

Triple Conjunction Conference

List of Contributed Papers

Presenter: Audra Baleisis

Title: Audience Response in the Planetarium: Instruments for Social Learning

Abstract: We discuss prototyping a planetarium show that combines audience response technology with simple, yet powerful, educational techniques like misconceptions, research and peer instruction to enable personalized learning in a group setting.

Presenter: Adam Barnes and Shai Fishman

Title: Music Under the Dome - Techniques that Maximize Impact

Abstract: This presentation introduces new composing and scoring techniques for planetarium shows, featuring methods for creating anticipation, increasing the effect of visuals, and developing audience identification with characters.

Presenter: Amie Gallagher

Title: The Skies Over Hogwarts

Abstract: Our eclectic group of witches and wizards guides you through a "Harry Potter" - themed tour of the night sky.

Presenter: Adam Thanz

Title: The Planets - A SEPA Planetarium Show Production

Abstract: This engaging planetarium show is being distributed for FREE to all facilities that have SEPA membership. The program highlights narration by Kate Mulgrew, music by Jonn Serrie, script by Jon Bell and animations by Allen Davis. Non-SEPA members can purchase the show at low cost.

Presenter: April Whitt

Title: Planetarium Potpourri: Recent Public Activities at Fernbank

Abstract: The Fernbank Science Center offered a variety of events for the general public this year and is a host for the IPY PolarPalooza. Come get some ideas and share in the fun.

Presenter: Brock Schroeder

Title: Student Resistance to Science Instruction

Abstract: This session will introduce attendees to a set of conceptual change teaching strategies that are beneficial when encountering individuals that may exhibit resistance to science due to their faith.

Presenter: Carolyn Sumners

Title: Portable Digital Theaters: What Teachers Choose From Stars and a Dozen Movies

Abstract: We travel 3 portable dome theaters and reached over 38,000 visitors last year. You'll be surprised by the programs chosen by teachers at different grade levels, the dome schedules teachers arranged, the role of standardized tests, and the opportunity to create career awareness.

Presenter: Carolyn Sumners

Title: Exhibits-Planetarium Connection: Revenue Generated and Lessons Learned

Abstract: The Burke-Baker Planetarium has created seven full-dome shows to accompany major traveling exhibitions with co-marketing and ticketing. Learn what makes a show that effectively complements an exhibit experience and benefits from the co-marketing exposure.

Presenter: Carolyn Sumners and Adam Barnes

Title: Full-dome Photography - Techniques for Shooting and Post-processing

Abstract: This presentation includes shooting to maximize effect, minimize cross-talk, retain resolution, and create apparent motion. We describe techniques for incorporating full-dome photographs in productions along with animations and as a background for embedding videos.

Presenter: Carolyn Sumners and Patricia Reiff

Title: Evaluating Immersion

Abstract: The Houston Museum of Natural Science in collaboration with Rice University has traveled portable digital theaters for over three years and conducted research on student learning in this immersive environment. This paper documents dome-learning strategies and offers methods for designing a field study.

Presenter: Dale Smith

Title: A Largely Self-Taught Astronomy Honors Course

Abstract: Description of an astronomy honors course for non-majors in which carefully-crafted assignments the primary teaching mechanism.

Presenter: Dave Hostetter

Title: Cheap Stuff That Works

Abstract: Even in an age of growing visual sophistication in the planetarium, sometimes simple, inexpensive demonstrations help an audience understand.

Presenter: David Hurd

Title: Phoenix: On Mars and In the Classroom

Abstract: On August 4th, the Phoenix Mars Lander took off for..you guessed it, Mars! In its wake, Phoenix left behind a cadre of high school teachers and students who will work directly with mission scientists. This paper reviews mission status and the Phoenix Student Intern Program. It will also highlight resources for informal educators to use with regard to the Phoenix Mars Lander and suggest ways planetaria can become more involved in future missions.

Presenter: David Weinrich

Title: The Astronomical League – Amateurs United

Abstract: The Astronomical League is one of the largest amateur astronomical associations in the world. The programs, publications and meetings of the League often dovetail nicely with planetarium interests. My association with the Astronomical League has rekindled my passion for observing the night sky. In this presentation, I will summarize the resources that the League can offer planetarians.

Presenter: Fran Ratka

Title: Real Heroes for Today's Youth: Reliving Early Manned Spaceflight

Abstract: Children of today have very few role models that are positive and careers in science and technology are no longer highly valued. They did not grow up during the exciting times of Sputnik and the frontiers of human spaceflight. Presenting the story of early manned spaceflight and the race to the Moon is interesting, fun and very inspiring to all age levels. This paper will outline the methods used for both third graders and high school astronomy students to give them a taste of the amazing events in early manned spaceflight.

