

GOOD QUESTIONS! AUM MINI-COLLEGE JUNE 13 AND 14 2017

What Is Our Universe Made Of?

This session will offer a broad overview of how scientists came to our present understanding of the matter and energy which make up our universe. Beginning with the advent of atomic theory, we will discuss how our perception of matter and energy has changed as a result of pivotal developments in physics including electromagnetic theory, special and general relativity, quantum mechanics, the standard model of elementary particle physics, and the big bang theory. The discussion will culminate with the discovery of the mysterious dark matter that holds galaxies together and the ubiquitous dark energy that will eventually tear our universe apart.

Randy Russell has taught introductory level astronomy and physics to students at AUM for more than 30 years. He holds a M.S. in meteorology from Iowa State University. His current research focuses on determining the fraction of sunlight reflected by clouds using measurements of solar radiation at the Earth's surface.

Is Reason The Enemy Of Faith?

Many people take it for granted that faith and reason are inherently opposed to one another. In this session, we will look at different perspectives on the nature of faith, how it might relate to reason, and some of the most influential philosophical arguments for and against belief in God.

Dr. Matthew Jordan is an honors associate professor of philosophy at AUM. In addition to courses on ethics and the philosophy of religion, he regularly teaches classes on the writings of C. S. Lewis and his colleagues in the Inklings, and has led several Inklings-themed study abroad trips to Oxford.

Does Our Personality Change As We Age?

In this session, we will discuss what personality is, where it comes from, how it is investigated, and how it changes and stays the same as we develop over time. We will also discuss common misunderstanding about personality development. For example, can we really change who we are?

Dr. Glen E. Ray is a professor and chair of the psychology department. A development psychologist with a doctoral degree from The University of Memphis, his main research interests are children's peer relationships. He specializes in the study of friendship development, popularity/social status, and peer conflict (bully-victim relationships). He is married to Dr. JoAnne W. Ray, a clinical psychologist in Montgomery and is the proud father of one 16 year-old daughter, Ashton.

Seward's Folly: What Is The Real Story Behind The Alaska Purchase?

The Alaska Purchase—denounced at the time as “Seward’s Folly” but now seen as a masterstroke—is well known as a key moment in American history. But few know the whole story. This session will give an overview of just what the Alaska Purchase was, how it came about, its impact at the time, and more. Also discussed will be the implications of the deal for foreign policy and international diplomacy far beyond Russia and the United States at a moment when the global balance of power was in question.

Dr. Lee A. Farrow received a Ph.D. in History from Tulane University, with a specialty in Russian History. She is a Professor of History and now the Director of the Center for Excellence in Learning and Teaching. In 2004, Dr. Farrow published *Between Clan and Crown: The Struggle to Define Noble Property Rights in Imperial Russia*, and she has also published numerous articles on Russia-American relations. She published *Alexis in America: A Russian Grand Duke’s Tour, 1871-72* in December 2014 with Louisiana State University Press. Her newest project is a history of the Alaska Purchase with University of Alaska Press timed to appear in 2017 for the anniversary of the purchase.

What Can Computer Viruses Teach Us About How Cells Function?

In this session we will use a discussion-based format to examine how biological viruses function in comparison to the well-known properties of computer viruses. We will also consider the nature of cells, genes, proteins and gene expression as part of the overall virus program. Time permitting, we will field participant questions on any topic within the presenter’s area of expertise.

Dr. Pryce L. “Pete” Haddix received his doctorate in pathogenic microbiology from the University of Kentucky in 1992. From 1992 to 1995 Dr. Haddix worked as a postdoctoral research associate at Washington University in St. Louis on *Mycobacterium avium*, a bacterial pathogen commonly found in AIDS patients. Following a five-year stint at a St. Louis college to develop a student research program, Dr. Haddix joined a team of environmental scientists at American Water, Inc. There he developed new testing technology for detection of drinking water contaminants. Dr. Haddix joined the faculty of the Auburn University Montgomery Biology Department in August, 2005 and currently holds the rank of Associate Professor. His ongoing research concerns the biological function of a red pigment produced by the soil bacterium *Serratia marcescens*.

