



Abhishek Prakash

Abhi joined Caltech in September 2017 after earning his doctorate at the University of Pittsburgh under Prof. Jeff Newman. His work during Ph.D. focussed mainly on large-scale structure spectroscopic surveys like SDSS-III/BOSS, SDSS-IV/eBOSS, and DESI. Abhi is known for developing a new method of identifying Luminous Red Galaxies by combining optical and infrared photometry which he employed for assembling eBOSS LRG target sample. His research interests lie in large-scale structure (BAO), galaxy evolution, time domain astrophysics, and target selection for spectroscopic surveys. Abhi also like to explore new machine learning techniques for estimating photometric redshifts for large imaging surveys like LSST.



Albert Izard

My background is physics and astro. In 2016 I finished my PhD in Barcelona and came here to start my first postdoc (UC Riverside/JPL). My field of study is numerical cosmological simulations as a tool to produce mock galaxy catalogs. These are computationally very expensive and new techniques have emerged to generate halo or galaxy mocks more efficiently, run many more realizations and estimate covariance matrices of observables. I am also interested in the halo-galaxy connection, weak gravitational lensing and galaxy clustering.



Alex Merson

My interests focus on galaxy formation and connecting galaxies to the cosmic large-scale structure. I work mainly with semi-analytical models of galaxy formation, which I apply to cosmological N-body simulations to make mock catalogues emulating future galaxy surveys. In particular, my work at JPL focusses on building mock catalogues to make forecasts for the ESA Euclid mission and the NASA Wide Field Infrared Survey Telescope (WFIRST). Before coming to JPL I did my PhD at Durham University (U.K.) and was a postdoc at University College London.

Allison Strom



Andreas Faisst

Andreas Faisst completed his PhD at ETH Zurich. In 2015, he came to Caltech with a research fellowship and since mid 2016 he is a postdoctoral researcher at the Infrared Processing and Analysis Center (IPAC) at Caltech. His research focuses on the formation and evolution of the first galaxies in the early Universe. He is an expert of emission lines and the North America PI of a 70h ALMA program to explore the dust properties and gas kinematics of today's largest sample of high redshift galaxies. Starting next year, Andre as will join the Canadian JWST NIRISS GTO team. Next to research, Andreas is heavily involved in outreach and science education and communication.



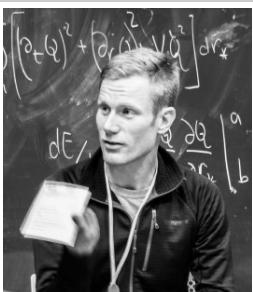
Anne Medling

Anne Medling is a Hubble Fellow at Caltech. Her research focuses on the nuclei of galaxies surrounding the central supermassive black hole. Anne began her astronomy studies at Caltech (BS, 2006) and UC Santa Cruz (PhD, 2013) and has also been a Fulbright Fellow, a UC Regents' Fellow, a NSF Graduate Research Fellow, and an Achievement Rewards for College Scientists Scholar. After receiving her PhD, Anne spent three years as a postdoctoral researcher at the Australian National University, where she helped build the SAMI Galaxy Survey. In her free time, she loves food, music, and being outside with her family.



Arpita Roy

Arpita is a Millikan Postdoctoral Fellow at Caltech working on exoplanet discovery and characterization using the new wave of extreme precision spectroscopy instruments. She is Project Scientist for the Keck Planet Finder instrument, and team member of the Habitable Zone Planet Finder and NEID instruments, spanning both the optical and near-infrared in search of Earth analogs. Combining hardware innovation along with tailored software development and careful consideration of stellar false positives, Arpita aims to ultimately use these high-fidelity instruments for the direct detection of planetary light, which would open up a new regime of exoplanet characterization.



