## February 27-March 6, 2015 Hilo, Hawaiʻi

## **Astronomy Educator Profiles**

ourney through the Universe



<u>Nobuo Arimoto</u> Subaru Observatory Contact: <u>arimoto@naoj.org</u>

**Nobuo Arimoto's** intense interest in astronomy began when a neighbor showed him how to use a telescope when he was 11 years old. He went on to become a student of astronomy at Tohoku University, where he received his Ph.D. in astronomy in 1980. He has held positions the Observatoire de Paris-Meudon in France (1984-1988), the University of Durham in the United Kingdom (1988-1991), the Universitaet der Heidelberg in Germany (1991-1993), the Institute of Astronomy at the University of Tokyo in Japan (1993-2001), and NAOJ in Japan (2001-2012). He served as part of Subaru's Time Allocation Committee (2000-2004) and as Chair of the Subaru Advisory Committee (2004-2012). He took over Director of the Subaru Telescope in April of this year (2012). A heavy user of Subaru's telescope (59 nights as a principal investigator in a little over a decade), Dr. Arimoto focuses his scientific research on understanding galaxy evolution and the properties of individual stars within galaxies.



Brad Bailey SSERVI/NASA Contact: brad.bailey@nasa.gov

Brad Bailey will always be an Astrobiologist... dedicated to discovering the origin and evolution of life, both here on Earth and beyond! Brad's road to Astrobiology began with his B.S. in Physics with minors in optics, chemistry and Japanese from the Rose-Hulman Institute of Technology. In 1998, Brad was accepted into the NASA Ames Astrobiology Academy where he worked on determining the composition of the interstellar medium. From there, he received his M.S. in Astrophysics from New Mexico Tech where he used the Very Large Array (VLA) (seen in the movie "Contact"!) to look at pulsars. After working for two years at NASA Ames as a hardware engineer for the International Space Station, Brad went back to graduate school at Scripps Institution of Oceanography in San Diego and completed his Ph.D. in marine microbiology and geochemistry. His Ph.D. work included diving into submarine volcanoes in Hawai'i and Samoa via small submersibles to study how life can survive in extreme environments. Brad is now the NASA Solar System Exploration Institute Staff Scientist at NASA Ames Research Center and also directs the NASA Ames Academy, a summer student research and leadership development program. He actively speaks to the public on a wide variety of topics from astrobiology and planetary science to robotics and exploration.



Daniel Berke Joint Astronomy Centre Contact: <u>d.berke@jach.hawaii.edu</u>

<u>Kelly Blumenthal</u> UH Institute for Astronomy Contact: <u>blumenthal.kelly@gmail.com</u>

**Daniel Berke** earned his Bachelor's degrees in Physics and Astronomy at UH Hilo in December 2011 after moving to Hawaii from California. He quickly fell in love with the climate and after graduating spent a year working at the Mauna Kea Visitor Information Station before finding a job at the Joint Astronomy Centre. There he keeps an eye on the output of the James Clark Maxwell Telescope, watching to make sure everything is running as it should be. Apart from his main loves of physics and astronomy he enjoys reading anything he can get his hands on, hiking, playing computer games, powerbocking, classical music, spelunking, and singing in choir. In the future Daniel plans to go on to graduate school to obtain a Ph.D. in theoretical physics.

**Kelly Blumenthal** is a first year graduate student at the Institute for Astronomy at UH Manoa. She received her B.A. in astronomy and physics, with a minor in music performance from Boston University in 2014. While there, she worked primarily on weak gravitational lensing theory, and its implications on the derived local dark matter distribution. At the IfA, she hopes to study how theories of galaxy evolution are affected by chaotic events such as major mergers. If you manage to find her not ruining her eyesight in front of a computer, Kelly is likely either reading some overly dense sci-fi novel, or trying desperately to teach herself to play the ukulele.



<u>Andre-Nicholas Chene</u> Gemini Observatory Contact: <u>achene@gemini.edu</u>

**André-Nicolas Chené** is an assistant scientist at the Gemini North Observatory since early 2013. He obtained his Ph.D. in astrophysics from the Université de Montréal in 2007. He then moved across his home country ("A Mari Usque Ad Mare") to become a research associate for the National Research Council Canada at the Herzberg Institute of Astrophysics from 2007 to 2010. From 2010 to 2013, he held a joint post-doctoral position between the Unversidad de Concepcion and the Universidad de Valparaiso, in Chile, and joined the science team of the VISTA Variable in Via Lactea survey. His main scientific interests are massive stars and young stellar open clusters. His expertise covers optical and near infrared imaging and spectroscopy. Two things he enjoys a lot since he moved to Hawai'i are long observing runs at Mauna Kea, and his daily bike ride to work up and down Puainako St.



<u>Kathy Cooksey</u> UHH Physics & Astronomy Contact:<u>kcooksey@hawaii.edu</u>

Sandra Dawson Thirty Meter Telescope Project Contact: sdawson@tmt.org

**Kathy Cooksey,** an assistant professor in astronomy, received her PhD in 2009 from UC Santa Cruz and was an NSF postdoctoral fellow at MIT until starting at UH Hilo in January 2014; both institutions enabled her to learn about science pedagogy and practice teaching. She researches the large-scale gaseous structure in the universe to understand how various elements cycle in and out of galaxies, over cosmic time. As for hobbies, she enjoys soccer, hiking, and camping (and crocheting and watching anime, on the sedentary side).

Sandra Dawson is Manager, Hawai'i Community Relations, for the Thirty Meter Telescope Project. Dawson has a Bachelor of Arts degree in Political Science and a Master's Degree in International Studies from Claremont Graduate University. For 20 years as an employee of the California Institute of Technology (Caltech) she worked at Caltech's Jet Propulsion Laboratory on some of JPL's largest projects for NASA, including the Galileo, Cassini and Mars missions, and received numerous group and individual awards. With her husband, Dwayne, she moved to Hilo six years ago to work on the Thirty Meter Telescope project and has been engaged in many civic, non-profit, and educational programs.



