Newsletter
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volume 55 number 2

SPECIAL ISSUE: Annual Meeting Preview

C'mon Down to the 2013 ASA Meeting!

What do the Grand Ole Opry and the 2013 ASA Annual Meeting have in common? One's already in Nashville, and the other's coming to town in July! Showcasing creativity is also what they share. Nashville's famous for drawing creative musicians from around the country. Scientists are also creative in their own special way, and that's what we'll celebrate this year.

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the American Scientific Affiliation

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The Director's Corner

Come join us in Nashville this summer! Once again, we look forward to our annual gathering to share our common interest in science and Christian faith. This issue features the events planned for the upcoming meeting.

In this age of instantaneous electronic communication, some have asked why we continue to organize and conduct these annual meetings. After all, the time and money required to assemble more than 200 people is considerable. Couldn't this be done electronically? Quite simply, the answer is no. Personal interaction provides an aspect of human connection that no electronic medium can.

It is true that in the last 20 years, the internet and social media have transformed the way in which we exchange information. Prior to this time, oral presentations, whether in lecture halls or via radio and TV, and written publications, such as journals, newspapers, and pamphlets, were the only effective media for exchanging ideas. Today, the internet enables inexpensive and immediate transmission of ideas from almost anyone to almost everyone. However, the critical ingredient of personal interaction, conveying emotion, passion, empathy, and love, is impoverished in the electronic world. Emoticons are hardly a substitute for expressing a common bond in Christ.

One of the best experiences at our annual meetings is worshipping together. It sends a thrill up my spine to stand with 200 scientific colleagues, raising our admittedly rusty voices in praise and adoration to God. One cannot experience this on Facebook.

I'm delighted with the theme of the conference. One of the clear implications of the doctrine of creation and the concept of our being created in God's image is that we have been endowed with the ability to create. Our expression of creativity is a way of carrying out what God has given us. By focusing on creativity through invention and entrepreneurship, we look forward to celebrating a vital aspect of God's purpose for humankind. Let's come together and worship our Creator in Nashville!

Register now to take advantage of the early discount rates.

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God's mandate to be creative originates from the beginning of the Bible. He created us in his image, and tells us to fill the earth and subdue it. Honoring this is part and parcel of who we are as Christians in science. For this year's Annual Meeting, we'll focus on our God-given creativity in all of its forms. Our goal is to bring together those who practice science and engineering, to communicate about these activities, and to address the theology of our calling in these areas as uniquely gifted servants of God.

To lead our celebration, we've engaged the following outstanding plenary speakers.

- Andy Bocarsly, Professor of Chemistry Princeton University, Founder of Liquid Light Inc.
- Jeff Cornwall, Jack C. Massey Chair in Entrepreneurship and Director of the Center for Entrepreneurship, Belmont University
- Jim Van Dam, Director, Research Division, Fusion Energy Sciences, Office of Energy Sciences, US Department of Energy
- Bruce A. Vojak, Associate Dean for Administration, College of Engineering, University of Illinois at Urbana-Champaign
- Mary Wagner, Associate Professor of Pharmacy Practice and Administration, Rutgers University

Presenters will be joining them in the following topical areas:

- Communication in Science and Faith: Education and the Media
- Faith and Science in Medicine
- Genetics and Biological Origins
- Physical Sciences: Recent Advances and Implications
- Science and Faith: History, Philosophy, and Theology
- Technology and Stewardship

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Welcome, New Members!

