

35th AAS/AIAA Space Flight Mechanics Meeting, Kaua'i, HI

January 19-23, 2025

Conference Official Website: https://www.space-flight.org/docs/2025_winter/2025_winter.html



The 35th AAS/AIAA Space Flight Mechanics Meeting (SFM-2025) is organized by the Space Flight Mechanics Committee of the American Astronautical Society (AAS) and co-sponsored by the Astrodynamics Technical Committee of the American Institute of Aeronautics and Astronautics (AIAA).



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SPONSORS

The AAS Space Flight Mechanics Committee and the AIAA Astrodynamics Technical Committee acknowledge the generous support of our conference sponsors.



TRAVEL INFORMATION

Lihue International Airport (LIH) serves as the travel gateway for Kaua'i, HI. The conference venue is The Royal Sonesta Kaua'i Resort (<https://www.sonesta.com/royal-sonesta/hi/lihue/royal-sonesta-kauai-resort-lihue/>)

3610 Rice Street
Lihue, HI 96766
Phone: (808) 245-5050

Check-in time: 4.00 pm
Check-out time: Noon

AIRPORT SHUTTLE

The conference hotel offers stress-free arrival and departure with their complimentary shuttle service between The Royal Sonesta Kaua'i Resort Lihue and Lihue Airport (LIH), located just 2 miles away. After retrieving your luggage upon arrival at LIH airport, simply call the hotel at (808) 245-5050 to request pick-up. This convenient service is available to all resort guests around the clock.

HOTEL PARKING

The hotel offers self-parking for \$30 per day with in/out privileges or convenient valet parking service with in/out privileges for \$40 per day.

RESORT AMENITIES

Guests staying at the Royal Sonesta Resort under the AAS Contracted Hotel Rate will be charged a \$25 daily resort fee plus applicable taxes. Portage gratuities are \$10 per person, round-trip for group arrivals, and otherwise, at guest's discretion. Housekeeping gratuities are optional \$2.00 per day. The \$25 daily resort fee includes the following amenities:

- ~~• Daily Enhanced Internet Services ("Accept Fees to Access Account" will not be charged)~~
- ~~• Local and Long-distance Domestic Calls~~
- ~~• Airport Shuttle on Demand~~
- ~~• Daily Fitness Classes (Alternating Yoga and Aqua Fit, up to 2 guests)~~
- ~~• Cultural Classes~~
- ~~• 24hr Access to Fitness Center~~
- ~~• One (1) appetizer or dessert in Kukui's Restaurant per room, per stay~~
- ~~• Two (2) Complimentary Mai Tais at Kukui's Restaurant per room, per stay~~

(Updated January 20, 2025) --- the Hotel unilaterally changed the list of amenities provided as part of the Resort Fee to the following:

- Complimentary Daily Enhanced Internet Service
- Local/long distance & Domestic Calls

- airport shuttle on demand
- Two reusable water bottles with Purified Water Stations
- Access to 24-hour Fitness Center
- Daily Yoga & Aqua Fit Classes
- Guided Sunrise Walk
- Hawaiian Cultural activities (Lei Making, Ukulele, Hula Lessons)
- Keurig Coffee Maker with Kauai Coffee and Tea in room
- Weekend Entertainment at Royal Lanai
- Koi Fish Feeding demonstration
- Computer Access
- Shuttle Service Hokualea Golf Course
- 10% Discount on merchandise at Pool Hut (excluding Maui Jim sales/purchases)
- Garden Tours

We regret any inconvenience caused by this change by the conference hotel.

CONFERENCE REGISTRATION DESK

The conference registration can be accessed at:

<https://www.xcdsystem.com/aas/attendee/index.cfm?ID=bIOlg8C>.

The online registration system is programmed to accept Visa, Mastercard, Discover and American Express credit cards.

NOTE: Registration fees are calculated at the time of payment according to the following rate schedule.

Registration Type	Early (On or before Dec 6, 2024)	Regular (Dec 7 to Dec 31, 2024)	Walkups (Jan 1, 2025 onwards)
Full Registration - Current Member (AAS or AIAA)	\$695	\$875	\$945
Full Registration - Non-member	\$795	\$975	\$1,045
Student Registration - Current Member (AAS or AIAA)	\$455	\$515	\$595
Student Registration - Non-member	\$505	\$565	\$645
Retiree Registration - Current Member (AAS or AIAA)	\$455	\$515	\$595
Retiree Registration - Non-member	\$510	\$570	\$650

We will accept registration and credit card payment on-site for those who have not pre-registered online, but it is our strong recommendation that everyone completes their registration online before the conference to avoid delays. Pre-registration also gives you free access to pre-print technical papers.

REGISTRATION PACKETS

On-site packet pick up will be available from the Registration Desk at the **Kaua'i Court** during the following times:

- Sunday, January 19, 3:00 pm to 6:00 pm

- Monday, January 20, 7:30 am to 5:00 pm
- Tuesday, January 21, 8:00 am to 5:00 pm
- Wednesday, January 22, 8:00 am to 5:00 pm
- Thursday, January 2, 8:00 am to 5:00 pm

SOCIAL EVENTS

A Welcome Reception event will be held on Sunday evening (January 19) during 5:30 pm to 7:00 pm in the **Puna Court** area. This Sunday reception is sponsored by Intuitive Machines, the Platinum sponsor for our SFM-2025.