<u>Brian Day</u> SSERVI/NASA Contact: <u>brian.h.day@nasa.gov</u>

Brian Day is the Lead for Citizen Science and Community Development at the Solar System Exploration Research Virtual Institute (SSERVI). In this role, he coordinates programs with numerous internal and external partnering organizations, focusing on providing opportunities for students and the public to directly participate in NASA science and exploration. He currently acts as SSERVI's project manager for NASA's Lunar Mapping and Modeling Portal (http://lmmp.nasa.gov), a set of tools designed for mission planning, lunar science, and public outreach. From 2010-2014, Brian served as the Education/Public Outreach Lead for NASA's Lunar Atmosphere and Dust Environment Explorer (LADEE) mission to the Moon, which flew through and studied the Moon's tenuous atmosphere. From 2007-2010 he served as the E/PO Lead for NASA's LCROSS lunar impactor mission which discovered deposits of water ice at the Moon's South Pole. He has also participated in producing the Education/Public Outreach sections for numerous NASA mission proposals. Brian has played key roles in various NASA Mars Analog Field Studies, providing technical support in the field for webcasts and robotic rover tests in extreme environments here on Earth. In 2007, he flew on the Aurigid-MAC mission to record fragments of comet Kiess entering Earth's upper atmosphere. Brian is a frequentlyrequested speaker at local schools and community organizations. As a member of NASA's Speakers Bureau, he is sent by NASA to give talks on a wide range of NASA missions and research topics.



**Daniel Devost** is the Director of Science Operations at the Canada-France-Hawaii Telescope since 2008. He started at CFHT in 2007 as a Canadian Resident Astronomer and was the WIRCam Instrument Scientist. Before Moving to Hawaii, Daniel worked at Cornell University from 2000 to 2007 as an Instrument Scientist for the Infrared Spectrograph. The spectrograph is one of three instruments on board the Spitzer Space Telescope that was launched in August 2003. Daniel did his PhD at the Université Laval in Québec City, Canada in collaboration with the Space Telescope Science Institute in Baltimore where he spend three years. His science interests are the formation of massive stars and the amount of metals in the Universe.

Daniel Devost Canada-France-Hawaii Telescope Contact: devost@cfht.hawaii.edu



<u>Angelic Ebbers</u> Gemini Observatory Contact: <u>aebbers@gemini.edu</u>

Angelic Ebbers is a Senior Software Engineer for Gemini Observatory. She is part of the Software Operations group as well as a Telescope Technical Manager. Angelic specializes in motion control systems, EPICS real-time development, and troubleshooting. Angelic earned a B.Sc. from York University in the Space and Communications Sciences stream, with Honors in Computer Science and Physics, plus a minor in Astronomy. Prior to joining Gemini, Angelic worked for The Herzberg Institute of Astrophysics as well as the University of Toronto Southern Observatory in Chile. Outside of work, Angelic can be found training/competing in Dog Agility, scuba diving, or reading a good science fiction book.



<u>Anna Ferre-Mateu</u> Subaru Telescope Contact:

Anna Ferre-Mateu was born in Barcelona, Spain. She always has one eye on the Earth, the other one looking up to the skies. Anna moved to the Canary Islands at the age of 22 to pursue a major in Astrophysics. The magic of the island, so similar to Hawaii, kept her in there for 8 amazing years filled with sun, sea, high mountains, big telescopes and the intrigues from the Universe. After receiving her PhD there in 2013, from the Insitituto de Astrofisica de Canarias, Anna moved to another fascinating volcanic island, Big Island. Now she is working as a research specialist in the extragalactic field for Subaru Telescope. Her work is focused on shedding some light into the puzzle of the formation and evolution of the most massive elliptical galaxies in the Universe. Anna studies how the properties of their stars vary over cosmic time and how this evolution fits on the assumed theories. When she is not thinking about the Universe and its secrets, she likes to spend her time outdoors: surfing, skiing, diving, hiking, or simply relaxing at the beach reading a book. But her favorite hobby is to travel, and she travels as much as she can so maybe is not that easy to find her around.



<u>Scott Fisher</u> University of Oregon <u>Contact: rscottfisher@gmail.com</u>

Scott Fisher is a faculty member within the University of Oregon, Department of Physics, where he teaches astronomy courses and serves as the Director of Outreach for the department. Scott previously worked at the National Science Foundation in Washington, DC where he was responsible for selecting and funding astronomy programs across the United States. Before his time in Washington, Scott worked as a staff member of the Gemini Observatory as an instrument scientist and as a member of the Gemini Outreach team. Scott lived in Hilo-town for just over 10 years while he worked at Gemini. He obtained his Ph.D. from the University of Florida in 2001 after working his way through the Florida state school system, including a stint at Lake Sumter Community College. Scott's main area of research is searching for and studying planet-forming disks around young stars. He is also involved with the design, construction, and use of infrared camera systems that are used on some of the biggest telescopes in the world. He has spent approximately 350 nights observing from the summit of Mauna Kea since his first trip to Hawai'i in 1996. In addition to his love of astronomy, Scott is an amateur photographer and a Geocacher.



<u>Roy Gal</u> UH Institute for Astronomy Contact: <u>rgal@ifa.hawaii.edu</u>

**Roy Gal** received his B.A. in Astrophysics from Columbia University in 1994, and his Ph.D. in Astronomy from Caltech in 2001, detecting and studying galaxy clusters from the 2nd Palomar Sky Survey. He then worked on the Sloan Digital Sky Survey at Johns Hopkins University, followed by three years at U.C. Davis, studying galaxy evolution in clusters that formed when the Universe was half its present age. He has been a faculty member at UH Manoa's Institute for Astronomy (IfA) for eight years, continuing to study the evolution of galaxies. He oversees all of the IfA's outreach programs and media relations, teaches astronomy classes, and heads the UH National Gemini Office and the Friends of the Institute for Astronomy.