Cameron Hummels

My research focuses on computational modeling of galaxy evolution. Complementing this, I develop public software for data visualization and generation of synthetic spectra (e.g., Enzo, FIRE, yt, Trident). I care deeply about public education, and as an NSF postdoc, I organize the public outreach efforts in Caltech Astronomy including Astronomy on Tap. I hope to become an astronaut, or get a permanent research/faculty position with a hand in outreach, but who knows how this will all turn out. Hit me up if you want to talk coding, trail running, ironman, brewing, star wars, chess, PCT, or muppet costume design.



Coral Wheeler

My research primarily focuses on small-scale challenges to Lambda-Cold Dark Matter theory - are we missing dwarf satellite galaxies around the Milky Way and Andromeda? Why are there discrepancies in the predicted and observed density profiles of low mass dark matter halos? How is star formation quenched in low-mass galaxies, and what is the lowest mass dark matter halo that can form a galaxy? I search for answers to these questions by running extremely high resolution N-body and hydrodynamic simulations of dwarf galaxies, and by analyzing these and existing simulations and comparing to observations.



Daniel Lenz

Daniel's work is focussed on component separation for current and future and cosmology surveys. The cornerstone of this work is the modeling of the multiphase interstellar medium and the combination of multiple large-scale data sets. Daniel is also a core member of the HI4PI Collaboration, which published the HI4PI Survey of Galactic neutral hydrogen. He received his PhD in Astronomy/Astrophysics from the University of Bonn, Germany in 2016, followed by his current Postdoc at NASA JPL and Caltech.



Daniel Paardekooper

Daniel Paardekooper is a NPP fellow at JPL, carrying out experimental research focusing on understanding the origin of complex organic molecules in ices across our universe. In particular, he is interested in molecules relevant for the origin of life. His research focuses on incorporating a novel experimental technique that could provide additional insights in the processes occurring in ices. Before joining JPL, he held a short-term position at the University of Bern in Switzerland (Prof. Peter Wurz), working on time-of-flight mass spectrometer for future space exploration. His PhD was obtained in Leiden where he worked on applying novel experimental technique in astrochemistry.



Decker French

Decker French received her PhD from Steward Observatory at the University of Arizona and is now a Hubble fellow at Carnegie Observatories. She studies the evolution of galaxies through the post-starburst phase, using molecular gas observations to understand how and when galaxies stop forming stars. She also studies Tidal Disruption Events (TDEs), which are observed when a star is tidally disrupted by a supermassive black hole. These events occur at a higher rate during the post-starburst phase, and her research interests include studying why this is the case and how we can use this to inform future observations.



Elodie Choquet

My main science focus is on exoplanetary systems studies. I am interested in how they form, how they evolve, and what affects their dynamics. I study them through observations with HST and 10m-class ground-based telescopes, by imaging asteroid belts around nearby stars and characterizing their morphology. I am also very interested in techniques to image these faint systems, and I have developed techniques to better unveil them. I graduated at Paris Observatory in 2012, then joined STScI as a postdoc researcher until 2016. I am since a Hubble Fellow at JPL-Caltech, and I will start an Associate Astronomer position at LAM in France next Fall – which I am pretty excited about!



Eve Lee

I'm a Sherman Fairchild Postdoctoral Scholar in Theoretical Physics at TAPIR, Caltech. I'm a theorist interested in anything related to planet formation, and my expertise lies in analytic and semi-analytic studies of the formation and dynamics of planets close-in and far-out, drawing inspiration from the observed distribution of exoplanet radii, orbital period, period ratio, multiplicity, and host star properties. I obtained my PhD at UC Berkeley under the supervision of Eugene Chiang, and before that, I obtained Honours BSc at the University of Toronto. Next year, I'll be moving back to Canada to be a faculty member at McGill.

Garreth Ruane



Gina Panopoulou

Studied physics in the island of Crete (Greece) from undergrad to PhD. Spent lots of grad-student hours observing, calibrating, analysing stellar polarization measurements to tease out information about ISM magnetic fields. Then came to Caltech in mid-2017, where I keep working on the ISM & magnetic fields. I help in preparing for an exciting upcoming opto-polarimetric survey of the high-latitude sky. I like any technique that can tell us more about the ISM (from radio to high-energy). Other things I'm checking out are machine learning and Bayesian methods.



