

## Watkins returns as new JPL director

Veteran engineer, scientist and manager Michael Watkins has been named JPL's new director. He will begin his new role July 1 succeeding Charles Elachi, who led the Lab for 15 years.

Watkins worked at JPL for 22 years, including his most recent position as manager of the Science Division, before leaving last year to lead the University of Texas at Austin's Center for Space Research.

At JPL, Watkins was mission manager and mission system manager for the Mars Science Laboratory Curiosity rover; led review or development teams for missions including Cassini, Mars Odyssey and Deep Impact; and was the project scientist for the Gravity Recovery and Interior Laboratory moon-mapping satellites, the Gravity Recovery and Climate Experiment Earth science mission and its follow-on mission, scheduled for launch in 2017. He also managed JPL's Navigation and Mission Design Section.

Watkins' JPL colleagues recall an enthusiastic and dedicated leader, well versed in all areas of spaceflight operations, mission development and science.

"It's significant that a discriminator between the final candidates was familiarity with JPL's culture given the challenges and opportunities we have over the next decade," noted Earth Science and Technology Director Diane Evans.

Richard Cook, currently acting director for solar system exploration and former manager of several Mars missions, noted that Watkins excelled in a diverse set of roles.

"For Curiosity, Mike developed the mission system and was the manager of day-to-day surface operations," said Cook. "But he also offered a lot of insight into the



Photo by Josh Krohn / JPL Photo Lab

whole project—entry, descent and landing; aeroshell instrumentation; the science. It seemed he worked about 12 hours a day, and was usually the last one to leave."

At the same time Watkins was mission system manager for Mars Science Laboratory, he also served as project scientist on the Gravity Recovery and Interior Laboratory mission. Project manager David Lehman praised Watkins' knack for leadership. "His time on the project was gold," said Lehman.

"When Mike left to go to Austin, many of us in the Science Division thought one day he would return to guide JPL," said Simon Hook, the current Science Division manager.

Watkins holds a bachelor's degree, master's degree, and Ph.D. in aerospace engineering from the University of Texas at Austin. He has published extensively in both engineering and science, contributed more than 100 conference presentations, and has served on the boards of numerous international scientific and engineering societies.

"JPL has such a talented and deeply committed staff," said Watkins. "It is a privilege to have this opportunity to lead the Laboratory to even greater discoveries. I look forward to working with my colleagues on campus and across NASA to forge new directions in space exploration and Earth science."

# New challenges, solid opportunities

Executive Council retreat positions Lab for the upcoming decade

By Mark Whalen

A renewed focus on how the Laboratory will meet its challenges over the coming decade dominated discussions at the JPL Executive Council's annual retreat held in April.

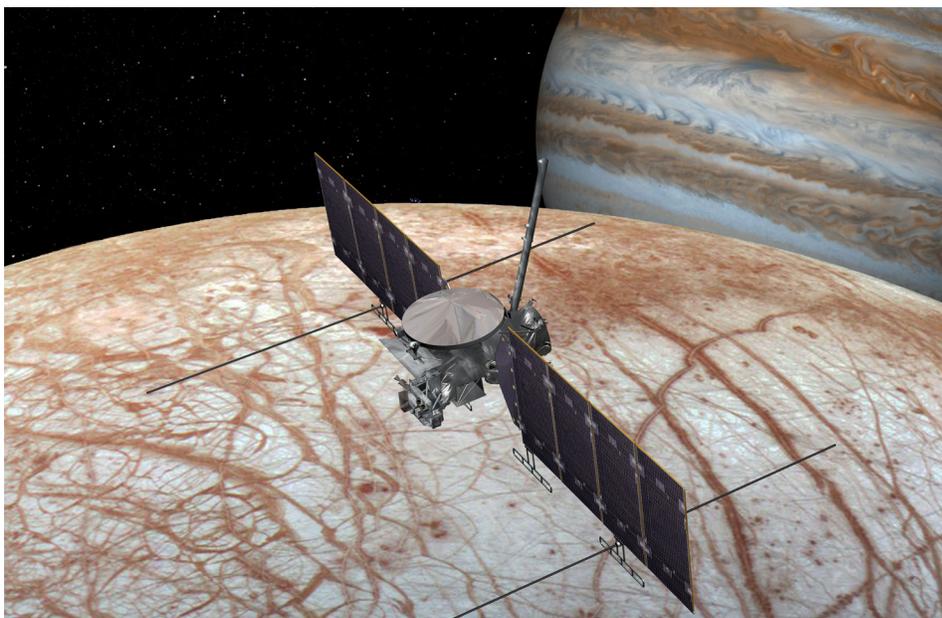
"In the last 15 years we have launched 24 space missions, and the pace over the next 10 or 15 years is expected to be about the same," said JPL Director Charles Elachi. "I'm confident that the people of JPL will rise to that challenge."

