

THE CENTER FOR
Scholarship
AND FACULTY
Development



THE
TENTH
ANNUAL *Day of*
Common
Learning

Wednesday
October 19, 2011

CELEBRATING THE HARMONY OF FAITH AND SCIENCE

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OPENING PLENARY SESSION 10 A.M.

Welcome

Philip W. Eaton, *President*

Introduction of Keynote Speaker

Les Steele, *Vice President for Academic Affairs*

KEYNOTE ADDRESS

**“Stars, Galaxies, Planets, and Life:
An Amazing Universe to Behold”**

Jennifer Wiseman, Ph.D., *Senior Project Scientist,
NASA Hubble Space Telescope*



Jennifer Wiseman, senior project scientist for NASA's Hubble Space Telescope, has studied star-forming regions of our galaxy using radio, optical, and infrared telescopes. She previously served as chief of the Laboratory for Exoplanets and Stellar Astrophysics at NASA's Goddard Space Flight Center. She also directs the program of Dialogue on Science, Ethics, and Religion for the American Association for the Advancement of Science. Dr. Wiseman earned a B.S. in physics from MIT, discovering comet Wiseman-Skiff in 1987, and a Ph.D. in astronomy from Harvard. She continued her research as a Jansky Fellow at the National Radio Astronomy Observatory and as a Hubble Fellow at Johns

Hopkins University. She has served as a Congressional Science Fellow of the American Physical Society and as a Fellow of the American Scientific Affiliation, a network of Christians in science. She has authored several essays addressing the relationship of astronomy and Christian faith, and frequently gives talks to churches, schools, and campus groups on the excitement of scientific discovery and the complementarity of science and faith.

Closing Announcements

Margaret Diddams, *Director, Center for Scholarship and Faculty Development*

Because of the day's events, all seminars, classes, and labs held before 3 p.m. have been suspended. All classes and labs after 3 p.m. will be held as usual.

Christian Theism and Science in Historical and Philosophical Perspective

Patrick McDonald, *Associate Professor of Philosophy*

Rod Stiling, *Associate Professor of History*

Peterson 303

The modern interactions between the realms of natural science and Christianity are by no means novel. This session will briefly examine and discuss three representative examples: the 13th-century encounter of Christian theologians (especially Aquinas) and the natural philosophy of Aristotle; the 17th-century encounter between the innovative astronomer Galileo and the Catholic Church; and the 19th-century encounter between the Darwinian proposal and the theological and cultural norms of western Christendom. Although historical myths remain, these encounters offer valuable lessons regarding faith, reason, biblical interpretation, nature theology, and the nature of the human person.

Conflict and Harmony Between Science and Faith Throughout Recorded History

Lawrence Gulberg, *Assistant Professor of Chemistry*

Karisa Pierce, *Assistant Professor of Chemistry*

Science 112

Scientists search for natural truths and theologians search for theological truths. As such, have you heard that scientists and Christian believers are always at odds? This session will describe scientific advances throughout recorded history while also quoting people of faith who were responsible for some of those advances. Please come share your thoughts about the intersections of science and faith. God has blessed us with our beautiful and wondrous universe, the properties of which merit the hard work of study and understanding.

Contributions of Women to Science

Janet Bester-Meredith, *Assistant Professor of Biology*

Cara Wall-Scheffler, *Assistant Professor of Biology*

Community Panelists

Otto Miller 109

This session will focus on the scientific contributions of women throughout history. We will begin with a brief overview of two major themes: trends along the career paths of successful female scientists, and whether women are currently underrepresented in science. The panel will include Christian women who are scientists, who will address the roles of mentoring, finding advocates for one's science, identifying fields where women have made inroads, and the role of spousal support in developing a successful scientific career.

C.S. Lewis, Astrobiology and the *Perelandra* Thesis

Bruce Baker, *Assistant Professor of Business Ethics*

Stamatis Vokos, *Professor of Physics*

McKenna 118

This session will consider some of the theological implications of life on other planets. C.S. Lewis paved the way for us with his science fiction trilogy (*Out of the Silent Planet*, *Perelandra*, and *That Hideous Strength*), which tells the story of human encounters with extraterrestrials. A mere 15 years ago, exoplanets (planets in solar systems outside Earth's) were largely unknown outside of science fiction, but today we know of hundreds, and new discoveries are coming quickly. What are the implications for Christians on Earth? In this session we will evaluate the scientific possibilities of Lewis' imaginary exoplanet, *Perelandra*, theologially reflect on the fanciful idea of extraterrestrial souls, and discuss the issues.

Faith and Science: Perspectives From Christian Biologists

Ryan Ferrer, *Assistant Professor of Biology*

Eric Long, *Assistant Professor of Biology*

Charlotte Pratt, *Assistant Professor of Biology*

Demaray 261

What does it mean to be a Christian biologist? How do biologists practice their faith in the classroom, in the laboratory, and in the field? What specific challenges do they face in belonging to a community of faith as well as a wider community of scientists who may not share the same worldview? What should students do to prepare themselves for careers as Christian scientists? Participants at this session will hear from members of SPU's Biology Department, ask questions, and join the discussion.