<u>Olivier Guyon</u> Subaru Telescope Contact: <u>guyon@naoj.org</u>

Olivier Guyon is an astronomer at the Subaru Telescope. He started looking at stars from the age of 10, and he is now both an avid amateur astronomer and a professional astronomer. Olivier graduated from University of Paris 6 in 2002 (Ph.D. research topic: wide field interferometry), and now works with other scientists to directly observe exoplanets. Olivier has been developing new techniques for imaging exoplanets (planets around other stars) from telescopes on Earth and also future telescopes in space. With these new techniques, astronomers will soon be able to observe planets like ours and start to find out if there is life elsewhere in the Universe. In 2007, Olivier received a Presidential Early Career for Scientists and Engineers award from President Bush at the White House. Olivier received in 2012 the MacArthur fellowship (nicknamed the "Genius grant") for his innovative work in astronomical optics. In his spare time, he builds telescopes which he then uses to observe from the clear skies of Mauna Kea and Mauna Loa.



<u>John Hamilton</u> UH Hilo Physics & Astronomy Contact: <u>jch@hawaii.edu</u>





<u>Janice Harvey</u> Gemini Observatory Contact: <u>jharvey@gemini.edu</u>



<u>Guenther Hasinger</u> UH Institute for Astronomy Contact: <u>ghasinger54@gmail.com</u> John Hamilton is currently serving as Deputy Director of the Pacific International Space Center for Exploration Systems (PISCES) based at the University of Hawai'i at Hilo. An astronomer by trade, he has been associated with space exploration since 1972 with the Skylab missions, spent most of his career supporting astronomical observations at multiple observatories in Hawai'i on Haleakala and Mauna Kea and also in Chile. He has most recently managed the first two International ISRU analog field tests in Hawai'i in 2008 and 2010 and is currently working on the 2012 deployment. John currently teaches undergraduates in Physics and Astronomy courses at UH Hilo. He also serves as co-founder and chief scientist for a local high-tech R&D company Akeakamai Enterprises LLC.

Janice Harvey is the Community Outreach and Education Programs Leader at Gemini Observatory and serves as the director of the nationally recognized Journey through the Universe Program on the Big Island. Janice is also the National Team Site Leader for the Family Astro/Project Astro program in Hawaii and serves as the StarLab Portable Planetarium instructor and trainer. In 2010 she was awarded the Outstanding Individual in Business award by the Rotary Club of Hilo. She is a member of the Astronomical Society of the Pacific, the International Planetarium Society, and the National Science Teachers Association. Janice has a BS in mathematics and went back for her associate degree in astronomy in 2000 at UHH. She has lived on the Big Island for 40 years and has worked as the Mayor's Executive Assistant, owned and operated Sylvan Learning Centers and three travel agencies in Hawaii. Janice's passion is bringing science and astronomy into the local classrooms.

**Günther Hasinger** is a world leader in the field of X-ray astronomy and in the study of black holes, having received numerous awards for his achievements. Before becoming Director of the IfA in 2011, he was Director of the Max-Planck-Institutes for extraterrestrial Physics and for Plasma Physics, where he also was responsible for space technology and X-ray detector development. Prof. Hasinger gained his doctorate at the University of Munich and holds an honorary professorship at the Technical University Munich. He began his research career in astrophysics, receiving numerous awards for his contributions in this area, including the Leibniz prize in 2005, for his work on cosmic background x-radiation and black holes, and the Cospar award in 2010 for outstanding contributions to space science. He has also been active in explaining cosmology to a wider audience, winning a Science Book of the Year Award in 2008 for his book "Fate of the Universe". He used to be a rock musician.



<u>Saeko Hayashi</u> Subaru Telescope Contact: <u>saeko@naoj.org</u>



<u>Stephanie W. Henry</u> NASA Marshall Space Flight Center Contact: <u>stephanie.I.Wilson@nasa.gov</u> Saeko S. Hayashi grew up in Tohoku, a northeastern rural part of Japan, where she spent part of her childhood in Fukushima. After graduating from a local high school, she boldly went on to attend the University of Tokyo as one of the few women undergraduates in STEM majors; she continued there and became the first woman to pursue Ph.D. in astronomy. She conducted her graduate research at the 45-m radio telescope in Nobeyama, Japan. After receiving her doctorate, she worked at the 15-m James Clerk Maxwell Telescope in Hawai'i and then joined the 7.5-m Japan National Large Telescope (JNLT) project, which began at the National Astronomical Observatory of Japan in 1990, and later became known as the Subaru Telescope with 8.2-m diameter. She has performed a variety of roles at Subaru from taking care of telescope optics, managing day crews to currently managing the Public Information and Outreach Office. She hopes to participate in the publication of research that will lead to major discoveries of Earth-like exoplanets, possibly with water and vegetation. She says, "Subaru Telescope, where people from all over the world come together and work with each other [as ancient Japanese word "Subaru" stands for], is a great place to work. The technical and other challenges at work and the laid back life in this beautiful island is an ideal combination for me".

Stephanie W. Henry serves as a Communications Strategist with Arctic Slope Regional Corporation, Inc. in Huntsville, AL. Stephanie's duties include external communications for the Lunar Quest and Discovery/New Frontiers Program Office at NASA's Marshall Space Flight Center. Stephanie assists in developing communication products and materials for the programs. She visits schools, museums, and community organizations to excite students and teachers about NASA's mission and encourages the students to study science, technology, engineering, and math. Stephanie is a graduate of the University of North Alabama where she received a Bachelor of Arts degree in Spanish/Political Science and a Master of Arts in Community Counseling. Stephanie also attended Belmont University in Nashville, TN where she earned her teacher certification for kindergarten through eighth grade. Before joining ASRC, Stephanie's experience includes work in a variety of educational arenas. Stephanie spent seven years working in Student Affairs at different universities and seven years teaching in the classroom, formal and informal instruction. Stephanie is a native of Tupelo, MS and has lived in the Huntsville, AL area for the past nine years. She is married and has a 15-year-old stepson. Stephanie enjoys traveling, shopping, tennis, and spending time with her family in her spare time.