JPL's planetary portfolio now includes a mission to Jupiter's moon Europa, which will investigate whether the icy moon could harbor conditions suitable for life. A Europa lander is also being assessed and studied for a potential launch in the 2023-24 timeframe.

Development of the Mars 2020 rover mission continues apace and will include autonomous terrain mapping technology, said Elachi. Also under study for the mission is a helicopter to join the rover; chamber testing is underway on Lab.

Also focusing on future studies of the Red Planet, NASA's Mars Exploration Program is seeking to upgrade its aging orbital infrastructure with a new orbiter to be launched in the early 2020s. A request for proposals has been issued for the Next Mars Orbiter, or NeMO, which would refresh the capabilities necessary to continue Mars exploration and support future mission needs.

The Lab is also working to support NASA's Human Exploration Program. "The key roles that JPL will play include deep-space communication and navigation, as well as human-robot interaction," said Elachi. JPL will also support the program in areas in which the Lab has unique talents, he added, such as entry, descent



Artist's rendering depicts a Europa orbiter. Also under study is a lander for the Jovian moon.

and landing.

In order to best manage the challenges and achieve success, JPL is working on a long-term plan to upgrade its facilities and infrastructure, including test chambers, laboratory equipment and offices. Elachi noted the development of a sustainable model for funding infrastructure development and maintenance.

The Lab will also look to determine the technologies that will shape the future. "As an organization that is pushing the limit, we need to make sure we invest in those critical technologies," said Elachi.

As always, Elachi said, a major part of managing the Lab's challenges involves the JPL workforce. The director noted that the Lab is at about its capacity right now. "As we get more work, we need to be thinking of how we manage that work," he said. "For the new employees at JPL, how do we make sure they gain the experience to carry the Lab during a very exciting time that's coming up?"

And JPL can't go it alone. About half of the Lab's work is accomplished with outside contractors.

"When we look at the future and the possibility of significant work, the possibility of increasing our activities, the key thing is, what do we keep in house, what do we do with other NASA centers, and what do we do with industry?" asked Elachi. "As we think about future Mars orbiters and future Earth science missions, I think we will be relying on industry."

The director noted that all of JPL's Earth science missions are fully funded and are doing very well, particularly in emphasizing the themes of water resources, natural hazards and climate change.

Elachi said JPL's future financial outlook looks solid. "We are aware there will be changes in Washington, with the election coming up," he said. "We have very strong support in Congress, and I am very optimistic financially that we will do very well—both NASA and JPL."

# News Briefs

## Lab will lead four concept studies

JPL recently won four of 13 competed awards in NASA's Innovative Advanced Concepts Program. These are long-range, transformational mission concepts that are very different from the current NASA missions.

No other organization won more than one award in the competition that was open to any organization or individual.

The JPL winners are:

Ratnakumar Bugga, principal investigator for Venus Interior Probe Using In-situ Power and Propulsion; Masahiro Ono, principal investigator for Journey to the Center of Icy Moons; Marco Quadrelli, principal investigator for E-Glider: Active Electrostatic Flight for Airless Body Exploration; Jonathan Sauder, principal investigator for Automaton Rover for Extreme Environments.

The program nurtures visionary ideas that could transform future NASA missions with

the creation of breakthroughs—radically better or entirely new aerospace concepts—while engaging America's innovators and entrepreneurs as partners.

For more information, please visit [https://www.nasa.gov/directorates/spacetech/niac/NIAC\\_funded\\_studies.html](https://www.nasa.gov/directorates/spacetech/niac/NIAC_funded_studies.html).

## Array proposal moves forward

NASA's Game Changing Development Program has selected four proposals—including one led by JPL—to develop solar array technologies that will aid spacecraft in exploring destinations well beyond low-Earth orbit, including Mars.

JPL's Andreea Boca is principal investigator for Solar Array for Low-intensity Low Temperature and High-Radiation Environments.

Thirteen proposals were received from NASA centers, laboratories, research groups and industry.

## Passings

JPL's chief information security officer, Corbin Miller, 49, died March 18.

Miller joined JPL in 1989 as an IT technician and later held several leadership positions of increasing responsibility. In 2008 he became the IT Security Group supervisor, working to combat malicious malware, computer viruses and other IT security threats. In 2014 he became the chief information security officer, responsible for protecting JPL's IT assets while minimizing impact to JPL employees and services.

Miller is survived by his wife, Kelly, and daughters Hayley and Heather. A memorial was held March 30.



Corbin Miller

Richard Coffin, 77, a retired Deep Space Network manager, died April 5.

Coffin joined JPL in 1966 and retired in 2008. He led the network's Advanced Planning Office and Engineering Office, retiring as the assistant Laboratory director for the Telecommunications and Mission Operations Directorate (now the Interplanetary Network Directorate).

