in mind the advantages of a poster over an oral presentation. Posters are available for an extended period of time. Attendees find the poster sessions a good way to sample many papers, devoting their time in proportion to their interest in the poster topic. Authors and interested viewers have time for much more significant discussion, not the five minutes allotted at the end of oral presentations. Finally, there is no first or last poster presentation on the program!

Specific Guidelines

Posters should be readable by viewers five feet away. The message should be clear and understandable without need for oral explanation; it is not an exhaustive list of your research activities or pages of a scholarly research article. Use of the following guidelines may help the effectiveness of your presentation. With posters, pay careful attention to style, format, color, readability, attractiveness, and showmanship—use pictures, graphs, perhaps a cartoon, etc. effectively.

1. *Rough layout:* Your poster must fit on a 32" x 40" foam core board (no exceptions), preferably in landscape format. Layout should proceed from upper left to lower right in an intuitively logical fashion (or with numbered panels or with clear, connecting arrows between panels). Font should not be smaller than 18 point; 24 point is much better. Place your title at the top of the panel (at least 36 point font) with your affiliation beneath or alongside the title in smaller lettering. Space may require a shorter title; the full title will be on the published abstract.
2. *Content:* Your poster should cover the *key points* of your work, not all the details. Leave the details for discussion with the persons expressing interest in your work. A poster featuring laboratory research should include brief sections functioning as introduction, methods and materials, results, discussion, conclusion(s), and several main references, many as bullet points. A poster featuring a non-laboratory scholarly work should include an introduction, an approach to the problem or question being posed, discussion, conclusion, and several main references. (Written papers are not to be posted as posters.)
3. *Final layout:* The artwork is complete. The text, tables, and graphs are typed but not necessarily enlarged to full size. Now ask: Is the message clear? Do the important points stand out? Is there a balance between words and illustrations? Is there spatial balance? Is the pathway through the poster clear? Resist the temptation to overload the poster as more material may mean less communication. Ask a friend whether what you say and how you say it makes sense. Then put things in final form.

While not a requirement, consider having your poster printed as a single, 32" x 40" paper. Many academic and research institutions have such printers. (Commercial printers such as Kinkos also offer these services, though at moderate expense.) If you are traveling only a short distance or by private car, you may have your poster mounted in advance on foam board, but it must not be larger than 32" x 40". Alternatively, the unmounted 32" x 40" printed poster can be carefully rolled up and safely transported in a cardboard mailing tube. You may print your poster in smaller panels.

4. *Presentation:* You will be provided with a 32" x 40" foam core board, mounting clips for your poster, and a display easel. Have a short statement prepared for those who are interested but have no questions. Stand close by but not directly in front of your poster. Give concise answers to questions; communicate with everyone, not just your friends. Be prepared with extra copies of materials that you would like to share, including business cards.

INFORMATION ON SCHOLARSHIPS FOR EARLY CAREER SCIENTISTS AND GRADUATE AND UNDERGRADUATE STUDENTS IN THE SCIENCES AND ENGINEERING

We invite early career scientists (within the first three years of receiving your latest degree), and graduate and undergraduate students to participate in the 61st ASA Annual Meeting, July 28–31, 2006, on the campus of Calvin College in west Michigan.

The ASA Annual Meeting provides an opportunity to meet professionals in your field who share your Christian faith; to hear prominent plenary speakers; to participate in the symposia, paper, or poster sessions; to give a paper or poster yourself; to network with other Christians from a wide variety of colleges, universities, and research institutions; and to explore how to integrate your faith with your discipline. This is an excellent opportunity to share your research with Christian colleagues. Your presentation can be listed on your resumé as a paper or poster presented at a national meeting (with an international audience). It is a professional activity that strengthens your applications for further training, grants, or career advancement.

The meeting also promises to be great fun in a beautiful place. Field trips and gatherings for emerging scientists will take advantage of the location. So, come join us! To encourage and enable your participation, a number of ASA members have graciously provided funding for a limited number of scholarships. An application form is on the following page.

