



**IEEE METROPOLITAN LOS ANGELES SECTION GENERAL MEMBERSHIP MEETING**  
**Wednesday, June 18, 2008, 6-9pm**

<http://ewh.ieee.org/r6/lametro/>

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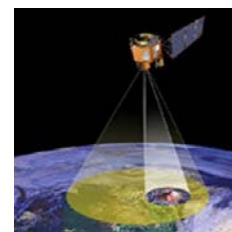
Student Branches

CSULA, USC & Caltech

**TOPIC:** Building HAL -- Prospects for Autonomous Spacecraft, Past, Present, and Future

**SPEAKER:** Dr. Steve Chien, Principal Scientist, JPL

**ABSTRACT:** The Earth Observing One (EO-1) spacecraft, weighing about half a ton, is hurtling overhead at 7.5 kilometers per second. With the ability to precisely point to image targets on the ground, EO-1 uses onboard Artificial Intelligence (AI) software to autonomously identify and track science events such as volcanic activity, flooding, and snow/ice/water freeze/thaw cycles. This software has enabled dramatic new science and saved millions of dollars in operations costs. How is this spacecraft "intelligent"? How does the software work? What decisions does it make? Does it learn? Come hear a discussion of these topics as well as prospects for communities of intelligent spacecraft. For more information, check out: <http://ase.jpl.nasa.gov>.



**LOCATION:** Von Karman Auditorium, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109. Parking is free and directly adjacent to auditorium, just outside main gate. For directions, see [http://jpl.nasa.gov/about\\_JPL/maps.cfm](http://jpl.nasa.gov/about_JPL/maps.cfm)

**DATE & TIME:** Wednesday, June 18, 2008

**Reception:** 6:00pm to 7:00pm (free to IEEE Metro Members, \$25 for Non-members. Please RSVP as described below.)

**Seminar:** 7:00pm to 8:00pm (free to IEEE and non-IEEE members. No RSVP required.)

**RECEPTION RESERVATION DETAILS:**

To attend Reception, please RSVP to: [Larry.A.Bergman@jpl.nasa.gov](mailto:Larry.A.Bergman@jpl.nasa.gov) by June 12, 2008. IEEE Metro Member attendees will need to send their IEEE membership numbers and their IEEE aliases. To get an IEEE alias, go to [www.ieee.org](http://www.ieee.org) and search for IEEE alias. If you are a non-IEEE member, please email your name/RSVP as above, and you can pay at the door. If you are interested in joining IEEE, please check out <http://www.ieee.org/join>. Problems? contact [e.miranda@ieee.org](mailto:e.miranda@ieee.org)



**ABOUT THE SPEAKER:**

Dr. Steve Chien is a Principal Scientist at the Jet Propulsion Laboratory, California Institute of Technology, where he leads efforts in autonomous space systems (see <http://ai.jpl.nasa.gov>). He holds a B.S. with Highest Honors in Computer Science, with minors in Mathematics and Economics, M.S., and Ph.D. degrees in Computer Science, all from the University of Illinois. Dr. Chien has received over 80 awards from NASA and JPL, including NASA Medals in 1997, 2000, and 2006. He is a three time honoree in the NASA Software of the Year Competition, most recently he was the team lead for the Autonomous Sciencecraft, co-winner in 2005. He has led the deployment of advanced artificial intelligence software to five spacecraft and rovers. Dr. Chien's work has been featured in numerous venues including Businessweek, CNN, Discover, USA Today, Nature News, BBC, National Geographic, and the New York Times.



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