Free Will: What Is It, Have We Got It, and Does It Matter?

Baine Craft, *Assistant Professor of Psychology and Biology*

Steve Layman, *Professor of Philosophy*

Cremona 101

What is free will? Do humans have it? Does it matter if we don't? In this session we will discuss free will from theological, philosophical, and psychological perspectives. What are the main philosophical views of free will? Does current neuro-psychological research provide compelling evidence that our behavioral choices are not freely made? Is a belief in free will necessary for psychological well-being?

God and the Ultimate Driving Machine: Questions, Questions, Questions

Dale Cannavan, *Assistant Professor of Exercise Science*

Bertona 1

The human body is a unique, intricate structure composed of many parts that interact to produce locomotion. When we are compared against the animal kingdom, we are not the strongest, fastest, or most agile. So what makes us unique, what makes us the ultimate driving machine? Do we look after what we have been given, or do we take advantage of this unique creation? Is our lifestyle affecting the way in which muscles interact so that we no longer move the way we should? This session will explore the sanctity of the human body and movement variability.

How Can I Serve God Through Technology? Four Stories of How Engineering Is Used to Improve the Human Condition and the Sustainability of Our Planet

John Lindberg, *Associate Professor of Physics*

Elaine Scott, *Professor and Director of Engineering Programs*

Otto Miller 118

Engineers can serve God by using their skills to improve the human living conditions of impoverished peoples around the world and to enhance the sustainability of our planet. This session will focus on four stories that highlight the many ways Seattle Pacific University engineering students and faculty are serving God through engineering. These stories include the construction of sand dams in Mozambique, the design of a power strip to reduce idle power consumption, the development of a solar-powered absorption refrigeration system, and the design of a hydroelectric water purification and delivery system.

Integrating Christian Faith Into the Science of Career Development

Lynette H. Bikos, *Associate Professor of Clinical Psychology and Director of Research*

Rick Edwards, *Industrial/Organizational Psychology Doctoral Student*

Richard B. Steele, *Professor of Moral and Historical Theology*

Cremona 102

Social Cognitive Career Theory (an extension of Bandura's Social Cognitive Theory) postulates that career development behaviors are a result of personal variables, environmental/contextual variables, and behaviors. Where does that leave faith or an individual's experience of God? This session will present the results of a qualitative investigation of career-decision-making among repatriated, college-aged children of Christian missionaries (MKs, N=11). How these MKs experienced God and were influenced by faith in their career development will be addressed. Additionally, an alternative to Bandura's model of triadic reciprocity will be proposed.

International Perspective on Science and Faith

Sally Thomas, *Director of A.C.E. Language Institute*

Student Panelists

Bertona 4

Science education is presented differently in countries all over the world. And people of diverse faiths have different perspectives on the world of science. Come participate in a discussion about science education and the intersection of faith and science as a panel of international students from five different countries offer insight into how science education is presented in their countries and how their own faiths influence their perception of scientific concepts.

Learning About the Universe

Doug Downing, *Associate Professor of Economics and Adjunct Professor of Astronomy*

Otto Miller 119

This session features numerous pictures of deep-sky objects and will address questions such as how did we first observe the expansion of the universe in the 1920s? How was the expansion predicted by a Catholic priest who understood Einstein's theory better than Einstein himself? How are new telescopes improving our ability to observe the universe? Why does it appear that the expansion is mysteriously accelerating?

Music as a Way of Knowing: Finding Meaning Through Musical Discourse and Structure

Eric Hanson, *Professor of Music*

Cremona 201

As humans, we are "meaning-makers." How does one find meaning in organized sound? Music mediates meaning through its unique discourse. For example, through intertextual allusion the composer creates narrative. A composer posits points of arrival — arrives or delays arrival to create expectation and fulfillment. A composer will use structures such as the Golden Mean or fractals to resonate with the listener's experience of the phenomenal world. Music uses signifiers couched in a cultural context to mediate meaning. This session will explore these issues in the first movement of Mozart's Symphony No. 41 in C major ("Jupiter").

Real or Not Real?: Science Fiction That Ignites Our Fears

Adrienne Meier, *Librarian for Social Sciences and University Archivist*

Cindy Strong, *Librarian for Education and Business*

Laura Sweat, *Assistant Professor of New Testament*

Tracy Williams, *Professor of Curriculum and Instruction*

Demaray 150

Suzanne Collins' *Hunger Games* trilogy has taken readers captive. After devouring the books, many readers want an opportunity to discuss this thought-provoking, disturbing, and challenging series. These books bring up questions of violence, the media, friendship, and sacrifice, while also tapping deeply into our collective fears about the future uses of science. This session will discuss reactions to reading these books, and contemplate how people of faith can respond to this type of text.

So Say We All: Technology, Aliens, and Radical Monotheism in *Battlestar Galactica*

Jeffrey F. Keuss, *Professor of Christian Ministry, Theology, and Culture*

Library Seminar Room

What first aired as a 1978 television spinoff capitalizing on the success of *Star Wars IV: A New Hope* was reimagined in 2003 by Ronald D. Moore as one of television's most critical reflections on the changing nature of religion and politics after 9/11. Raising questions as varied as the nature of God, what it means to be human immersed in technology, how people of different faiths find common ground, the reality of warfare, and living into apocalyptic prophesies in a scientific age, the show was a critical success from 2004 to 2009 and changed the way science fiction was viewed in mass media. This seminar will look at some themes raised by the show and the theological implications for our life of faith.