Presenter: Geoff Holt

Title: Live Presentation Skills: Learn From Others!

Abstract: We all learn so much from each other at planetarium conferences. But don't you wish you could sit in on actual live shows conducted by our peers in front of real audiences? This paper session presents video clips of a few tips I've picked up by recording other planetarians. And the plea will be made for YOU to submit video or audio clips to be considered for a future DVD on live presentation techniques.

Presenter: Geoff Holt

Title: 3-Screen Video on a Shoestring Budget

Abstract: Slides provide a nice static image, but the dynamic nature of space science requires frequent updates and visuals with motions. Unfortunately, many of us can't afford a nice turnkey video system like the ones many of our vendors could aptly provide. The task becomes quite challenging when you want to use this system for both live and recorded programs. This session explores some of the barricades and potholes encountered on the road to success in Madison, Wisconsin. Come and learn from my mistakes, and share your successes.

Presenter: Gary Lazich

Title: Visualizing The Planets: A Marriage of Media

Abstract: This presentation describes a unique approach to orchestrating a live "visual spectacular" in which Gustav Holst's Suite: "The Planets" became the soundtrack for a chronicle of the Space Age. Video excerpts will illustrate the approach.

Presenter: Jon Bell

Title: Invitation to Join the O.A.S.

Abstract: The author/presenter, in order to promote knowledge of constellations and asterisms useful for sky interpretation, proposes the establishment of the O.A.S. - Obscure Asterism Society.

Presenter: Jon Elvert

Title: The 2009 Baton Rouge Invitational

Abstract: The Irene W. Pennington Planetarium has invited all seven U.S. affiliates for their annual conference meeting in 2009. This paper defines the proposal including why this septuplet conjunction conference is significant.

Presenter: John Scala

Title: Engage - A Checklist for Planetarium Pilots

Abstract: Any good pilot (or starship Captain) knows to follow their checklist. For a successful planetarium experience for you audience, the five "E" 's serve as your guide. Engage your mind and make use of these tools for your presentation.

Presenter: Lucy Albert

Title: Hubble Space Telescope: Servicing Mission 4 Update

Abstract: I will present an update on the current plans for the refurbishing of the Hubble Space Telescope during the upcoming servicing mission. Resources for educators will be discussed.

Presenter: Mark Prusten

Title: Procedural Volumetric Modeling and Animation of Polar Auroras

Abstract: The procedural generation of volumetric charged particles and animation of their interaction the magnetosphere to produce Polar Auroras is presented for fulldome planetarium theaters. This paper describes the production workflow pipeline for creating, animating and rendering these luminous environments and the challenges to generate this phenomena in photo-real animations.

Presenter: Mark Prusten

Title: Procedural Animation of Nebula Gas System Structures

Abstract: The procedural generation of volumetric Nebula gaseous systems and their animation is presented For fulldome planetarium theaters. This paper describes the production workflow pipeline for Creating, animating and rendering these self luminous environments and the challenges to Generate this phenomena in photo-real animations.

Presenter: Michael Magee and Mark Prusten

Title: Creating Photo-Real Virtual 3D Environments from the Hi-Rise Mars Camera Imagery Data

Abstract: The generation of interactive, virtual, 3D environments from the HiRise Mars Camera imagery data is presented for full-dome planetarium theaters. This paper describes the production workflow pipeline for creating these environments along with the challenges of handling very large data sets to generate the environment texture mapes for photo-real animations.

Presenter: Patricia Seaton

Title: New Horizons: Bridge to the Beginning

Abstract: Our planetarium is partnered with the Johns Hopkins University Appied Physics Lab to develop a planetarium program highlighting the New Horizons mission to Pluto. Hear snippets of our program along with the process we took to make this a unique experience for all audiences.

Presenter: Richard Gamba

Title: Save the Planetarium Fund, Inc.: What Can We Do For You?

Abstract: Save the Planetarium Fund, Inc. is a charitable, non-profit organization that came to be in response to the announced closure of the Novins Planetarium in Toms River, NJ. Through our efforts, the Novins Planetarium will be re-opened. We would like to hear your thoughts on expanding our efforts to a national scale.

Presenter: Robert Bonadurer

Title: Sputnik: Panic to Peaceful Progress

Abstract: Fifty years ago, Sputnik flew. It was both revered and feared. Regardless, the world was not The same. The space race had begun. America had to catch up. Science was significant again. One consequence? We needed to teach people about space. Planetariums proliferated across America. And here we are. This paper will look at the impact of Sputnik since that cool Autumn Friday back in 1957.

Presenter: Ron Kaitchuck

Title: Pixels on the Dome

Abstract: With the widespread conversion to digital image production and projection, there is much discussion of required pixels in an image. Decisions are often based on experience or gut feelings. This paper presents actual calculations of the required number of pixels in an image based on the resolution of human eye and viewer location in the room. In this way, some general guidelines are presented for video image resolution and the pixel numbers required for slide scanning and computer generated images.