JANUARY–MARCH 2013

Abraham, Ponnu –Ann Arbor, MI
Alford, Aaron –Calgary, AB
Anderson, Stephen –Schenectady, NY
Austin, Todd –Brentwood, TN
Bond, Andy –Cambridge, UK
Chaturantabut, Saireudee –Boston, MA
Cliff, Abigail –Grove City, PA
Comandante, Natacha –Seattle, WA
Connors, Darren –Spanish Fork, UT
Dahill, Jansen –San Diego, CA
Fisher, Lloyd –Kenmore, WA
Ginting, Dianta –Cheongju, Chungbuk -Do, Korea, South
Gougeon, Bryan –White Lake, MI
Green, Aaron –Ithaca, NY
Hamilton, Robert –Longmont, CO
Heese, Kaitlyn –Akron, OH
Highsmith, Mark –San Antonio, TX
Jung, James –Los Angeles, CA
Kelley, Richard –La Habra, CA
Larry, Thomas –Purcellville, VA
Lee, Margot –Northborough, MA
Light, Ken –Kelowna, BC
Lindsay, Steve –Spring, TX
Manuel, Antonio –Porto, Aveiro, Portugal
Maxfield, Stephen –Jacksonville, FL
Noor, Joseph –Cape Town, South Africa
Pankey, William –Port Barrington, IL
Priebe, Jeffrey –Las Cruces, NM
Puthiamadathil, Jeevan –Arlington, VA
Ramos, Alice –Mishawaka, IN
Robbins, Caleb –Waco, TX
Santos Neto, Alcir –Coconut Creek, FL
Schweitzer, Catherine –Wenham, MA
Shirey, Kelsey –Macedonia, OH
Starparson, Dwight –Heavensgate, Av, Cocos (Keeling) Islands
Taylor, Rachel –Riverside, CA
Thompson, Greg –Tulsa, OK
Torres, Angela –Stanford, CA
True, Randall –Cody, WY
Wagner, Caleb –Azusa, CA
Weed, Joshua –Waco, TX
Wells, Arden –Richardson, TX
Yurchenko, Vadim –Sherwood Park, AB

FRIDAY ACTIVITIES

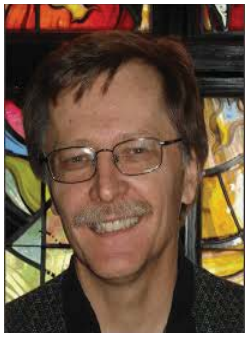
more details in the Annual Meeting brochure at www.asa3.org

WORKSHOPS

Workshop 1: Introductory Hermeneutical Principles for Science and Religion

Denis Lamoureux, Leader

This workshop will explore whether the Bible contains modern science, and it will offer an introduction to hermeneutical principles.



Workshop 2: The Human Genome as an Ancient Text

Dennis Venema, Leader

This workshop will examine how our species came into being as written in our genomes—from prior to our origins in Africa, to our emergence as the last surviving hominin species on the planet.

FIELD TRIPS

Mammoth Cave

Belmont Mansion

Discover Nashville

The Parthenon

PLENARY SPEAKERS

Bruce A. Vojak is an associate dean and an adjunct professor in the College of Engineering at the University of Illinois at Urbana-Champaign. Prior to joining the university in 1999, he was Director of Advanced Technology for Motorola's nonsemiconductor components business; earlier he held business development and research positions at Amoco and a research position at MIT Lincoln Laboratory. In addition to his administrative responsibilities, he teaches and conducts research on the topics of innovation and strategic technology management.

With Abbie Griffin and Ray Price, he is co-author of *Serial Innovators: How Individuals Create and Deliver Breakthrough Innovations in Mature Firms* (Palo Alto, CA: Stanford University Press, 2012). Further, he currently serves on the Board of Directors of Midtronics, Inc. and periodically consults for Procter & Gamble.

Bruce holds BS, MS, and PhD degrees in electrical engineering from the University of Illinois at Urbana-Champaign and an MBA, with concentrations in finance and marketing, from the University of Chicago's Booth School of Business.

Mary Wagner obtained her Doctor of Pharmacy degree from the University of California in San Francisco and a Masters degree in pharmacotherapy research at the University of Minnesota where she also completed an epilepsy fellowship. She completed a general pharmacy residency at the University of Arizona in Tucson and a specialized ambulatory care residency at the University of Texas in San Antonio.

Wagner joined the faculty at Rutgers in 1990. As a pharmacy professor, she teaches the neurology-related topics in the curriculum and precepts students and pharmacy residents in the neurology clinic at Robert Wood Johnson University Hospital. As clinical pharmacists, she and her students work with neurologists to evaluate and monitor patients with a variety of neurological conditions. Her specific expertise is in patients with epilepsy, Parkinson's disease, sleep disorders, and headaches.

She is the adviser for the Clinical Pharmacy Honor's Research program and has completed multiple clinical research projects, producing over sixty manuscripts and seventeen chapters in pharmacy textbooks. She currently is working on several projects to identify patients at risk for osteoporosis and to develop treatments for preventative care. She is also working on grants for tele-pharmacy and multidisciplinary health care teams for federally qualified health care centers. Wagner serves on the International Medical Advisory Board for the Restless Legs Syndrome Foundation, the Interagency Council on Osteoporosis for the New Jersey State Board of Health, and chairs the neurology section on the Annals of Pharmacotherapy Editorial Advisory Board.