Hannah Earnshaw

Hannah joined Caltech as a postdoc in December 2017, having completed their PhD in X-ray astronomy at Durham University, UK. Their interests lie mainly in X-ray and multiwavelength studies of extragalactic non-nuclear X-ray sources, including ultraluminous X-ray sources, in order to better understand super-Eddington accretion and find ways to identify candidate intermediate-mass black holes and pulsar ULXs.



Harish Vedantham

I am an electrical engineer turned radio astronomer. I worked on observations of the 21-cm line from the early Universe (cosmic dawn and epoch of reionization) during my PhD. At Caltech I have worked on Fast Radio Bursts (population and scattering properties, localization), and gravitational lensing on milli-arcsecond scales. I have a long-standing interest in electromagnetic wave propagation, interferometry, and radio polarimetry. In a month, I will join the astronomy group at ASTRON (www.astron.nl) in the Netherlands to dabble with the most sensitive low-frequency radio telescope (LOFAR), while enjoying good beer and complaining about the general lack of sunshine and good hiking.



Iary Davidzon

Submit proposal, rejected, submit proposal, rejected, submit proposal, accepted, observations, call mum, observations, bad weather, observations, data reduction, bug, bug fixed, data reduction, another bug, overnight, bug fixed, data reduction, seems ok, when was last time you called mum?, data analysis, strange preliminary results, head against the wall, overnight, shortage of coffee, new results, sanity checks, science, science, science, first draft, second draft, eighteenth draft, implement comments, final version, final comments, ignore final comments, send to journal, wait, referee report, answer, accepted, arXiv buzzer beat, sleep, drink beer, spam people about new paper, talk tour with free lunch. Actually the conclusions of the paper are not very robust: new observations are needed. Submit proposal, rejected...



Jacqueline McCleary

Jacqueline defended her PhD in Physics from Brown University in 2017. In her thesis work, specialized in analyzing the dark matter substructure of low-redshift galaxy clusters using the Dark Energy Camera (DECam) and some very shoddy weak gravitational lensing analysis. She joined JPL in September of 2017, where she has been working on developing a data analysis pipeline to perform similar (but hopefully less shoddy) measurements of clusters using the Superpressure Balloon-borne Imaging Telescope (SuperBIT). A mid-latitude long duration balloon mission, SuperBIT will be launching in 2019 and has the goal of imaging 200 clusters over 100 days.



Johanna Teske

Johanna got her bachelor's degree in Physics from American University in Washington, DC, moved to Tucson to get her PhD in Astronomy from the University of Arizona, and then moved back to DC to spend two years as the Carnegie Origins Fellow at Carnegie DTM. On the same fellowship, she moved to Pasadena in 2016 to work at Carnegie Observatories, and then this year began a Hubble Fellowship also at Carnegie. Her work focuses on finding and characterizing extrasolar planets, mostly through observations of their host stars with ground-based high resolution spectroscopy and imaging. Long term, she would like to help determine how unique Earth is in its composition, formation history, and presence of life.



Kirsten Larson

I am currently a post-doc at IPAC and did my PhD at the University of Hawaii. I study star formation in luminous infrared galaxies from the Great Observatories All-Sky LIRG Survey (GOALS). I use narrow-band HST imaging to resolve individual star forming regions and compare these clumps of star formation to those found in both normal local galaxies and high-redshift galaxies. LIRGs are often highly disturbed systems undergoing major mergers and allow me to investigate how galaxy mergers affect the star formation and morphology of the galaxies.



Maria Drout

I am a Hubble Fellow at Carnegie Observatories and Research Associate of the Dunlap Institute at the University of Toronto. My research interests revolve around the evolution, influence, and ultimate fate of massive stars and the origin of unusual astronomical transients. I combine multi-wavelength observations of transient phenomena with studies of resolved stellar populations in nearby galaxies. I received my PhD from Harvard in 2016, before which I did a Masters of Advanced Study at the University of Cambridge. I am originally from Wisconsin, and am very stereotypically obsessed with cheese.



