



The Orange County Section of the American Chemical Society

May 2023 Dinner Meeting Wednesday, May 31, 2023

Hilton Garden Inn Irvine Spectrum
23131 Lake Center Drive, Lake Forest, CA 92630
Phone: 949-455-7000

Social:	5:30PM
Dinner:	6:15PM
Presentation:	7:00PM



Reservations

Please contact us as soon as possible, but no later than 12 noon on Friday, May 26, 2023 at OCACS@sbcglobal.net. Indicate if you will be attending the dinner and program, or the program only. Also, please list the names of all attendees. There is a limit on the number of attendees so make your reservation early.

Note: OCACS pays the hotel on the basis of the number of dinner reservations made. Your RSVP for dinner is a commitment to pay for the meeting cost. Dinner cost is \$35 for members and member's significant others; \$40 for non-members or those without reservations. The first five students who register for a meeting will receive a \$10 discount on their dinner.

Since there is a room rental fee, there is a \$10 charge for talk only attendance. However, students may attend to listen to this talk for free!

At this time, we are not set up to accept credit cards. Please plan on paying with a check or cash. For advance payments by mail, our address is: OCACS, P.O. Box 211, Placentia CA 90871.

Technical Presentation

The James Webb Space Telescope: Its Mission, Design and Development

Jonathan Arenberg

Chief Mission Architect for Science & Robotic Exploration,
Northrop Grumman Aerospace Systems, Redondo Beach, CA

Abstract

This talk introduces the James Webb Space Telescope, NASA's Flagship astrophysics mission and the largest telescope ever designed, constructed and operating in space. Webb's science goals are presented and the flow of these science objectives into mission requirements and design is examined. The elements of the Webb are introduced, and their performance explained. The main engineering challenges in implementing this revolutionary observatory are explored. The presentation will conclude with a brief review of some of the exciting images returned during Webb's inaugural year of operation and a look at what is next.

Speaker Biography

Jonathan Arenberg has been with Northrop Grumman Aerospace Systems since 1989 having started his career with Hughes Aircraft Company. His work experience includes optical, space and laser systems. Specifically on astronomical programs as the Chandra X-ray Observatory, James Webb Space Telescope and helped conceive and develop the Starshade concept for the direct imaging of extra-solar planets. He has also worked on major high-energy and tactical laser systems, laser component engineering, metrology and optical inspection issues. He is a member of US National and International (ISO) sub-committees charged with writing standards for laser and electro-optic systems and components, SPIE, American Astronomical Society, American Association for the Advancement of Science, AIAA and Sigma Xi. Dr. Arenberg holds a BS in physics and an MS and PhD in engineering, all from the University of California, Los Angeles. He is the author of over 240 conference presentations, papers, book chapters and a recent book on systems engineering. He holds 15 European and U.S. Patents in a wide variety of areas of technology and is currently the Chief Mission Architect for Science and Robotic Exploration at Northrop Grumman and an SPIE Fellow.