Presenter: Rob Landis

Title: Old Starry: The First Planetarian

Abstract: Born in 1809 on a poor farm near present day Morganfield, Kentucky, Ormsby MacKnight Mitchel grew up with an uncanny passion for astronomy. In a very Jeffersonian way, he was committed to communicate the wonders of astronomy to the broader public. Not only was he [arguably] America's first astronomer, he was the world's first planetarian, inspiring and leading the development of the Cincinnati Observatory as well as the first popular journal of astronomy, "The Siderial Messenger". A classmate of Robert E. Lee (USMA, 1829), the men under Mitchel's command fondly referred to him as "Old Stars" and "Old Starry".

Presenter: Rob Landis

Title: The NEO Alternative

Abstract: Planetarians are the most effective public communicators of astronomy and space activities. In my experience, planetarians are not mildly interested in what NASA does, but, wildly enthusiastic! The Constellation Program at NASA is charged with developing the spacecraft and launch vehicles to return humans to the Moon and beyond. Part of the "beyond" may be closer than we thought! A recent Constellation funded study examined the feasibility of piloted flights to near-Earth objects (NEOs). Such a mission would mark the first human expedition to an interplanetary body beyond the Earth-Moon system.

Presenter: Sally Goff

Title: Make Contact – The Minnesota Planetarium Society

Abstract: The Minnesota Planetarium Society is in the midst of a campaign to build the Minnesota Planetarium and Space Discovery Center [2010] and is successfully building its outreach with the ExploraDome Immersive Learning Program.

Presenter: Shawn Laatsch and Kris Koenig

Title: HOT Planetarium Program: An Integrated Project for IYA2009

Abstract: The History of the Telescope (HOT) project integrates a planetarium program, a two-part PBS documentary, and web deliverables/hands-on activities to share the 400th anniversary of Galileo's first views through a telescope. Imiloa, Adler and Buhl Planetariums have partnered with Interstellar Studios and the Astronomical Society of the Pacific to create a complete package for celebrating the International Year of Astronomy in 2009. The best part for planetariums is a 30 minute planetarium program that will be available at minimal cost (hard drives and slicing). This paper will give an update on the project and the technology used for capturing full dome motion pictures of the largest observatories in the world. Find out how you can get this program for your dome!

Presenter: Steven LJ Russo

Title: Suits-Beuche Planetarium. The Final Renovation - For Now!

Abstract: The Suits-Beuche Planetarium at the Schenecady Museum has finished a major renovation that started in 2003. It is a final renovation for now, as a new science center & planetarium is in the planning.

Presenter: Sheldon Schafer

Title: Outreach to Space - A Collaborative Model for Rural Community Engagement

Abstract: OTS is a collaborative of 11 midwestern and west coast science museums. Members have developed a set of portable, interactive astronomy exhibits which will be delivered to non-traditional venues in 2008-2009. This paper will present the key elements of this program.

Presenter: Sharon Shanks

Title: All-Dome for Children on the Cheap: Wilbear's Adventures Across Three Regions

Abstract: In which we learn how Wilbear was born in Florida, grew up in GLPA Land traveled far away to SEPA territory to become a nifty all-dome hero, and landed in MAPS Maine to face another transformation; or, to be boring, how three planetariums across the country have cooperated to produce an almost no-cost all-dome program for young people.

Presenter: Tony Butterfield

Title: Refractors to Reflectors-Lenses to Mirrors: What Worked for the Telescope, Now Works for the Dome.

Abstract: Convex spherical mirrors can replace lenses in delivering wide angle, full-dome images to the dome. This technology, first introduced over 7 years ago, has led to another digital milestone in the planetarium community. This flexible, open architecture display system gives another choice for planetaria to consider when upgrading.

Presenter: Thomas Hamilton

Title: Public Misunderstanding of Astronomical Topics

Abstract: "Yahoo Answers" is used by thousands of people all over the world for information. Many questions betray a profound lack of understanding. With a planetarium attached to the New Creation Museum, this situation may worsen.

Presenter: Todd Slisher

Title: Chroma Key Shooting for Planetarium Production

Abstract: The author will present tips and suggestions for shooting scenes with live actors against a Chroma (green or blue) background for use in planetarium productions. New technologies in this area will also be discussed.

Presenter: Wendy Ackerman

Title: New Horizons-Mission to Pluto and Beyond

Abstract: The Maryland Science Center is a partner for education and public outreach with the Applied Physics Laboratory for the New Horizons mission. Hear about what we've been up to, some simple activities we do and pick up some fun materials.