

CBDO 2024 - PROGRAM

First week of December 2024

Monday, December 2nd

12:10 pm - Registration and reception of participants

1:40 pm - Opening

1:50 pm - Wagner Sessin Award

2:00 pm - Opening Talk

Italy-Brazil Joint Science and Technology Cooperation in Space Technology: the SPLASH Project (CBDO 187)

Ignazio Dimino

CIRA, Centro Italiano Ricerche Aerospaziali, Capua, CE, Italy

First session on Dynamical and Planetary Astronomy

Chairman: Silvia Giuliatti Winter

2:50 pm - Oral communication 01

The Orbital Eccentricities of Directly Imaged Companions Using Observable-based Priors: Implications for Population-level Distributions (CBDO 001)

Clarissa R. Do Ó

University of California, San Diego & University of California, Los Angeles, USA

3:10 pm - Oral communication 02

The co-orbital dynamics in binary systems (CBDO 002)

Fernando Roig

National Observatory, ON, Rio de Janeiro, RJ, Brazil

3:30 pm - Oral communication 03

Vision Transformers for identifying asteroids interacting with secular resonances (CBDO 006)

Valerio Carruba

UNESP - São Paulo State University, Guaratinguetá, SP, Brazil

3:50 pm - Coffee break

4:10 pm - Poster Session 1. CBDO 001 – CBDO 105, except oral communication.

Tuesday, December 3rd

Second session on Dynamical and Planetary Astronomy

Chairman: Sylvio Ferra Mello

8:30 am - Invited talk 1

Dynamic of Centaurs, link with the giant planets and other small body populations (CBDO 188)
Romina Paula Di Sisto
Facultad de Ciencias Astronómicas y Geofísicas, Universidad Nacional de La Plata, Argentina

9:20 am - Invited talk 2

Stellar Occultations by Trans-Neptunian Objects (CBDO 185)
Felipe Braga Ribas
Federal University of Technology of Paraná, UTFPR, Curitiba, PR, Brazil

10:10 am – Coffee Break

10:30 am - Oral communication 04

Non-transiting exoplanet characterization using TTV pattern and Deep Learning (CBDO 035)
Marco Antonio Petersem-Domingues
National Observatory, ON, Rio de Janeiro, RJ, Brazil

10:50 am - Oral communication 05

The Effect of Triton's Evolution on Neptune's Spin Axis (CBDO 039)
Rodney Gomes
National Observatory, ON, Rio de Janeiro, RJ, Brazil

11:10 am - Oral communication 06

A Hamiltonian for 1/1 rotational secondary resonances, and application to small satellites of Saturn and Jupiter (CBDO 108)
Nelson Callegari Júnior
UNESP - São Paulo State University, Rio Claro, SP, Brazil

11:30 am - Oral communication 07

Analysing the dynamics of Kepler-90 planetary system (CBDO 049)
Silvia Giuliatti Winter
UNESP - São Paulo State University, Guaratinguetá, SP, Brazil

11:50 am - Oral communication 08

Estimation of the viscosity of trans-neptunian dwarf planets through the synchronous motion of Eris (CBDO 100)
Adrián Rodríguez
Valongo Observatory, Federal University of Rio de Janeiro, UFRJ, Rio de Janeiro, RJ, Brazil

12:10 pm – Lunch

First session on Orbital Mechanics and Spacecraft Attitude Determination and Control

Chairman: Priscilla Silva

1:40 pm - Invited talk 3

Geodetic and Geophysical Characterization of Ganymede with GALA, the Ganymede Laser Altimeter (CBDO 186)

Hauke Hussmann

DLR Institute of Planetary Research, Berlin, Germany

2:30 pm - Oral communication 09

Preliminary Design of Trajectories for Rendezvous with 2001 SN263 (CBDO 210 - N)

Rodolfo Batista Negri

Federal University of São Paulo, UNIFESP, São José dos Campos, SP, Brazil

2:50 pm - Oral communication 10

Analytical Modeling of the Gravitational Potential of Irregularly Shaped Celestial Bodies considering three distinct internal structures: Application to (21) Lutetia (CBDO 025)

Marcelo L. Mota

Federal Institute of São Paulo, IFSP, Hortolândia, SP, Brazil

3:10 pm - Oral communication 11

Study of a satellite constellation for INPE's BiomeSat mission (CBDO 054)

Liana Dias Gonçalves

National Institute for Space Research, INPE, São José dos Campos, SP, Brazil

3:30 pm - Oral communication 12

Long and short-duration orbits around the Moon for different types of missions (CBDO 045)

Jean Paulo dos S. Carvalho

Federal University of Recôncavo da Bahia, UFRB, Feira de Santana, BA, Brazil

3:50 pm – Coffee Break

4:10 pm – Poster Session 2. CBDO 001 – CBDO 105, except oral communication.