<u>Michael Hoenig</u> Gemini Observatory Contact: <u>mhoenig@gemini.edu</u>

**Michael Hoenig** is currently working as a Data Analysis Specialist at Gemini Observatory. He did his undergraduate degree in Astrophysics at the University of Sussex (England) in the mid-1990s, and then went on to do a Ph.D. at the University of Cambridge, which he completed in 2004. His thesis centered around the construction of a wide field infrared camera called CIRSI, which meant he ended up going on a number of observing trips to Mauna Kea and the Canary Islands. Once all the data from the instrument was properly reduced and calibrated, it was used to search for distant clusters of galaxies - and he is happy to report he actually found some, too. After his Ph.D. he worked in translation and publishing for a few years. He is thrilled to be back in astronomy and back in Hawai'i. When he's not examining data from the telescope, he likes to go to the beach, read a good book or dance Argentine tango.



<u>Matthew Hosek</u> UH Institute for Astronomy Contact: <u>mwhosek@gmail.com</u>

**Matt Hosek** is a second year graduate student at the University of Hawaii Institute for Astronomy, having received a B.A. in Astrophysics from Williams College in 2012. He is interested in how stars interact with and affect their galactic environment, and is currently studying star formation near the supermassive black hole at the center of our galaxy. Interested in astronomy from a young age, he is excited for the opportunity to share his enthusiasm through education and outreach. Outside of astronomy, he is a huge football fan (GO GIANTS!) and enjoys hiking and playing ultimate frisbee.



<u>Stewart Hunter</u> Mauna Kea Support Services Contact: <u>shunter@ifa.hawaii.edu</u>

**Stewart Hunter** has been the General Manager at Mauna Kea Observatories Services (MKSS) since 2010. MKSS operates and maintains the mid-level astronomy facilities at Hale Pohaku on Mauna Kea. This includes the astronomy dormitories, the dining facility and the Visitor Information Station as well as maintaining the summit roads. Prior to working at MKSS, Stewart spent 24 years in the Navy, serving on submarines as an electronics technician, then after receiving a commission, a logistics officer until retiring in 2004 as a Lieutenant Commander. He received a BS in Earth Science from Oregon State University in 1991 and a MS in Systems Management from the Naval Post Graduate School in 1999. Stewart and his wife Lory have been Hilo residents since 2000, where they also own and operate a local Bed and Breakfast.



<u>Russell Kackley</u> Subaru Telescope Contact: <u>rkackley@naoj.org</u>

**Russell Kackley** holds a Bachelor of Science in Mechanical Engineering from Wayne State University and a Master of Science in Mechanical Engineering from Stanford University. He worked for 16 years on spacecraft design and analysis at Lockheed-Martin before moving to Hawai'i. Here in Hilo, he worked for 11 years at the Joint Astronomy Centre and was responsible for the Telescope Control System software. Since April 2011, he has been working at the Subaru Telescope in the Observation Control Software group. He also mentors the Waiakea Intermediate and Honoka'a High School robotics teams.



<u>Yuko Kakazu</u> Subaru Telescope Contact: <u>kakazu@naoj.org</u>

Yuko Kakazu recently joined the Subaru Telescope as an outreach specialist. A native Okinawan, she began her journey into astronomy when she attended NASA's U.S Space Camp program at age 13. She graduated from Tohoku University in Japan and then obtained her Ph.D. at the Institute for Astronomy, University of Hawai'i at Manoa in 2008. Since then, she has worked as a postdoctoral researcher in Paris, France (Institut d'Astrophysique de Paris), California (California Institute of Technology), and Chicago (University of Chicago). Her research focuses on metal poor galaxies and distant galaxies with the aim of improving our understanding of galaxy formation and chemical enrichment history. At Subaru, Yuko arranges and conducts public outreach events and lectures for the local and the international communities, including Japanese audiences. She is hoping to help fill the gap between scientists and the public and wants to encourage young people, especially women and minorities, to engage in science and technology. When Yuko is not talking about astronomy or playing with her baby galaxies, she enjoys cooking (as well as eating), listening to piano jazz and classical music, and taking yoga or Zumba class at the gym. She is a certified Zumba fitness instructor.



<u>Rob Kelso</u> Pacific International Space Center for Exploration Systems (PISCES) Contact: <u>rkelso54@gmail.com</u>

**Rob Kelso** has worked for NASA for 38 years at the Johnson Space Center in Houston, Texas. During the late 1980's and 90's, Rob served as a Shuttle Flight Director in NASA's famed Mission Control Center (MCC) while directing 25 Space Shuttle missions. His role as Flight Director is the same as Gene Kranz (*Failure is Not an Option*) in the movie "Apollo 13" starring Tom Hanks. During the missions, Rob often used the NASA and Air Force tracking/communications ground stations in Hawaii to monitor the Shuttle and communicate with the astronauts. He is currently the Executive Director of PISCES (Pacific International Space Center for Exploration Systems) in Hilo. PISCES is responsible for conducting robotic operations on the Big Island for testing planetary surface technologies before launch. He has a bachelor's degree in physics and an MBA in public management.



<u>Markus Kissler-Patig</u> Gemini Observatory Contact: <u>mkissler@gemini.edu</u>



<u>Bernhard Laurich</u> Hawai'i Community College Contact: <u>laurich@hawaii.edu</u>



<u>Mary Beth Laychak</u> Canada-France-Hawaii Telescope Contact: <u>name@cfht.hawaii.edu</u>



<u>Nadine Manset</u> Canada-France-Hawaii Telescope Contact: <u>manset@cfht.hawaii.edu</u>

Markus Kissler-Patig grew up in Switzerland and France before moving to Germany for his university studies. He obtained his PhD in astrophysics in 1997 from the University of Bonn and held post-doctoral positions at the University of California Santa Cruz and the European Southern Observatory (ESO) in Germany. He joined the latter as faculty in 2000 as instrument scientist for a series of instruments for ESO's Very Large Telescope. In 2008, he took up the position of project scientist for the 40m European Extremely Large Telescope. In August 2012, Markus Kissler-Patig joined the Gemini Observatory as director. He remains an adjunct professor at the Ludwig-Maximilians University in Munich where he has been teaching astrophysics and astrobiology since 2005.