Were Pre-Civil War Northern Industrial Workers Treated Worse Than Southern Slaves?

In the decades leading up to the Civil War, northern abolitionists blasted slavery as an immoral and inhumane institution that must be abolished. Southern slave owners shot back with their own assault on northern industrial capitalism, which they argued was worse than slavery for its cruel and callous treatment of industrial workers. In this session we will

will analyze and discuss historical documents from both sides of this topic. Participants will be encouraged to come to their own conclusions on this controversial question.

Dr. Keith Krawczynski is Distinguished Professor of History. He teaches courses on Early American History, the American Revolution, American Slavery, and American Labor History. He has authored two books on the American Revolution, a book on life in Colonial America, as well as book chapters and articles on African American history.

Why Was River Travel So Dangerous In Mark Twain's Era?

In this session we will discuss the enormous hazards of traveling by any type of river vessel—canoes, scows, flatboats, keelboats, rafts, or steamboats—during the antebellum period. The casualty rate was frighteningly high, yet until railroads became competitive there was little choice except to take one's chances. Pirates were a great problem for the smaller riverboats, but steamboats had their own dangers, especially fires and boiler explosions. Mark Twain left behind the most vivid account of these wild days on the rivers, though many pilots and passengers chronicled close calls or disasters. Special attention will be given to events that took place in early day Alabama.

Dr. Alan Gribben, an AUM English professor, edits the *Mark Twain Journal* and co-founded the Mark Twain Circle of America, a scholarly society. He has published *Mark Twain's Library: A Reconstruction*, co-edited *Mark Twain on the Move: A Travel Reader*, and written dozens of articles and chapters on Twain's intellectual background.

Are We Really Free?

In this session we will discuss the freedom of using computer technology in general and computer software in particular. In addition to a survey of open source computer applications there will be hands-on activities..

Dr. Luis Cueva-Para is an associate professor and associate head of the Department of Mathematics and Computer Science. He has a Ph.D. in Scientific Computing, a M.S. in Industrial Mathematics, B.S. in Mechanical Engineering and additional education in Electrical Engineering and Industrial Engineering. His research agenda is focused on the study of complex multi-scale physical, chemical and/or biological phenomena using modern mathematical models and computer simulation techniques.

How Did Superheroes Become So Popular?

*In an episode of *The Big Bang Theory*, Amy criticizes Sheldon for his interest in "picture books about flying men in colorful underwear." Yes, superheroes are silly, but they've been a fixture of American entertainment for nearly a century, and their popularity only seems to be*

growing thanks to movies and television. How did we get to this point? This session will explore the historical antecedents of superheroes, their emergence from pulp magazines and comic strips into the comic books where they found their home, and their expansion into the mass media. It will also explore the reasons why superheroes have been popular among children, teens, and adults.

Dr. Darren Harris-Fain is a professor of English. In addition to dozens of essays and articles on fantasy, science fiction, and comics, he is the author of *Understanding Contemporary American Science Fiction: The Age of Maturity, 1970-2000* (University of South Carolina Press, 2005) and a contributor to the forthcoming *Cambridge Companion to the Graphic Novel* and *Cambridge History of the Graphic Novel*. Dr. Harris-Fain also coaches the AUM quiz bowl team and was a three day *Jeopardy!* champion in 2015

How Did Racial Integration In Professional Baseball Occur And Help Pave The Road For The Civil Rights Movement?"

When Jackie Robinson broke the color barrier in Major League Baseball on April 15, 1947, in what became known as "The Noble Experiment," he gradually changed the manner in which Caucasians viewed African Americans in regard to athletics, intelligence, character, and their place in American society. The American public watched with great interest as Dodgers general manager Branch Rickey proceeded with his revolutionary plan to integrate a black baseball player onto a white team in an all-white league. For the first time white and black fans sat in close proximity to one another and cheered for the same teams and players. In this session we will explore how the success of Rickey's plan, a socially radical idea, influenced American culture by serving as a microcosm of how African Americans could be deftly integrated into many other facets of American society. Racial integration in baseball helped lead to the integration of hotels and restaurants when teams containing black and white players came to town.