Jim Van Dam is the Fusion Energy Sciences Research Division Director in the Office of Science of the US Department of Energy. He was a visiting member of the Institute for Advanced Study in Princeton for one year and then moved with Prof. Marshall Rosenbluth to the University of Texas at Austin when the Institute for Fusion Studies was established in 1980. He served as the director of the Institute during 2003–2011. Concurrently, he was the director of the US Burning Plasma Organization and the Chief Scientist of the US ITER Project Office during 2007–2011.

Van Dam's research areas include kinetic theory, MHD, plasma waves, ignition physics, equilibrium and stability in toroidal confinement fusion devices, energetic particles, and magnetospheric physics. He participated in developing the now-standard ballooning mode representation for tokamak stability theory. He predicted a new fundamental stability limit for

the bumpy torus device. He applied energetic particle stabilization of ballooning modes in tokamaks. He analyzed the effects of alpha particles on the stability of ideal MHD modes in ignited plasmas, e.g., the theoretical prediction of the destabilization of the Toroidal Alfvén Eigenmode by fusion alpha particles and the calculation of the effect of continuum damping. He has published over one hundred papers and two books.

He has organized a number of international workshops. He was a member of the program advisory committees for DIII-D, Alcator C-Mod, Fusion Simulation Program, National Institute for Fusion Science (Japan), and Max-Planck Institute for Plasma Physics (Germany). He was the co-chair of the US-Japan Joint Institute for Fusion Theory. He was the chair of the US Theory Coordinating Committee. He is a Fellow of the American Physical Society (1992). He continues to serve as a US member of the Science and Technology Advisory Committee for the international ITER Project.

Jeff Cornwall is the inaugural recipient of the Jack C. Massey Chair in Entrepreneurship and professor of entrepreneurship at Belmont University in Nashville, Tennessee. He has a doctorate in business administration and an MBA from the University of Kentucky. In the late 1980s, Cornwall left academics for a nine-year "sabbatical" to become the cofounder and president/CEO of Atlantic Behavioral Health Systems, headquartered in Raleigh, NC.

Cornwall has received national awards for his work in curriculum development and teaching, and in 2013 he was named the National Entrepreneurship Educator of the Year by the United States Association of Small Business and Entrepreneurship. He has published eight books and numerous articles on entrepreneurship. His blog, The Entrepreneurial Mind, is among the most popular with a focus on small business and entrepreneurship. The Entrepreneurial Mind is part of the Forbes blog network and was named by that magazine as a "Best of the Web." It is also syndicated by *The Christian Science Monitor* and many other outlets. He also writes a bi-weekly column for the Tennessean on small business.

Andrew Bocarsly received his BS degree jointly in chemistry and physics from UCLA in 1976, and his PhD in chemistry from MIT in 1980. He has been a member of the Princeton University chemistry department faculty for thirty-three years. He is affiliated with Princeton's Materials Institute, Princeton's Environmental Institute, and the Andlinger Center for Energy and the Environment. Bocarsly has published over 190 papers in peer-reviewed journals and co-authored over a dozen patents. Research in his laboratory is focused on visible light photoelectrochemistry for the conversion of carbon dioxide to alcohols, elevated temperature proton exchange membrane fuel cells, cyanogel sol-gel processing, and molecule-based multielectron photoinduced charge transfer processes.

Bocarsly serves as a consultant and contractor to various fuel cell and alternate energy companies. He is a co-founder and president of the Science Advisory Board for Liquid Light Inc., a company formed to commercialize the formation of organic commodity chemicals from carbon dioxide using alternate energy sources.

Bocarsly has received an Alfred P. Sloan Fellowship, the Sigma Xi (Princeton Section) Science Educator Award, and the American Chemical Society-Exxon Solid State Chemistry award. He serves as the electrochemistry editor for *Methods in Materials Research.* He has also edited a volume for *Structure and Bonding* in the area of fuel cells and batteries and sits on the Advisory Board for the *Journal of Physical Chemistry, C.*

SPECIAL PRESENTATION

Faith and Science, Friends or Foes?

by Ming Wang

Dr. Ming Wang, an internationally renowned cataract and LASIK eye surgeon, will present a plenary talk at the ASA Annual Meeting, Saturday, July 20, at 6:30pm, entitled "Faith and Science, Friends or Foes?"