Wednesday, December 4th

8:30 am - Mini-course

Optimal control of spatial trajectories using GEKKO

Jhonathan Piñeros

Space systems analyst, SAIPHER

9:10 am – Break

Second session on Orbital Mechanics and Spacecraft Attitude Determination and Control

Chairman: Rosana Araújo

9:20 am - Invited talk 4

Attitude Representations of Artificial Satellites and Applications (CBDO 190)

Maria Cecília Zanardi

UNESP - São Paulo State University, Guaratinguetá, SP, Brazil

10:10 am – Coffee Break

10:30 am - Oral communication 13

Use of a Rational Agent to determine the attitude of a Solar Sail (CBDO 056)

Lucas G. Meireles

UNESP - São Paulo State University, Guaratinguetá, SP, Brazil

10:50 am - Oral communication 14

Orbital mechanics around non-homogeneous elongated asteroids (CBDO 085)

J. D. Gutiérrez

Universidad de Zaragoza, Spain

11:10 am - Oral communication 15

Machine learning techniques for autonomous satellite guidance during terminal rendezvous operations (CBDO 128)

Rogério Rodrigues dos Santos

UNESP - São Paulo State University, Guaratinguetá, SP, Brazil

11:30 am - Oral communication 16

Mitigating Actuator Faults in Spacecraft Formation Flying through a Reconfigurable Guidance Strategy (CBDO 130)

Willer Gomes dos Santos

Aeronautics Institute of Technology, ITA, São José dos Campos, SP, Brazil

11:50 am - Oral communication 17

Existence and Stability of Moon's Stationary Polar Orbits (CBDO 133)

Marcelo D. Marchesin

Federal University de Minas Gerais, UFMG, Belo Horizonte, MG, Brazil

12:10 pm - Lunch

Third session on Orbital Mechanics and Spacecraft Attitude Determination and Control

Chairman: Antonio F. B. A. Prado

1:40 pm - Oral communication 18

Utilizing Cosmic Microwave Background Measurements for Improved Interstellar Navigation Systems (CBDO 139)

Pedro Kukulka de Albuquerque

George Mason University, Fairfax, Virginia, USA

2:00 pm - Oral communication 19

Trade-off Families of Transfer Trajectories in the Cislunar region (CBDO 142)

Caio Jansen Accioly

Aeronautics Institute of Technology, ITA, São José dos Campos, SP, Brazil

2:20 pm - Oral communication 20

Mathematical model of the orbital elevator motion (CBDO 182)

Sergei Kupreev

RUDN University, Moscow, Russia

2:40 pm - Oral communication 21

Method of satellite constellation design for on-orbit servicing of multisatellite space systems on orbits with given parameters (CBDO 183)

Vladimir Razoumny

RUDN University, Moscow, Russia

First session on Dynamical System

Chairman: Lucas Ruiz dos Santos

3:00 pm - Invited talk 5

Decomposition of Symmetrical Classes of Central Configurations (CBDO 119)

Marcelo Pedro dos Santos.

Federal Rural University of Pernambuco, UFRPE, Recife, PE, Brazil

3:50 pm - Coffee Break

4:10 pm – Poster Session 3. CBDO 106 – CBDO 210, except oral communication.

6:30 pm - **Social Barbecue at ADC/INPE**

Thursday, December 5th

8:30 am - Mini-course

Optimal control of spatial trajectories using GEKKO

Jhonathan Piñeros

Space systems analyst, SAIPHER

9:10 am – Break

Second session on Dynamical System

Chairman: Marcelo Marchesin

9:20 am - Invited talk 6

Dynamics of a non-homogeneous straight segment: relative equilibria, stability, periodic solutions and singularities (CBDO 189)

Claudio Vidal

Universidad del Bío-Bío, Concepción, VIII Region, Chile

10:10 am - Coffee Break

10:30 am - Oral communication 22
Isochronous Bifurcations (CBDO 044)
Michele Mugnaine
São Paulo University, USP, São Paulo, SP, Brazil

10:50 am - Oral communication 23
Dynamical evolution of a system composed by extended deformable bodies with complex rheologies (CBDO 064)
Vitor M. de Oliveira
São Paulo University, USP, São Paulo, SP, Brazil

11:10 am - Oral communication 24
The secular tidal evolution of a binary system in the viscous regime and singular perturbation theory (CBDO 084)
Lucas Ruiz dos Santos
Federal University of Itajubá, UNIFEI, Itajubá, MG, Brazil

11:30 am - Oral communication 25
Tidal Evolution and Spin-Orbit Dynamics: The Critical Role of Rheology (CBDO 075)
Clodoaldo Ragazzo
São Paulo University, USP, São Paulo, SP, Brazil

11:50 am - Oral communication 26
On the attraction of ellipsoids and the properties of the Newtonian attraction (CBDO 125)
Alain Albouy
Observatoire de Paris, CNRS, France

12:10 pm - Lunch

Third session on Dynamical System

Chairman: Eduardo Leandro

1:40 pm - Oral communication 27
Bifurcations of a Symmetric Family of Dziobek Configurations (CBDO 129)
Michelle Gonzaga dos Santos
Federal University of Pernambuco, UFPE, Recife, PE, Brazil