There are a limited number of three levels of scholarships available:

1. **Scholarships for Early Career Scientists and Students in the Sciences and Engineering** are available to all early career scientists and graduate and advanced undergraduate students (who have already done considerable research by the February 28 proposal deadline) submitting a proposed abstract for a presentation or poster in any of the six planned special symposia or the Research and Scholarship General or Poster Session. These scholarships will cover registration, room (at double occupancy dormitory rate, if needed) and board at the conference for first-time presenters. Individuals who have received one of these scholarships previously may apply for a second scholarship that will fund one-half their registration, room (at double occupancy dormitory rate, if needed) and board. Your deadline for submitting your proposed abstract and applying for one of these scholarships is Monday, February 28, 2006.
2. **Scholarships for Undergraduates in the Sciences and Engineering** are available to undergraduate students only (performing most of their research and scholarship in the spring and summer of 2006) submitting a proposed abstract for a poster in the Undergraduates Students' Spring and/or Summer Research Poster Session. These scholarships will cover registration and one-half the cost of room (at double occupancy dormitory rate, if room is needed) and board. Your deadline for submitting your poster proposed abstract and applying for one of these scholarships is Thursday, July 13, 2006.
3. **Scholarships for Undergraduates in the Sciences and Engineering** who would like to attend but are not presenting a paper or poster are eligible for scholarships covering the cost of registration. The scholarship application deadline is Thursday, July 13, 2006.

APPLICATION FOR SCHOLARSHIP AID

to participate in the 61st ASA Annual Meeting
July 28–31, 2006, at Calvin College, Grand Rapids, MI

Early career scientists (within three years of receiving their latest degree) and graduate students submitting a proposed abstract may apply for scholarship aid; undergraduate students may apply for whichever of the three levels of scholarship aid they qualify. A limited number of scholarships are available according to the terms listed on the previous pages.

To be considered for financial aid, mail or FAX this form to the ASA office (ASA, PO Box 668, Ipswich, MA 01938; FAX: (978) 356-4375) immediately after submitting your abstract electronically. Applications for the **Scholarships for Early Career Scientists and Students in the Sciences and Engineering** must be postmarked no later than Monday, February 28, 2006. Applications for the **Scholarships for Undergraduates in the Sciences and Engineering** must be postmarked no later than Thursday, July 13, 2006. Scholarship recipients must join the ASA and plan to participate in the entire meeting. An annual ASA student membership is \$20; an annual full membership is \$60. See www.asa3.org for an online membership application.

| YOUR INFORMATION | SUBJECT AREA OF YOUR PAPER (check primary area) |
|-------------------------|--|
| Name: _____ | |
| Institution: _____ | <input type="checkbox"/> astronomy/cosmology |
| Address: _____ | <input type="checkbox"/> biochemical/molecular |
| City, State, Zip: _____ | <input type="checkbox"/> biological sciences |
| E-mail: _____ | <input type="checkbox"/> chemistry/physics |
| Cell phone #: _____ | <input type="checkbox"/> engineering/technology |
| Summer address: _____ | <input type="checkbox"/> environment |
| City, State, Zip: _____ | <input type="checkbox"/> geology |
| Field of study: _____ | <input type="checkbox"/> history and philosophy of science |
| | <input type="checkbox"/> origins issues |
| | <input type="checkbox"/> science and religion |
| | <input type="checkbox"/> psychology |
| | <input type="checkbox"/> other, specify: _____ |

Please indicate your career status:

- undergraduate student, attending only undergraduate student, presenting
 graduate student post-doctoral researcher
 Early Career Scientist, please specify latest degree and date received: _____

If presenting, preferred format (check one and list title):

- Oral presentation Poster presentation

Title of your proposed abstract: _____

If you are a student, your department chair or supervising professor must sign below:

I affirm that the above information is correct and that the above-named individual is a full-time student.

Signature: _____

Title: _____

Name (printed or typed): _____

Date: _____

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Future ASA Meeting in Conjunction with CiS
Edinburgh, Scotland
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