In this talk, Wang will describe his experience growing up in China during the Cultural Revolution (1966–1976). At age 14 after graduating from junior high school, Ming faced the deportation imposed by the Communist government, to the poorest part of China and being condemned of a life of poverty and hard labor, a devastating fate that fell upon millions of youth in China during that time. Ming learned to play the Chinese violin er-hu as a way to escape deportation. A chance meeting with a visiting American professor helped Ming. In 1982, with $50 in his pocket, a Chinese-English dictionary in his hand, and an American dream in his heart, Ming arrived here in US.

Wang will tell the powerful story of the development of an amniotic membrane contact lens, a 16-year journey of faith and science. He will describe how he began the fetal wound-healing research to try to help injured adult eyes heal and to restore sight, but was frustrated at not being able to find a way to conduct the fetal tissue research without hurting a fetus. Should we conduct fetal tissue research without our moral, ethical, and faith principles? Or should we not conduct such research and hence not advance medicine and not improve the quality of our lives? Is science and faith really this contradictory?

What does God want us to do? What would you do?

Come to attend this unique and powerful talk about persistence, patience, Christian faith, and science; about working hard and appreciating every opportunity that God has given us; about believing that in the end the world created by God is, indeed, perfect and without contradictions!

At the end of the talk, Wang will play a few music pieces using the same instrument that he played as a teenager during the Cultural Revolution, the Chinese violin er-hu, accompanied by classical guitarist and composer Carlos Enrique.

Members in Glory

Robert Blanchard Fischer

October 24, 1920–March 20, 2013

Robert Blanchard Fischer was born to Charles Albert Fischer and Matilda Nylen Fischer in Hartford, Connecticut. Following the death of his father in 1922, he moved with his mother and two brothers to Wheaton, Illinois. He attended Wheaton College (BS in chemistry in 1942) and the University of Illinois (PhD in analytical chemistry and electrical engineering in 1946).

Bob was on the faculty at the University of Illinois (1946–1948) and Indiana University (1948–1963). He was the founding Dean of the School of Science and Mathematics at California State University, Dominguez Hills (1963–1979), and the Provost and Senior Vice President of Biola University (1979–1989). He lived in Rancho Palos Verdes, California, from 1963 to 2002 and then in Fullerton, California.

Bob joined the ASA in 1945, was elected a Fellow, and served on the ASA Council 1962–1966, the last two years as President.

As a scientist, he contributed to the safe harnessing of nuclear energy through his studies of deuterium (heavy water) with the Manhattan Project during World War II. He studied the application of the electron microscope to scientific investigation and led the initial successful efforts to chemically add fluoride to toothpaste in order to prevent cavities.

As an educator, Bob taught thousands of students as they prepared for careers in many fields, helped create a new university at Cal State Dominguez Hills, and led the transformation of Biola College to Biola University. He wrote scores of scholarly articles and authored textbooks about electron microscopy and quantitative chemical analysis. For lay readers seeking to properly integrate science and faith, he wrote *Science, Man, and Society* as well as *God Did It, But How?* (two English editions, a third in Spanish) and *Who Is God?*

Bob met God personally during his childhood and sought to serve him faithfully throughout his life. He demonstrated his faith daily. He taught Bible classes and preached in several churches and was active at different times at College Church (Wheaton, IL), Twin Cities Bible Church (Urbana, IL), United Presbyterian Church (Bloomington, IN), Peninsula Baptist Church (Palos Verdes, CA), Rolling Hills Covenant Church (Palos Verdes, CA), and Evangelical Free Church (Fullerton, CA).

Beyond his many accomplishments, much of his enjoyment in life centered on his wife and family. Though orphaned of his own father and raised by a single mother, Bob was himself a role model of a loving father and faithful husband. He is survived by his wife of 66 years Mary Ellen (Mitchell) and his five children. —Phil Fischer

John (Jack) McIntyre

June 2, 1920–March 23, 2013

John (Jack) McIntyre passed away on Saturday, March 23, 2013, in Austin, TX, at 92. Born in Seattle, Washington, Jack was the eldest son of Harry J. and Ruth A. McIntyre. Jack earned a BS in electrical engineering from the University of Washington with highest honors after which he was part of the pioneering team to develop airborne radar for Westinghouse in Philadelphia during World War II. He went on to graduate work, earning a PhD in nuclear physics at Princeton University where he met Madeleine who became the love of his life.