**Bernhard Laurich** received his Ph.D. in Physics at the University of Stuttgart, Germany, where he studied the electronic properties of silicon. In 1986 he moved to the U.S. and spent 10 years at the Los Alamos National Laboratory doing research on layered inorganic and organic semiconductors and their structural, electric and electro-optic properties. In 1996 he followed his passion to create and foster interest in science, and since that time he has been teaching Physics, Chemistry and Astronomy at Hawai'i Community College. His most recent interests are astrobiology and sustainable energy systems.

Mary Beth Laychak is the outreach program manager at the Canada-France-Hawaii Telescope, her second time working at CFHT. Previously, Mary Beth was one of CFHT's service observers and outreach coordinator before moving to Oahu. On Oahu, she worked as the manager at the Imaginarium planetarium and astronomy lecturer at Windward Community College. Mary Beth has a BA in astronomy and astrophysics from Penn State University as well as a MA in Education from San Diego State.

**Nadine Manset** has been a resident astronomer at CFHT since 1999, right after finishing her PhD thesis at Universite de Montreal. Over the years, she has helped astronomers observe in classical mode at CFHT, with spectrographs and imagers. Now in charge of the Queued Service Observing mode, she prepares observations for CFHT's spectropolarimeter and oversees the nightly observations taken with the various instruments. In addition to chairing the Mauna Kea Astronomy Outreach Committee, Nadine participates to public outreach events a few times every year.



<u>R. Pierre Martin</u> UHH Physics & Astronomy Contact: <u>rpm33@hawaii.edu</u>

**Dr. R. Pierre Martin** is an Assistant Professor of Physics and Astronomy and the Director of the UH Hilo Hoku Ke'a Observatory on Mauna Kea. He earned his MS and PhD in astrophysics at Universite Laval in Quebec, Canada. He has held post-doctoral fellowship positions at Steward Observatory in Arizona, and with the European Southern Observatory New Technology Telescope in Chile. Between 1997 and 2008, Dr. Martin was a resident astronomer at the Canada-France-Hawaii Telescope on Mauna Kea, and its Director of Science Operations for six years. Prior to joining UH Hilo, he was the Executive Director of the WIYN 3.5m telescope on Kitt Peak (Arizona) and also a consultant for the Giant Magellan Telescope project. Dr. Martin fields of research include the chemical evolution of galaxies, massive star formation, galaxy morphology, planetary nebulae, astronomical instrumentation and the optimization of the observational process for professional observatories.



<u>Tony Matulonis</u> NASA IRTF Contact: <u>matuloni@ifa.hawaii.edu</u> **Tony Matulonis** works at NASA Infrared Telescope Facility (IRTF). He earned his Bachelor of Science in Astronomy from the University of Hawai'i at Hilo in 2002. After working as an Interpretive Guide at the Ellison Onizuka Center for International Astronomy Visitor Information Station, Telescope Operator at the UH 2.2-meter telescope, Science Operations Specialist at Gemini Observatory, he joined IRTF in 2013.



<u>Callie Matulonis</u> James Clerk Maxwell Telescope Contact: <u>mcnew@hawaii.edu</u>

**Callie Matulonis** is currently a Telescope System Specialist at the James Clerk Maxwell Telescope. Callie graduated from the University of Hawai'i at Manoa in the Spring of 2012 with a Master's degree in Educational Technology. Callie has worked for several Mauna Kea observatories over the past ten years fulfilling a variety of positions including public outreach, laser operations, and telescope operations.



<u>Peter Michaud</u> Gemini Observatory Contact: <u>pmichaud@gemini.edu</u>

Peter D. Michaud, Gemini's Public Information and Outreach Manager, has pursued a career that has provided a broad set of experiences in education, media relations and photography. These have ranged from the initiation and management of many informal science education programs to the authoring of a monthly newspaper column on astronomy. Prior to moving to Honolulu in 1989 to manage the Bishop Museum Planetarium, Peter obtained his Bachelor's Degree in Atmospheric Physics and certification in Physical Science Education in 1985. This led to his selection for the highly competitive annual planetarium education internship at the Strasenburg Planetarium in Rochester N.Y. in 1985 - 86. During almost a decade at the Bishop Museum Planetarium, Peter worked closely with local educators as well as the Mauna Kea astronomical community and initiated many new projects that included a NASA-funded project to produce a nationally distributed planetarium program about Mauna Kea. In June 1998, Peter accepted his current position at the Gemini Observatory in Hilo. Since arriving here, Peter has been involved in a variety of projects that have included the management of multiple outreach, education and media relations initiatives. An example of the innovative products produced by his office is the Gemini Observatory Virtual Tour CD-ROM/Kiosk which is currently being translated into multiple languages and has been installed in a variety of public facilities around the world.



<u>Joseph Minafra</u> NASA Ames Research Center Contact: <u>joseph.minafra@nasa.gov</u>

At the NASA Ames Research Center, Joseph Minafra serves as Lead of Technical Systems and Collaborative Technology Specialist for the NASA Solar System Exploration Research Virtual Institute (SSERVI). Joe has an extremely diverse background that ranges from Meteoritic studies, biology and project management, software development including web design, collaborative technology development to Scientific Illustration and a few years as a professional Chef. With his varied background, Joe has been responsible for a broad set of technical tasks for the NASA Ames Center Director as well as the Space and BioSciences Divisions. Currently, his work is to oversee technology innovation in order to enable collaboration and communication between competitively selected science and research teams across not only the United States but internationally as well. Joe has a long history of integrating government work with commercial enterprises and bringing that message to the public through the education and public outreach sectors. He is excited to share his NASA experiences with the Journey through the Universe communities! Ad Astra!