Dr. Eric Sterling earned his Ph.D. in English at Indiana University and is Professor of English at AUM, where he has taught for 23 years. He has published much on modern American culture, including baseball and the civil rights movement. His most recent publication is on the murders of Emmett Till, the four girls killed in the 16th Street Baptist Church Bombing, and the victims of the Algiers Motel Incident in Detroit.

The U.S. Constitution: A Medieval Document?

The framers of the constitution of the United States lived during what historians call the Enlightenment of the eighteenth century. Like other men of their time—and yes, they were all men—they looked back to the Middle Ages as, to use the words of one of their contemporaries, a period of "barbarism and religion." For religion, read "superstition." In this session we will explore how, without clearly being wholly aware of it, the constitution the framers produced was profoundly influenced by the very medieval period they rejected. And, thus, so are we.

Dr. Michael Burger is Dean of the College of Arts and Sciences and Professor of History. He has taught courses in ancient, medieval, and early-modern European history, women's history, and in religious studies, as well as the modern history of the West. Named Mississippi Humanities Teacher of the Year when he taught in that state, he is the author of various books and articles, mostly on medieval history. He once lived in a former twelfth-century chapel that had been converted into a modern residence, which is probably the only interesting thing about him.

Can We Trust Eyewitness Testimony?

What does psychological research have to say about our ability to evaluate eyewitness testimony? In this session we will discuss the stages of memory, factors that influence memory, and research-backed recommendations for improving how our legal system deals with eyewitness memory as evidence.

Dr. Rolando Carol is an assistant professor of psychology at AUM. He earned his Ph.D. from a legal psychology program in Miami, FL, which is also his home town. His research focuses on human memory in general, with specific interests in eyewitness memory and investigative interviewing. He has authored various empirical research articles and textbook chapters, and is currently editing a book on the Cognitive Interview, an evidence-based interviewing technique used by the FBI, as well as law enforcement in the U.K. and Australia.

What Are The Benefits (and Pleasures) Of Reading Literature Closely?

"Close Reading" is a fundamental technique of good literary analysis. It means paying attention to the choice and placement of practically every single word in a text. It emphasizes details. But isn't that boring? Isn't it overkill? Doesn't it involve killing a text and then dissecting the corpse? This discussion will highlight the benefits of close reading, which is like slow-motion replay of a great play in football. It involves paying close attention to the actual details that make literature literature. Our example will be a very short story by Kate Chopin.

Dr. Bob Evans is the author or editor of over thirty books and three hundred essays, including two books on Kate Chopin as well as many articles about her writings.

Where Did Rock And Roll Come From? (Hint: The Answer Is *Not* Elvis)

One of the most famous quotes in the history of rock 'n' roll came from Memphis recording studio owner Sam Philips: "If I could find a white man who had the Negro sound and the Negro feel, I could make a billion dollars." Then one day Elvis Presley walked into the studio and the rest—as they say—is history. But what is that history? The early history of rock is

also a history of societal and cultural change after the Second World War. This session traces the early days of rock music as it developed from rhythm & blues of the 1940s and 1950s. It also looks at the songs Elvis Presley sang in his earliest recordings, and identifies their sources.

Dr. Mark Benson has been an AUM faculty member since 1988. He has published articles on the music of such diverse figures as 16th-century madrigalist Carlo Gesualdo, and 20th-century composer Arnold Schoenberg. Dr. Benson is principal percussionist of the Montgomery Symphony Orchestra, and he writes the program notes for Symphony, and the Montgomery Chamber Music Organization. His article on Montgomery, Alabama, was published in the second edition of the *New Grove Dictionary of American Music* in 2013. Though not a professional composer, he wrote the music for AUM's fight song, "Mighty Warhawks."