Maddy and Jack moved to Stanford University where, as a research assistant, he contributed to a project that later won a Nobel prize. While in Stanford, they adopted John, their only son, from Sweden.

After Stanford, the family moved to New Haven, Connecticut, where Jack taught at Yale, first as an assistant professor and then as an associate professor. In 1963, the next move brought Jack to Texas A&M, where he served as a full professor and director of the high energy particle accelerator at the Cyclotron Institute. Even though folks in the Ivy League were skeptical of Jack's move to the "wild west," it turned out to be a great move and where they lived independently into their late 80s. The last few years were spent in Austin with family.

He was a wonderful example of a Christian professor who was respected by his colleagues and students for his professional work as well as his Christian example. Jack was one of several key professors who established the Christian Faculty Network at Texas A&M University in 1980. He served as the faculty sponsor for InterVarsity Christian Fellowship. He served on the Executive Council of the American Scientific Affiliation, including one term as President, and published thoughtful articles in *Perspectives on Science and Christian Faith*. He was also a very generous financial supporter of ASA.

Jack and Maddy were devout Christians and were founding members of Westminster Presbyterian Church in Bryan, Texas. He is predeceased by his wife Madeleine who often accompanied him at ASA annual meetings. —Walter Bradley

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We'll also have special programs for students and early career attendees. They include a session all their own to engage our plenary speakers. Student ASA members get a good deal when they register. It costs only $20 for those with basic membership, and premier student members attend for free. Basic student membership is free to anyone enrolled in an undergraduate or graduate program, and includes electronic versions of ASA publications. Premier student membership, which includes a paper copy of the ASA journal *Perspectives on Science and the Christian Faith*, is only $20 a year.

Among the best features of any Annual Meeting is the chance to fellowship with those who share a love of science and a commitment to Christ. They provide wonderful times of conversation, prayer, and worship. The Book of Proverbs tells us that "iron sharpens iron," and the Annual Meeting provides a unique opportunity to encourage each other in our calling as scientists in Christ's service.

The dates of the Annual Meeting are July 19–22, and the early registration discount ends June 14.

Learn more about the meeting at http://network.asa3.org/?2013AnnualMeeting.

Join us for a great meeting in Music City USA. See you there!

Robert Kaita
ASA Program Chair, 2013

The Newsletter of the ASA and CSCA is published quarterly for its membership by the American Scientific Affiliation. Send Newsletter information to the editor: Emily Ruppel, emily@asa3.org

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JOIN US

Intervarsity (IV) Grad Student and Faculty Fellowships invite you to a reception, Saturday, July 20, 9 PM. A few ASA folk with fond memories of their IV grad student days (Jennifer Wiseman and Robert Kaita, for example) will share briefly. We'll tell you what's happening in our movement these days and try to answer any questions you have.

Of course, there will be food and drink available, lots of IV propaganda, and us—the IV staff. Dwight Schwartz and Terry Morrison are the official hosts but a number of grad IV staff from nearby Nashville and other campuses will join us. Lots to learn, some ways to get engaged, and a great way to end that Saturday! See you there.

NASHVILLE JAM SESSION

Birthing "Christian Women in Science / STEM"

"If we're going to out-innovate and out-educate the rest of the world, we've got to open doors for everyone … that means clearing hurdles for women and girls as they navigate careers in science, technology, engineering, and math."

–First Lady Michelle Obama, September 26, 2011.

If women have hurdles to overcome in science, *Christian* women have two sets of hurdles! The need is critical to encourage Christian women in science technology, engineering, and math (STEM)—and ASA wants to do something about that.

Come join us on Saturday, July 20, at 8:00 PM in the Massey Board Room to help give birth to "Christian Women in Science/STEM"!

There are many successful model organizations for professional women that we can learn from. Let's "jam" together, as musicians do, and we'll figure out what specifically we want to accomplish and how we can do it. Come help us shape the future of "Christian Women in Science/STEM"!