<u>Brian Mitchell</u> NASA Lunar Science Institute Contact: <u>brian.k.mitchell-</u> <u>1@nasa.gov</u> Brian Mitchell is the Education and Public Outreach manager for NASA's Discovery/New Frontiers/Lunar Quest Program Office. He has more than 25 years at the Marshall Space Flight Center located in Huntsville, Alabama and has worked on various Space Shuttle payload missions including ASTRO, ATLAS, and Spacelab, as well as several experiments for the International Space Station. He has been the Program Office Education and Outreach lead during the LRO, LCROSS, LADEE, JUNO, GRAIL, and IML missions to our Moon, Jupiter and Mars. Future missions in his Office include the asteroid sample return mission OSIRIS-REx, INSIGHT seismic mission to Mars, and the New Horizon spacecraft nearing Pluto now. Brian is tasked with educating the general public and inspiring/engaging students and educators on Discovery/New Frontiers/ Lunar Quest Office missions, Agency science and exploration objectives, by using existing or creating new opportunities. He spends much of his time speaking in classrooms and public venues, as well as designing innovative interactive exhibits that travel the country. When not talking about space, Brian keeps his 1965 Ford tractor alive, competes in shooting events, and occasionally gets to swing a golf club with his two teenagers.



<u>Harriet Parsons</u> Joint Astronomy Centre Contact: <u>h.parsons@jach.hawaii.edu</u>

Harriet Parsons moved to Hilo in 2011 and is a Staff Astronomer for the James Clark Maxwell Telescope. This is her first job after completing her Ph.D. at the University of Hertfordshire in the United Kingdom. Her dayto-day job varies widely from assisting visiting astronomers both in terms of health and safety and in terms of quality of images, to working on data from the newest instrument on the JCMT: SCUBA-2. When she has time, her research focuses on cold dense clouds (made of gas and dust) within our own Milky Way galaxy looking at where massive stars may be forming. These stars are more than eight times the mass of our sun and end violently in supernovae; however the way they form is shrouded in mystery (well, OK, dust!). Using the JCMT astronomers can "see" through the dust helping to unlock the secrets of these clouds. Away from astronomy she enjoys paddling with Puna Canoe Club, learning Hula, snorkeling, and traveling. She also loves going to the diverse events available in Hilo, from Shakespeare in the Park to watching Paradise Roller Girls!



Emily Peavy UHH Physics & Astronomy Contact: peavye@hawaii.edu

**Emily Peavy** is a planetarium student worker majoring in astronomy at the University of Hawaii at Hilo and is currently in her third year of the program. She has been working at 'Imiloa as Planetarium Operator since January of 2012. Emily also enjoys volunteering at the Mauna Kea Visitor Information Center, and has completed an internship through the Akamai Workforce Initiative working at the Institute for Astronomy. She can easily see herself going into the outreach and education side of astronomy, but is also intrigued by much of the research that is occurring in the field.



<u>Andreea Petric</u> Gemini Observatory Contact: <u>apetric@gemini.edu</u>

Andreea Petric is a Science Fellow at the Gemini North Observatory since November 2013. She has received her PhD from Columbia University with a thesis on X-ray scattering halos and was a postdoctoral fellow at Caltech working on IR and millimeter observations of interacting galaxies and galaxies hosting Active Galactic Nuclei (AGN). Her current research focuses on near-IR observations with Gemini of the impact of AGN on the interstellar medium of their host galaxies.



<u>Christopher Phillips</u> Freelance Astronomy Educator Contact: <u>achernan.uk@gmail.com</u>

**Christopher Phillips** works internationally as an independent consultant and researcher on projects as diverse as museum programming, exhibit design, science communication training, international development and education. Most recently Christopher has served as scientific consultant for the construction of new radio telescope at Kazan University in the Russian Federation and science park facilities at Goonhilly satellite base station in the United Kingdom. Christopher is also a regular contributor to Guru Magazine, a brand new online popular science publication. He is also an active member of Astronomers without Borders and he founded the 'Reach for the Stars – Afghanistan' program – an effort to bring science education to children of conflict zones and the developing world.



<u>Bo Reipurth</u> UH Institute for Astronomy Contact: <u>reipurth@ifa.hawaii.edu</u>

Bo Reipurth graduated from the University of Copenhagen in Denmark. After spending some years as a postdoc there, he took up a position as staff astronomer with the European Southern Observatory in Chile for 11 years. Subsequently, he worked at CASA in Colorado as a Research Professor, and later joined the Institute for Astronomy at the University of Hawaii in Manoa in order to pursue studies of star and planet formation. "One of my first astronomical experiences as a small kid was to see the craters of the Moon and the rings of Saturn through the telescope at the public observatory on top of the Round Tower in Copenhagen. After that I was never in doubt that I had to become an astronomer. Conditions in Copenhagen were already in those days not ideal for looking at the night sky, but instead I spent innumerable hours with my small telescope drawing sunspots as they crossed the Sun. I took out a subscription to Sky and Telescope, which I then painstakingly read through with the help of a dictionary. One day I read an article about small mysterious blobs called Herbig-Haro objects which might be signposts of stars in the making. I was completely captivated by the possibility that we might actually be able to see stars in the process of being born, and I have spent most of my professional career trying to learn about how stars are formed."



<u>Rodrigo Romo</u> Pacific International Space Center for Exploration Systems (PISCES) Contact: <u>rfvromo@gmail.com</u>



<u>Kathy Roth</u> Gemini Observatory Contact: <u>kroth@gemini.edu</u>

**Rodrigo Romo** is the Project Manager for the Pacific International Space Center for Exploration Systems (PISCES), and is primarily in charge of the Robotic Village – an initiative to test in-situ resource utilization (ISRU) and robotics at planetary analogue testing sites. He is currently leading and supervising the development of PISCES' Alpha Argo planetary exploration rover, as well research and integration of future components for the Robotic Village. Romo began his career near Tucson, Arizona at Biosphere II - the largest fully enclosed facility dedicated to researching climate change, ecosystem interactions, and space colonization during its time. From 1992 through 1997, he held several key positions overseeing instrumentation and air monitoring systems, as well as working in research and engineering departments. Romo held his last position at Biosphere as the Plant Manager for a 6 megawatt cogeneration power plant on site. From 1997 through 2014, Romo served as the Vice President of Engineering for the Zeta Corporation, researching and developing new applications for the company's technologies. He is originally from Guadalajara, Mexico and earned his undergraduate degree in Chemical Engineering from ITESO University in 1992. He later obtained his Master's degree in Business Administration from the University of Arizona.