The Book of Job: A Psychologist Takes a Whirlwind Tour Through Theology and Sciences

Marcia Webb, *Associate Professor of Clinical Psychology*

McKenna 117

Through the millennia, the biblical story of Job has provided a narrative of the complexities of unjust suffering in the context of religious faith. In recent decades, psychological research has revealed various facets of the experience of trauma, loss, and coping, which may provide insight into Job's experience. In this session, ways in which the book of Job illustrates insights from psychological theory and research will be described. This session will explore the book of Job from an integrated perspective, utilizing insights from biblical scholarship and from psychological science regarding trauma and religious responses to adversity.

Theology and Science: Friends or Enemies?

Michael D. Langford, *Assistant Professor of Theology*

Thane Erickson, *Associate Professor of Psychology*

Cremona 202

From a Christian perspective, what is the appropriate relationship between the language of faith and the language of science? Should we ignore one in favor of the other? Should we keep theology and science in separate camps, or do they intermingle? In this session, we will first, using a theological model, propose a theoretical understanding of the relationship between theology and science. Second, within the particular discipline of psychology, we will give examples of different conceptions of the relationship between theology and science, and how these different conceptions, from a Christian perspective, can be either faulty or helpful.

Three Philosophers, an Architect and a Baby: Exploring Art and Beauty Through the Lens of Developmental Science

Owen Ewald, *C. May Marston Assistant Professor of Classics*

Ursula Krentz, *Assistant Professor of Psychology*

Otto Miller 127

What is beautiful? The ability to appreciate beauty has been credited as a trait that makes humans unique. Plato argued that beauty is morally or functionally good (*kalos*) or has formal order (*eidos*). Plotinus and Aquinas likened the appreciation of beauty to our ability to relate to God. Christopher Alexander finds beauty in mathematical configuration. Can a topic so deeply personal, culturally significant, and historically debated be subject to scientific inquiry? This session will explore how looking at infant preferences for art in its original and altered forms can shed fresh light on this mystery.

The Privileged Planet: Evidence That the Earth Is Intentionally Placed in the Cosmos for Optimal Habitation and Discovery

Don Peter, *Associate Professor of Engineering*

McKenna 111

Many know that the earth's distance from the sun is optimal for the existence of liquid water, essential for life as we know it. Not as well known is that numerous other solar system characteristics, including the specific size and proximity of our moon, are also essential. Moreover, our location in our galaxy is now known to be best for both life and cosmic discovery. Accident? Based on the groundbreaking book *The Privileged Planet*, this session will include video clips and an in-person interview with co-author Dr. Jay Richards.

Thinking About the Infinite

Robbin O'Leary, *Professor of Mathematics*

Bertona 6

One of Isaac Watts' hymns begins, "Great God, how infinite art Thou." While the Bible does not actually use the word "infinite," Christianity has a long-standing tradition of understanding God as being infinite. In mathematics, the concept of infinity arises in a variety of contexts and has been widely studied. How do mathematicians understand the infinite? Can mathematical infinity be used to explore ideas of God as infinite? This session will look at the mathematics of infinite sets and how it might give us different ways to think about an infinite God.

Trees of Life: From Cholera to Tolkien to Urzymes

Ben McFarland, *Associate Professor of Biochemistry*

Cremona 203

Deep inside everything alive, there are microscopic words of DNA. When the DNA from several organisms is compared, it looks like a tree of words. This kind of science traced the origin of a cholera outbreak in Haiti, and it can trace the origins of enzymes ("urzymes") and species as well. It turns out that J.R.R. Tolkien (who "found" tree-herding Ents in Middle Earth) found similar word-trees in his scholarly work as a philologist when comparing texts. This session will explore how Tolkien used these trees to give us insight into the relationship of science and faith when also considering biochemical word-trees.

Unveiling the Islamic Roots of Western Science

Don Holsinger, *Professor of History*

Otto Miller 128

Was Copernicus standing on the shoulders of Muslim scientists? Recent research increasingly affirms modern science's debts to the pioneering polymaths of the Islamic Golden Age. In this session, a short video will illustrate that the benefits of this research are twofold: a richer understanding of "our" scientific history and a challenge to those who picture Islam and the West as dichotomous.

What Is a Physical Object?

Lane Seeley, *Associate Professor of Physics*

• Rebekah Rice, *Assistant Professor of Philosophy*

Bertona 3

We take for granted that some things are physical (tables, trees, electrons) and others are not (souls, God). But what is it, exactly, that makes a thing physical? Numerous accounts have been offered throughout the history of philosophy (often these focused on the nature of "material" objects). Of course, many of the things physicists talk about don't seem very "material" (energy, forces, light, etc.). So, what is it to be a physical thing, if (among other things) physical things can fail to be material? In this session, questions at the intersection of physics and philosophy will be discussed.



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