The conference main dinner is scheduled for Tuesday January 21 at 6:00 pm to 9:00 pm in the **Kaua'i Ballroom** area. The dinner event includes a Hawaiian Entertainment Package. The entertainment package is supported in part through sponsorship from Ansys, our Gold tier sponsor at SFM-2025.

The Sunday welcome reception and Tuesday dinner with entertainment are included with every registration (Full, Student, and Retiree).

Both the Sunday reception and Tuesday dinner include dietary options: Vegetarian, Vegan, and Gluten-Free.

Additional guest tickets for the Sunday reception and Tuesday dinner can be purchased through the conference registration site.

Sunday reception:

Additional Guests (12yrs and older): \$40/person

Kids (11yrs and younger): no cost

Tuesday main conference dinner with Hawaiian entertainment:

Additional Guests (12yrs and older): \$140/person

Young Guests (6yrs-11yrs): \$100/person

Kids (5yrs and younger): no cost

MLK Day SPECIAL EVENT

A special panel discussion event will be organized on Monday, January 20 during 5:00 pm to 6:30 pm in the **Kaua'i Ballroom** to mark the MLK federal holiday. This event is sponsored by Embry Riddle Aeronautical University, a Silver tier sponsor for SFM-2025.

This special panel discussion will present young and experienced representatives from academia and private aerospace sectors. They will share their personal experiences, highlighting challenges faced and their successes in the field. The discussion will explore the evolving landscape of aerodynamics and the importance of diversity and resilience in shaping successful careers. Join us for an engaging session that celebrates the experiences and achievements of our community.

Poster Presentation Event

The 2025 AAS/AIAA Space Flight Mechanics Meeting will host a Poster Event, which features posters from a variety of disciplines relevant to space flight mechanics and astrodynamics. A panel of judges spacing academia, industry, and government will evaluate the posters. This event will be held Monday, January 20 from 3:00 pm to 5:00 pm in Ni'ihau Court. This poster event is sponsored by KBR, a Silver tier sponsor for SFM-2025.

The winners of the poster event will be announced during the conference awards recognition event to be held on January 21. There is no separate fee or entry cost for participating; posters are selected for presentation based on prior review. Cash prizes will be awarded to the top performing entries: First Place: \$500; Second Place: \$300; Third Place: \$200.

SPECIAL TECHNICAL EVENTS

There will be two special events as part of SFM-2025 technical program.

A. Three Minute Thesis Competition:

The 2025 AAS/AIAA Space Flight Mechanics Meeting will host a Three Minute Thesis (TMT) Competition, where current Ph.D. students will have three minutes to present their Ph.D. dissertation research to a panel of judges across academia, industry, and government. The competition is sponsored by Katalyst Space Technologies, a Silver sponsor for SFM-2025. This event will be conducted in two parts:

Puna Ballroom: Tuesday, January 21 during 3:15 pm to 4:15 pm and 4:30 pm to 5:30 pm.

Judges will select winners based on students' ability to communicate the following elements of their research to a broader audience:

- ◇ Background and motivation for research
- ◇ Novel technical contributions and methods
- ◇ Conclusions, outcomes, and/or expected impact

The winners will be announced during the conference awards recognition event to be held on January 21. There is no separate fee or entry cost for participating but prior registration is required due to schedule and capacity limitations. Cash prizes will be awarded to the top performing entries: First Place: \$500; Second Place: \$300; Third Place: \$200.

Rules and Eligibility for the TMT Competition:

- ◇ Participants must be current Ph.D. students at the time of the competition.
- ◇ Participants must be registered for the conference.
- ◇ Presentations are strictly limited to 3 minutes. Going over the time limit results in disqualification.
- ◇ Presentations are spoken word only with no electronic media or other visual aids.

B. Ansys Cislunar Orbit Designer Workshop: The SFM-2025 conference Gold tier sponsor Ansys along with their AGI technical team is hosting a hands-on workshop and technical demonstration scheduled for Wednesday, January 22 during 5:30 pm to 7:00 pm in the **Puna Ballroom**. The workshop will cover a prototype front-end application: the Cislunar Orbit Designer (CODE). This application exists separately from, but working in conjunction with, the Ansys Systems Tool Kit (STK) [®] as a sandbox to leverage multi-body dynamical systems concepts such as libration point orbit families, invariant manifolds and Poincaré maps. CODE is currently in beta-by-request status, compatible with recent versions of STK. Bring your laptop to follow along in STK Cloud [®]. There is no fee or additional charge for participation, but prior registration is required. Registration for hand-on participants is capped at 50 people (first-come, first serve basis).

As of January 1, 2025, the CODE workshop registration has reached maximum capacity. However, spectating and audience participation is permitted for conference attendees that are not formally registered for this event.