**Kathy Roth** is an Associate Scientist based at Gemini North. She is the instrument scientist for the Gemini Multi-Object Spectrograph (GMOS-N) and has been with Gemini since July 2000. She obtained her B.Sc. in Physics and Computer Science at Duke University in 1985 and her Ph.D. in Astrophysics from Northwestern University in 1992. She held a postdoctoral position at the Space Telescope Science Institute (STScI) in Baltimore from 1992 until 1995, followed by a Hubble Fellowship at the University of Hawai'i Institute for Astronomy from 1995 until 1998. In 1998 she joined the staff of the Far Ultraviolet Spectroscopic Explorer (FUSE) at Johns Hopkins University in Baltimore. Her research interests include the chemical enrichment of the interstellar medium in our galaxy and in the high-redshift universe via quasar absorption line spectroscopy, the study of distant young galaxies, and the use of gamma ray bursts to probe chemical enrichment of the early universe by the first stars.



<u>Dennis Schatz</u> Pacific Science Center Contact: <u>Dennis Schatz@pacsci.org</u> Dennis Schatz is Senior Advisor at Pacific Science Center in Seattle, Washington. A research solar astronomer prior to his career in science education, he worked at the Lawrence Hall of Science at the University of California, Berkeley, prior to moving to Seattle in 1977. At Pacific Science Center he has held a broad range of positions from Director of the Planetarium in his early years to VP for Exhibits and VP for Education to Senior VP in more recent years. In the last 4 ½ years, he was a Visiting Scholar at the University of Queensland, Brisbane, Australia, followed by four years as a Program Director at the National Science Foundation (NSF). He has provided leadership to several of Pacific Science Center's major initiatives, including Washington State LASER and Portal to the Public. He is active in the Association of Science-Technology Centers (ASTC), being a past member of its Program Committee, Professional Development Committee and past chair of its Education Committee, and its Leading Edge Awards Selection Committee. He is also active in the National Science Teachers Association, having been Program or General Chair for three of NSTA's Conventions. He has dedicated many years to identifying effective ways to teach astronomy concepts, especially through his involvement with the Astronomical Society of the Pacific (ASP), the largest international society dedicated to astronomy education in and out of school. He is a past board member and a past president of the ASP. He has received numerous honors, including the 1996 Distinguished Informal Science Educator Award from the National Science Teachers Association (NSTA). He received NSTA's 2005 lifetime achievement award (Distinguished Service to Science Education). In 2006 ASTC made him an ASTC Fellow for his lifetime achievement in service to the field and furthering the public's understanding of science. He is only one of 24 ASTC Fellows awarded in the history of ASTC and the first non-CEO or public official to receive the award. In March, 2009 he received the Faraday Science Communicator Award, presented annually by the National Science Teachers Association (NSTA). This award recognizes and honors an individual or organization that has inspired the public's interest in and appreciation of science. He joins an elite group of highly prestigious honorees, including the PBS series NOVA and NPR Science Correspondent Ira Flatow. Most recently, he received the 2014 Klumpke-Roberts Award from the Astronomical Society of the Pacific for outstanding contributions to the public understanding and appreciation of astronomy. Past awardees include stellar astronomy communicators, such as Carl Sagan, Isaac Asimov, Timothy Ferris and Dava Sobel. He is the author of 23 science books for children, including Uncover A T.rex, the Fossil Detective series of four books and the popular Totally series of six books (Totally Dinosaurs in 2000 to Totally Sea Creatures in 2003). His most recent book is The Amazing Squishy T.rex. His books have sold almost 2 million copies worldwide and have been translated into 23 languages. His Uncover A T.rex book was a 2003 Parents Choice Award Winner, and his Fossil Detective Woolly Mammoth received a 2006 iParenting Media award. He is also co-author/editor of several curriculum resources for teachers, including Astro-Adventures, Universe At Your Fingertips and More Universe At Your Fingertips.



<u>Sharon Schleigh</u> East Carolina University Contact: <u>schleighs@yahoo.com</u>

Sharon Price Schleigh has been an educator for over 20 years, teaching all ages from pre-school to university. She received her doctoral degree from Arizona State University. Her research interests include understanding how people think about and engage in science. This has led to research projects that have examined argumentation in a science classroom; authentic research in astronomy and problem-based curriculum designs; how students, teachers and scientists think about the nature of science; and how curriculum impacts content knowledge and attitudes about science. She has been involved projects such as the NASA Deep Impact Mission (Institute for Astronomy, Hawaii); Toward Other Planetary Systems (IFA/NSF); Ali'i Astrobiology Summer Workshops; and Teacher Leaders in Research-Based Science Education (NOAO, Kitt Peak). She has been on the education board for the Las Cumbres Observatories of Global Telescopes network (LCOGT), the Faulkes Telescopes, and GoScience. She is the current director of the Research Engaged Science Teacher Education Program to improve STEM (RESTEP to STEM), funded by NASA and the NC Space Grant to promote astronomy/science education with pre-service teachers. She has served as a Regional Science & Engineering Fair Director, a Regional Science Olympiad Director, a trainer and presenter of the ECU Portable Planetarium program, an AAPT State Representative (HI), as the Mentor Coordinator for the Near East School Alliance Virtual Science Fair.