He is survived by his wife, Margie; sons Rick, Craig and Brian; grandchildren Amy, David, Logan, Bobby, Phoebe and Leah; and great-grandson Lincoln.



Richard Coffin

Sally Rubsamen, 92, a former Pasadena Tournament of Roses queen who later had a career as a mathematician at Caltech and JPL, died April 15.

Rubsamen was selected to preside over the 1941 Tournament of Roses and dedicated the Pasadena Freeway/Arroyo Seco Parkway (route 110) on Dec. 30, 1940.

As a mathematician at Caltech she worked with Albert Einstein's son Hans, and at JPL contributed to such projects as Voyager, Mariner Mars and the first globe of Mars.

She is survived by son Charles Jr. and daughter Anne Stanton Rubsamen; grandchildren Jennifer Davidson and Ryan Rubsamen; and great-grandsons Kieran and Asher Davidson.

A celebration of life will be held in June.



Sally Rubsamen

## Retirees

The following JPL employees recently announced their retirements:

### February:

**Herlen Reed**, 33 years, Section 341; **Carol Shutt**, 30 years, Section 2201; **Stephen Proia**, 26 years, Section 2000; **Stephen Spohn**, 26 years, Section 3980; **Karen Sampley**, 21 years, Section 4020; **Edward Blazejewski**, 20 years, Section 389N.

### March:

**Linda Brown**, 38 years, Section 329J; **Michael K. Jones**, 37 years, Section 312B; **Randall Taylor**, 37 years, Section 4000; **Lesley Ibaiven**, 36 years, Section 3020; **Susan K. Jones**, 33 years, Section 312D;

**Catherine Cagle**, 32 years, Section 9020; **Joseph Provenzano**, 32 years, Section 3930; **Tseng-Chan Wang**, 32 years, Section 392L; **Nicole Rappaport**, 26 years, Section 341; **Richard Beatty**, 25 years, Section 312D; **Nazeeh Aranki**, 22 years, Section 349B; **Thomas Dodge**, 13 years, Section 5122; **Ann Coppin**, 12 years, Section 2731.

## Letters

Thank you to all my friends here at JPL for your condolences on the passing of my father, Richard Ellis. The plant and the card were both beautiful and I sincerely appreciate the prayers and kind words. He will be dearly missed.

**Kristan Ellis**

I want to thank both my co-workers and friends here for the kind and generous outreach upon the passing of my father, A. Edward Spitz. Your words, lovely plant and fruit basket brought me and my family comfort in this time of loss. My dad was always proud of me for my work at JPL and was interested in hearing about what I was doing. I too am proud to call this amazing place my work home. Thank you all again for your compassion.

**Suzanne Spitz**

## Classifieds

Ads submitted April 30 to May 5. To submit an ad, e-mail [universe@jpl.nasa.gov](mailto:universe@jpl.nasa.gov).

### For Sale

**BENCH**, queen Ann, new, \$70. 818-957-8614, Mina.

**PIANO**, upright; kids have left home so no one left in household who plays, the price is that you provide transportation from our house to yours. 818-731-4339, Lisa.

**TELESCOPE**, Meade 4" Schmidt Cassegrain tabletop, model 2045, as new, in fitted carrying case with 6 Plossl eyepieces (7.5mm, 10mm, 17mm, 20mm, 25mm, and 40mm in fitted case), Meade 07165 CMOS electronic eyepiece, 2X teleneegative Barlow adapter, 4 eyepiece b/c filters, 8.4 - 21mm zoom eyepiece, Celestron star diagonal, solar filter, dew shield and Meade field tripod w/equatorial wedge in Cordura carry case; all for \$575. 626-355-0290 or [flynham@aol.com](mailto:flynham@aol.com).

### Vehicles / Accessories

'07 JEEP Liberty, 4 WD, a/c, leather seats, tint windows, 3.7 V6 auto w/overdrive + 4 WD high & low, auto door locks at 5 mph, runs and drives very good, all stock, no custom anything, black paint, light gray interior, 88K miles, \$5,000. 661-722-3000 after 6 p.m., [kc6uzn@msn.com](mailto:kc6uzn@msn.com) for pix.

'06 TOYOTA Tundra off-road, crew cab, 4.7L V8, white, 147,000 miles, runs great, has a few bumps and bruises, \$8,000/obo. 310-347-2858.

### Wanted

**PACKING PAPER & MOVING BOXES**, available before end of May, used is great if you have moved recently. [connie@nearspace.net](mailto:connie@nearspace.net).

SPACE INFO/memorabilia from U.S. & other countries, past & present, for personal use (see <http://www.youtube.com/watch?v=S7PvjGp7mCU>). [mrayman@alumni.princeton.edu](mailto:mrayman@alumni.princeton.edu), 818-790-8523, Marc Rayman.