AWARD RECOGNITION CEREMONY

The conference will hold an award recognition event on Tuesday, January 21 during the Main Banquet Dinner event in the **Kaua'i Ballroom**. This event will recognize the following categories:

- ◇ Newly elected AAS Fellows
- ◇ The recipient for the 2024 Kathleen C. Howell Outstanding Paper Award for The Journal of the Astronautical Sciences
- ◇ John V. Breakwell Student Awards
- ◇ Poster Presentation Awards
- ◇ Three Minute Thesis Competition Awards

CONFERENCE MEETING SPACES

The conference meeting area provides complimentary basic WiFi internet access (for checking email). Please use the following access code and password for Wifi internet access in the conference meeting areas are:

Sonesta Conference

Password: **Kauai2025**

A layout for all the meeting spaces can be viewed in the diagram below:

The
ROYAL
SONESTA
KAUAI
RESORT

Any and all Smoking is prohibited
in the Room and on the Balcony.
\$250 Penalty FEE

Exit to Rice Street
Guest Parking

Additional Guest Parking, Hokualea Golf,
Kalanipu'u, Beach Access

Resort Conveniences

- Elevators
- Wheelchair Access
- Restrooms
- ATM
- Washer/Dryer
- Designated Smoking Area

Puna Ballroom

- Kalapaki Room
- Nawiliwili Room (A)
- Niumalu Room (B)
- Haiku Room (C)
- Kipu Room (D)

Kauai Ballroom

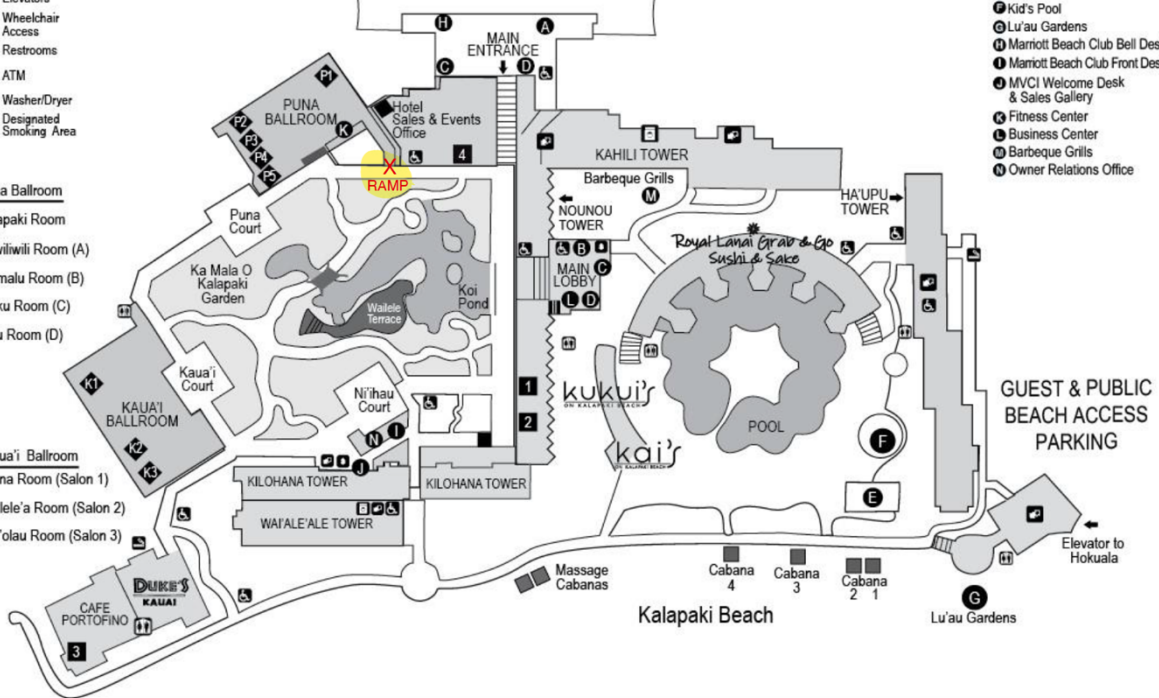
- Kona Room (Salon 1)
- Halele'a Room (Salon 2)
- Ko'olau Room (Salon 3)

Shops & Services

- Lamon's Gift & Sundry Shops
- Alexander Day Spa & Salon
- Kalapaki Beach Boys
- Tabora Art Gallery

Resort Amenities

- Bell Desk/Valet
- Front Desk
- MVCI Lobby Welcome Desk
- Concierge Desk
- Pool Hut & Towels
- Kid's Pool
- Lu'au Gardens
- Marriott Beach Club Bell Desk
- Marriott Beach Club Front Desk
- MVCI Welcome Desk & Sales Gallery
- Fitness Center
- Business Center
- Barbeque Grills
- Owner Relations Office



Kalapaki Beach

Lu'au Gardens

GUEST & PUBLIC
BEACH ACCESS
PARKING

CAFE
PORTOFINO

DUKE'S
KAUAI

Message Cabanas

Cabana 4

Cabana 3

Cabana 2

Cabana 1

Lu'au Gardens

Elevator to Hokualea

kukui's

KAUAI

BY THE BEACH

kai's

BY THE BEACH

RESTAURANT

BAR

BY THE BEACH

RESTAURANT

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