

Felix C. Seidel Caprez — Short CV

Jet Propulsion Laboratory / California Institute of Technology – Pasadena, CA, USA

✉ felix.seidel@jpl.nasa.gov • in felixseidel • April, 2023



Felix Seidel is a Scientist, Principal Investigator, and Discipline Program Manager working for NASA at Caltech's Jet Propulsion Laboratory (JPL). He holds a Ph.D. in Natural Sciences and a M.S. in Atmospheric & Climate Sciences. His goal is to advance the societal impact of NASA and JPL Earth science through the formulation of scientific and programmatic compelling science and mission concepts. His scientific interests are in climate research (e.g., aerosol, radiation, cloud dynamics, and radiation), wildland fires, air quality, and weather.

He excels at 'big picture' thinking and strategic planning. He loves to create and work with diverse and collaborative teams with a vision for effective solutions. His skills and experiences span across early concept maturation, research program and project management, science and team leadership, remote sensing, airborne and satellite instrument concept development, as well as data analysis.

Significant Achievements

- Managed the entire JPL EVS-4 proposal portfolio from ideation to submission, resulting in high-quality proposals.
- Assisted NASA HQ in launching the FireSense Project Office, ensuring a successful project start.
- Spearheaded a JPL strategic initiative on wildland fires with the goal for increased research in this critical area.
- Secured long-term funding for a JPL research lab and its workforce, ensuring continued scientific progress.
- Developed an innovative instrument concept for NASA's Atmospheric Observing System (AOS) mission, paving the way for future advancements in cloud dynamics and atmospheric research.
- Organized large review panels and site visits for NASA HQ managers, ensuring effective communication and collaboration between JPL and NASA HQ.
- Successfully convinced NASA to launch the TROPICS qualification unit, enabling the decision to launch the full observatory and paving the way for impactful research.
- Made significant contributions to NASA's initial implementation plan in response to the 2017 Earth Decadal Survey, helping to guide future missions.
- Managed major NASA airborne campaigns, such as ACEPOL and FIREX-AQ/ER-2, ensuring their success and providing valuable data for scientific research.

Skills

- Leadership: proficient in building & leading motivated, diverse teams, fostering collaboration and communication.
- Program Management: experienced in running research programs
- Project/Task Management: adept at planning and managing personnel, schedule, cost, risk, progress, and reporting to ensure the successful delivery of projects and tasks.
- Communication: excellent at exchanging ideas, knowledge, and data with clarity, precision, and purpose, ensuring effective communication with team members, stakeholders, and partners.

Experience

Scientist

JPL/Caltech, Pasadena CA

2019–present

- Contributes as JPL representative to NASA's ESO Integration Framework Formulation
- Manages the EVS-4 portfolio for JPL's *Earth Science Research & Mission Formulation Office* (830)
- Leads the JPL strategic initiative on wildfires
- Runs JPL's *Atmospheric Composition* and *Weather & Atmospheric Dynamics* programs as Discipline Program Manager
- Interfaces with senior JPL and NASA HQ management
- Establishes and coordinates wildfire science activities across NASA and JPL
- Defined instrument requirements as AOS Instrument Scientist & co-leads AOS's suborbital observing element
- Co-lead strategic data science partnerships working group
- Prepared Inter-Agency Agreements for NASA's *Multi-Angle Imager for Aerosols* (MAIA) mission

Program Scientist

NASA Headquarters, Washington DC.

2017–2019

- Was in charge of the scientific oversight of NASA's *TROPICS* EVI-3 satellite mission (Program Level Requirements)
- Managed the *Aerosol Cloud Ecosystem* (ACE) pre-formulation study
- Was responsible for the scientific oversight of the ORACLES EVS-1 mission (Program Level Requirements)
- Supported management/oversight of NASA Earth Science missions (Flight) & research programs (R&A)

Data Scientist/Technologist/Scientific SW Engineer

JPL/Caltech, Pasadena CA

2013–2017

- Contributed to NASA remote sensing data products
- Managed and led NASA airborne campaigns

Senior Postdoctoral Scholar

JPL/Caltech, Pasadena CA

2011–2013

- Developed operational data processing software to extract and visualize key information to end-users
- Discovered that retrievals of optical snow grain size and albedo are biased under snowmelt conditions

Astronaut Applicant

European Space Agency

2008

- Demonstrated skills to pass multiple selection steps

Lecturer

University of Zurich & ETH Zurich, Switzerland

2006–2011

- Taught Remote Sensing courses in Weather Satellites, Time Series Analysis, and Data Archives (100 students)

Head

National Point of Contact for Satellite Data, University of Zurich, Switzerland

2004–2011

- Influenced the Swiss Earth Observation Space Policy & consulted the Swiss government up to executive level
- Oversaw a team and managed multiple projects

Education

Ph.D. Natural Sciences

University of Zurich, Switzerland

2011

- Developed a fast atmosphere radiative transfer model
- Thesis: Radiative Transfer and Aerosol Remote Sensing. <https://doi.org/10.5167/uzh-48713>

Summer School

European Space Agency, Frascati, Italy

2008

- Earth Observation Summer School on Earth System Monitoring and Modelling

M.S. Atmospheric & Climate Sciences

Swiss Federal Institute of Technology (ETH)

2004

- Thesis: Temporal and Spatial Variations in Remotely Sensed Atmospheric Water Vapor over Africa from 1983-2003

Awards

5 NASA Group Achievement Awards

2 JPL Awards for a successful field campaign and a study on COVID-19 regulation impacts on air quality

1 Outstanding Student Poster Award

Publications

30 Scientific peer-reviewed papers (1700 citations, H-index of 21), 2 books or chapters, 2 theses, and 60+ conference abstracts and reports. Full publication record: <https://scholar.google.com/citations?user=tBEvjsgAAAAJ>

Presentations

11 Invited talks, 2 Town Halls talks at the American Geophysical Union and the American Meteorological Society Conferences, and 20+ talks at international scientific conferences, universities, and research institutions.