Marianne Heida

I'm from the Netherlands, where I got my BSc and MSc (both from Utrecht University) and my PhD (SRON/Radboud University Nijmegen). I started as a postdoc in the NuSTAR group at Caltech in 2016. My main research interests are Galactic X-ray binaries and ULXs. I'm currently involved in a project searching for ULXs with red supergiant donors and a project to obtain dynamical mass measurements of candidate black hole XRBs in the Galactic plane. More generally I want to identify ULX donor stars to understand where these systems fit in the evolution of massive binaries.



Marie Ygouf

My research focuses on high-contrast imaging in the view of directly detecting and characterizing exoplanets. In this framework, the development of innovative image post-processing methods is essential in order to eliminate the quasi-static speckles in the final image, which remain the main limitation for high-contrast. More generally, I am interested in improving the performance of instruments for exoplanet science, taking profit of data analysis and of the detailed characterization of the instrumental limitations and calibration capabilities. My fields of interest regroup direct detection of exoplanets, image processing, high angular resolution and high-contrast techniques, wavefront sensing and control, simulation, modeling and optical design.



Max Millar-Blanchaer

I am a second-year Hubble Fellow at JPL and I study directly imaged exoplanets and debris disks. My background is a mix of instrumentation and observation, with a focus on polarimetry. During my PhD I worked very closely with the Gemini Planet Imager, where I was involved with lab-testing, commissioning and now, on-sky operations. Recently I've also been attempting to detect polarimetric signatures of varying cloud cover in brown dwarfs using the newly commissioned WIRC+Pol upgrade at Palomar.



Nina Hernitschek

I'm a second-year postdoc working at Caltech with Judy Cohen on tidal streams and the Galactic halo. I'm part of the iPTF/ZTF project. My most recent work deals with the question on how to derive the profile of the Galactic halo and the geometry of stellar streams from Pan-STARRS1 RR Lyrae. As part of my research, I also develop astrostatistical methods for fast detection and classification of variable sources in general, including RR Lyrae, Cepheids and QSOs, which led to the Pan-STARRS1 catalog of RR Lyrae.



Riley Connors

I started my postdoc here in December 2017, working in the NuSTAR satellite team in SRL. I completed my PhD at the University of Amsterdam, where I worked on broadband spectral modelling of accreting black holes, both supermassive (so AGN) and stellar-mass (X-ray binaries). My current interests and research are much the same, though I focus mostly on X-ray binaries. I model their X-ray spectra in order to constrain key physical parameters of the system, such as the geometry of the accretion flow and the spin of the black hole, among others.



Rohini Giles

I did my PhD in Planetary Physics at Oxford University before moving to JPL as an NPP Fellow at the beginning of 2017. I use near- and mid-infrared observations to study the composition, cloud structure and temperature profiles of planets in our solar system – mostly Jupiter, but I'm starting to branch out to Venus. I also spend time at the IRTF and Gemini telescopes, observing with the TEXES visitor instrument on behalf of collaborators who study topics ranging from volcanism on Io to the chemical inventory of star-forming regions.



Rosalie McGurk

I am an Instrumentation Fellow at Carnegie Observatories. I am building an Integral Field Unit for the existing IMACS imager spectrograph on the Magellan Baade Telescope, as well as working with a team to build a new near-IR multi-object spectrograph with configurable slits and full JHK band coverage for Magellan. Additionally, I am finishing a project hunting for pairs of AGNs present in double-peaked emission line merging galaxies in the near-IR and X-rays, and beginning a near-IR spectroscopy project to examine and characterize the winds found in low star formation rate surface density galaxies previously thought incapable of driving winds.



Sean Mills

I am currently a postdoctoral scholar in Andrew Howard's group at Caltech. I aim to combine high precision spectroscopy and radial velocity data obtained with Keck telescope together with archival transit timing data to better understand the architectures of exoplanet systems. I completed my PhD at UChicago on exoplanet dynamics. By combining N-body modeling with Kepler photometry data, I extracted the mass and dynamical state of exoplanet systems in order to get hints of their formation mechanisms.