<u>Doug Simons</u> Canada-France-Hawaii Telescope Contact: <u>simons@cfht.hawaii.edu</u> **Doug Simons** received his B.S. in astronomy at the California Institute of Technology in 1985, and a Ph.D. in astronomy at the University of Hawai'i in 1990, before working as a staff astronomer at the Canada-France- Hawai'i Telescope (CFHT) for 4 years. Doug joined Gemini in May of 1994 as the Systems Scientist, then managed Gemini's instrument development program for 5 years before becoming Gemini's Director from 2006-2011. Doug returned to CFHT in 2012 where he now serves as Executive Director. Principal areas of interest include infrared instrumentation and studies of the Galactic center, low mass stars, and star formation regions.



<u>Evan Sinukoff</u> UH Institute for Astronomy -Manoa Contact: <u>sinukoff@ifa.hawaii.edu</u>

Evan Sinukoff is a second year graduate student at the University of Hawaii Institute for Astronomy. Born and raised in Toronto, Canada, he completed his undergraduate degree at McMaster University, majoring in Physics. As part of this degree, he spent time working as a research assistant at NASA's Goddard Space Flight Center in Maryland. There, he had the opportunity to meet astronauts, and was exposed to the amazing world of space exploration. He became particularly interested in the detection and characterization of extrasolar planets, especially those which might be host to alien life. Presently, as a graduate research assistant, he is using some of the world's most powerful telescopes to search for Earth-sized exoplanets and the black hole remnants of exploded stars. His research team recently measured the mass and density of a hot, Earth-sized exoplanet, Kepler-78b, finding its composition to be mostly rocky like Earth. Aside from astronomy, Evan loves to hike, surf and play a variety of different sports, and, as most Canadians, this includes ice hockey.



<u>Breann Sitarski</u> UCLA/TMT Contact: <u>bsitarski@astro.ucla.edu</u>

**Breann Sitarski** is a graduate student researcher in the Galactic Center Group at UCLA. She got her Bachelor's degree in Astrophysics from UCLA, and continued there for graduate school, where she is currently working on her Ph.D. in Astronomy. Breann studies dusty objects near the supermassive black hole at the center of our Galaxy to try to understand where they come from, what they are, and how they survive in such a hostile environment. She also studies the adaptive optics system on the Keck II telescope to try to correct for aberrations that the NIRC2 instrument itself is making on astronomical data. She is also one of the lead outreach coordinators of Astronomy Live! - UCLA's awardwinning astronomy outreach group. Breann also likes studying history, traveling, playing various sports, and reading!



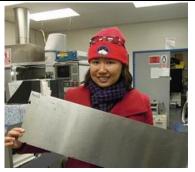
**Gordon K. Squires** is an astronomer at the California Institute of Technology, working with the Thirty Meter Telescopes as well as NASA's Spitzer Space Telescope, the Herschel Space Observatory, the Galaxy Evolution Explorer and other space telescopes with Caltech involvement. His research explores the old, cold and distant universe, understanding how galaxies formed billions of years ago, and the nature of the dark matter and dark energy that fills space.

<u>Gordon Squires</u> Thirty Meter Telescope Project Contact: <u>squires@tmt.org</u>



<u>Chad Trujillo</u> Gemini Observatory Contact: <u>trujillo@gemini.edu</u>

**Chad Trujillo** is an Astronomer at Gemini Observatory in Hilo. He obtained a BS in Physics from MIT in 1995 and a PhD in Astronomy from the University of Hawaii in 2000. After work as a Postdoctoral Scholar at Caltech he joined Gemini in 2003. At Gemini, he has been involved in the science operation of the Adaptive Optics system (Altair) guiding with both natural stars and laser beacons. His research interests include the Kuiper Belt, the solar system, star and planet formation and extrasolar planets. His recent work includes co-discovery and surface measurements of several of the largest Kuiper Belt Objects including the so-called "10th Planet", and co-discovery of the first high inclination Neptune Trojan asteroid.



<u>Vivian U</u> Thirty Meter Telescope Project Contact: <u>vivianu@ucr.edu</u>

Vivian received her Bachelor of Science degree in astrophysics in 2006 from the California Institute of Technology, and then a Ph.D. in astronomy from the University of Hawaii at Manoa in 2012. She was a visiting predoctoral fellow at the Harvard-Smithsonian Center for Astrophysics, and a recipient of the NASA-Harriett G. Jenkins Predoctoral Fellowship. Vivian is currently the Thirty Meter Telescope (TMT) Postdoctoral Scholar at UC Riverside working on the InfraRed Multi-object Spectrometer, one of the three first-light instruments that will be on the TMT.



<u>Josh Williams</u> Subaru Observatory Contact: <u>jcwilliams@naoj.org</u>

Josh Williams is an Operator for Subaru Observatory where he's been since March of 2011. He got his Bachelor's of Science degree in 2007 from the University of Hawaii – Hilo where he majored in Astronomy, and minored in Physics and Mathematics. Since graduating he has spent a significant amount of his time above an altitude of 9,000 ft. in various facets – as a volunteer and then Interpretive Guide at the Visitor Information Station on Mauna Kea (9,100 ft.), a Telescope Operator for the AMiBA Observatory on Mauna Loa (~11,100 ft.), and now as a Telescope Operator on the "proper" mountain, Mauna Kea (13,800 ft.). As a long time regular on Mauna Kea he has enjoyed eating copious amounts of ice cream at the mid-level facility.



<u>Sherry Yeh</u> Subaru Observatory Contact: <u>yeh@naoj.org</u>

**Sherry Yeh** joined Subaru Telescope in 2013 as a NAOJ-Subaru Research Fellow. She knew she wanted to become a scientist at a young age, and she made up her mind to become an astronomer after attending summer schools at the Ken-Ting Observatory and Academia Sinica Institute of Astronomy and Astrophysics in Taiwan. Sherry received her PhD at the University of Toronto in Canada; using near- and mid-infrared instruments on telescopes around the world, her research focuses on the interplay between massive star clusters and their interstellar medium in nearby galaxies. When not exploring the Universe, Sherry enjoys knitting, long-distance cycling, and wandering in the volcano park.