### Real Estate for Sale

**LEBEC-area mountaintop retreat**, spectacular views, 4 br./2 ba., 3,210 sq. ft. custom-built house on 20 acres, surrounded by vast fields of wildflowers in spring, but stunning year-round; only about an hour from JPL north on I-5; includes spacious workshop or artist's studio; see <http://www.tourfactory.com/idxr1308594>; \$574,900. 805-358-1626 or [Robert.A.Preston@icloud.com](mailto:Robert.A.Preston@icloud.com).

### For Rent

**HOLLYWOOD KNOLLS**, 2-bedrm. unfurn apt., priv. entrance, patio deck, chimney, oak floor, washer/dryer, dishwasher, granite kitchen counter, fridge, stove, tiled bath w/travertine floor; parking, hot water (solar) & trash service; 7-unit family-owned bldg., secluded, safe hillside neighborh'd nr. Lake Hollywood (hiking & running), Griffith Park, Universal Studios, Toluca Lake Village; 25 min. to JPL. 626-798-3235, [gaboon@sbcglobal.net](mailto:gaboon@sbcglobal.net).

**LA CANADA**, completely remodeled 1-bedrm, 1-bath guest house in prestigious neighborhood

within a block of Descanso Gardens; new kitchen incl. quartz counters and most appliances, bright and cheerful w/several dual-pane windows and new bay window, surrounded by blooming flowers and private garden; a/c, heating, electricity, water, WiFi, basic cable included, plenty of street parking and fully furnished; \$1,850/month. 281-660-1256.

**LA CRESCENTA**, 2-bed, 2-bath front duplex (2912 Mary St.); updated kitchen and bathrooms, hardwood floors, central air, den, garage and in-unit washer and dryer; walking distance to La Crescenta Elementary and Crecenta Valley High School; available June 1; \$2,800/month with one-year lease and \$2,800 security deposit. 818-415-8334.

### Vacation Rentals

**BIG BEAR lakefront**, luxury townhome, 2 decks, tennis, pool/spa, beautiful master bedrm. suite. 949-786-6548.

**HAWAII**: Kauai condo, Pacific Fantasy, Kapaa, 1 bedrm., sleeps 4, \$950/wk.; **MEXICO** (1 bedrm.): Mayan Palace: Acapulco, Nuevo Vallarta, Riviera Maya, Puerto Vallarta; Sea Garden: Acapulco, Nuevo Vallarta, Mazatlan; trades available with II and RCI based on availability. 818-272-3262.

**JACKSON HOLE, WY**: Luxurious bed and breakfast on 3 acres of solitude on Snake River near Jackson Hole Mountain Resort and south entrance to Grand Teton Natl. Park; see <http://www.bentwoodinn.com/>; mention JPL for discount. [info@bentwoodinn.com](mailto:info@bentwoodinn.com), 307-739-1411.

**MAMMOTH, Snowcreek**, 2 bd., 2 ba. + loft, sleeps 6-8, fully equip'd kitchen incl. microwave, D/W, cable TV, VCR, phone, balcony w/mtn. vw., Jacz., sauna, streams, fishponds, close to Mammoth Creek, JPL discount, no pets. 626-798-9222, 626-794-0455 or [valerjee@caltech.edu](mailto:valerjee@caltech.edu).

**MAMMOTH, Snowcreek**, beautiful updated condo, 2 bd., 2 ba. + loft (sleeps 6-8), great location by pond/meadow, new appliances, TVs, DVD players, free wireless Internet and washer/dryer, no pets. 818-952-2696 or [BigMtnPrettySky@gmail.com](mailto:BigMtnPrettySky@gmail.com).

**MAMMOTH**, remodeled 2 bed/2 bath + loft, short walk to Canyon Lodge; Courchevel 6 features full kitchen, cable and Internet TV, DVD & Blu-Ray, wireless high-speed Internet, 2-car garage, Jacuzzi, summertime grill and pool; no pets. <http://Courchevel6.com>.

**OCEANSIDE** condo, on the sand, watch the beautiful sunsets, charming, 1 bedroom, panoramic view, walk to pier or harbor, pool/spa, game room, sleeps 4 max, all amenities. 949-786-6548.

**OCEANSIDE** white-water view beach condo; virtual tour: <http://www.previewfirst.com/mls/33034>; 2 bd., 2 ba., sleeps 6; well decorated and equipped: boogie boards, wet suits, full kitchen, all linens, beach towels; Wi-Fi ready, new flat-screen TVs, daily paper, grocery stores nearby; 2-min. walk to the sand, no roads; JPL and Caltech rates: winter \$1,195/week, summer \$2,150/week, monthly and nightly rates available; see <http://www.warmfocus.com/video/k/1402-999npacificstc213/video.php>; reserve with \$500 deposit. 760-433-4459, Grace; 831-425-5114, Ginger. ■



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### Editor

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