Sebastian Kiehlmann

My general research area is extragalactic astronomy, more specifically studying Active Galactic Nuclei (AGN). I am current focused on astrophysical jets, in particular blazars, i.e. highly energetic, relativistic jets launched from the central region of AGN. I have done my PhD at the Max Planck Institute for Radioastronomy in Bonn, Germany, studying the multi-frequency emission of one particular blazar. I have continued this research at the Metsähovi Radio Observatory near Helsinki, Finland. Since early 2017 I am at Caltech, running the blazar monitoring campaign with the 40 Meter Telescope at the Owens Valley Radio Observatory (OVRO).

**Shahab Arabshahi**

Shahab is a NASA Postdoctoral Program Fellow at JPL with experience in computational modeling, instrumentation, and data analysis. He has published many papers on high energy atmospheric physics topics and after joining JPL, has been working on computational simulation of atmospheric high-energy phenomena on Mars and also developing the Machine Learning pipeline for automated detection of electrostatic discharges on Mars using NASA's deep space network. He received his PhD in physics from Florida Institute of Technology in 2015, his MSc from University of New Brunswick, and his BSc from Sharif University of Technology. He won the NASA Earth and Space Sciences Fellowship for his PhD to study terrestrial lightning and NASA Postdoctoral Program Fellowship to study Martian lightning.

**Shea Garrison-Kimmel**

Shea did his undergrad at Haverford and his grad work at UCI. He's been a postdoc at Caltech in TAPIR for the last three or so years, working primarily with the FIRE collaboration on simulations of galaxy formation with high performance computing. His specific interests lie primarily in using the Local Group, and all the observational advantages it implies, to understand the nature of dark matter and the physics important to galaxy formation on scales up to L_star.

**Stefano Pasetto**

Stefano Pasetto: Ph.D in Padua (Italy), and after a postdoc in Paris (France), Heidelberg (Germany) and London (United Kingdom) joined Carnegie in Sep. 2016. Stefano research focuses on: 1) energy transfer processes in stellar structure and evolution (convection, radiation, conduction), 2) stellar populations kinematics, dynamics, and theory of orbits 3) dissipative and instability hydro-dynamical processes (Tidal forces, ram pressure, Rayleigh-Taylor, Kelvin-Helmholtz,...). Info @ www.spasetto.net

**Thomas Connor**

Thomas Connor is a postdoctoral research assistant at the Carnegie Observatories. He earned his PhD from Michigan State University in 2016. His research focuses on groups of clusters and galaxies, particularly using the synergy between X-ray, UV, and optical observations to better understand how these massive systems have evolved. Thomas has also recently been working on the X-ray properties of high-redshift ($z > 6$) quasars. At Carnegie, he has been using multi-object spectroscopy to better understand systems with deep X-ray and photometric datasets.

**Vikram Ravi**

Vikram grew up in outback Australia, but has been glad to learn about Aussie shepherds, and Wallaby-brand yoghurt since moving to Pasadena. Initially, his longing for the restful nights of a theorist led him to complete a thesis on binary supermassive black holes and their gravitational-wave emission. However, the call of the astronomical wild proved irresistible. He returned to observational astronomy to seek to understand fast radio bursts, and other interesting time-domain astronomical phenomena (yep, there's a lot). He has most recently led the construction of a telescope to localize new fast radio bursts to a few arcseconds.



Virginie Faramaz

I obtained my PhD in France in 2014, where I studied how hidden planetary components can reveal themselves via their imprint on debris disks. Then I spent three years in Chile, where I got the chance to become more acquainted with millimeter interferometric observations of debris disks with ALMA, and complement my theoretical background with observational aspects. My work focuses now on planet-disk interactions that can lead to the dynamical production of comets, how frequent are the planetary system architectures favorable to this, how this is related to the inputs of water and organics on terrestrial-like planets, and thus ultimately, how frequently can we expect life to have opportunities to develop on these planets.