2:00 pm - Oral communication 28
Perilune Poincare Maps: a NRHO's Station Keeping Approach (CBDO 143)
Maisa Oliveira Terra
Aeronautics Institute of Technology, ITA, São José dos Campos, SP, Brazil

2:20 pm - Oral communication 29
The Veronese variety associated with Dziobek central configurations (CBDO 209)
Thiago Dias Oliveira Silva
Federal Rural University of Pernambuco, UFRPE, Recife, PE, Brazil

Third session on Dynamical and Planetary Astronomy

Chairman: Nelson Callegari Júnior

2:40 pm - Invited talk 7

Investigating Dynamical Structures in the TOI-178 System (CBDO 137)

Rafael Sfair

UNESP - São Paulo State University, Guaratinguetá, SP, Brazil

3:30 pm - Oral communication 30

Stable configurations for the retrograde planet in the ν Octantis system (CBDO 089)

Alan C. Signor

IGCE, UNESP - São Paulo State University, 3506-900 Rio Claro, SP, Brazil

CFisUC, Department of Physics, University of Coimbra, 3004-516 Coimbra, Portugal

3:50 pm - Coffee Break

4:10 pm – Poster Session 4. CBDO 106 – CBDO 210, except oral communication.

Friday, December 6th

8:30 am

Mini-course

Optimal control of spatial trajectories using GEKKO

Jhonathan Piñeros

Space systems analyst, SAIPHER

9:10 am – Break

Fourth session on Dynamical and Planetary Astronomy

Chairman: Priscilla Pires

9:20 am - Invited talk 8

NEOMOD: Dynamical Model of Near-Earth Objects from a Decade of Catalina Sky Survey Observations (CBDO 184)

David Nesvorný

Southwest Research Institute, Boulder, CO, USA

10:10 am - Coffee Break

10:30 am - Oral communication 31

Exploring the Formation of the TOI-1130 Planetary System Using a Hydrodynamic Approach (CBDO 097)

Bárbara Celi Braga Camargo

Valongo Observatory, Federal University of Rio de Janeiro, UFRJ, Rio de Janeiro, RJ, Brazil

10:50 am - Oral communication 32

A numerical analysis of planar colliding binary companions (CBDO 061)

Gabriel Caritá

National Institute for Space Research, INPE, São José dos Campos, SP, Brazil

11:10 am - Oral communication 33

Planetary resonances: properties for arbitrary eccentricities and mutual inclinations (CBDO 091)

Tabare Gallardo

Facultad de Ciencias, Udelar, Uruguay

11:30 am - Oral communication 34

On the Dynamics around Quaoar: its shape and the unstable limit (CBDO 042)

Othon Winter

UNESP - São Paulo State University, Guaratinguetá, SP, Brazil

11:50 am - Oral communication 35

Dynamic tides in the exoplanetary system CoRoT-3b (CBDO 117)

Sylvio Ferraz Mello

São Paulo University, USP, São Paulo, SP, Brazil

12:10 am - Closing Ceremony

Information about the Minicourse:

Content: The GEKKO library (in Python) will be implemented as an alternative to solve two problems of optimal control of space trajectories: orbital transfer and planetary re-entry.

- The sessions will be online on Wednesday, Thursday, and Friday between 8:30 and 9:10 pm.

- Estimated time: three 40-minute sessions.

- Requirements (desirable): Laptop with Python software, Jupyter Notebook, GEKKO, Numpy and Matplotlib libraries.

Instructor: Dr. Jhonathan Murcia Piñeros

Space systems analyst, SAIPHER

FINAL PROGRAM

First week of December 2024

	Time	Monday, 2	Tuesday, 3	Wednesday, 4	Thursday, 5	Friday, 6				
am	8:30		Invited talk 1 Romina Di Sisto CBDO 188	Mini-course	Mini-course	Mini-course				
	8:40			Optimal control of spatial trajectories using GEKKO	Optimal control of spatial trajectories using GEKKO	Optimal control of spatial trajectories using GEKKO				
	8:50									
	9:00				break	break	break			
	9:10									
	9:20			Invited talk 2 Felipe Braga-Ribas CBDO 185	Invited talk 4 Maria Cecília Zanardi CBDO 190	Invited talk 6 Claudio Vidal Díaz CBDO 189	Invited talk 8 David Nesvorný CBDO 184			
	9:30									
	9:40									
	9:50									
	10:00			Coffee break	Coffee break	Coffee break	Coffee break			
	10:10									
	10:20									
	10:30			Oral Comm. 4 CBDO 035	Oral Comm. 13 CBDO 056	Oral Comm. 22 CBDO 044	Oral Comm. 31 CBDO 097			
	10:40									
	10:50			Oral Comm. 5 CBDO 039	Oral Comm. 14 CBDO 085	Oral Comm. 23 CBDO 064	Oral Comm. 32 CBDO 061			
	11:00									
11:10		Oral Comm. 6 CBDO 108	Oral Comm. 15 CBDO 128	Oral Comm. 24 CBDO 084	Oral Comm. 33 CBDO 091					
11:20										
11:30		Oral Comm. 7 CBDO 049	Oral Comm. 16 CBDO 130	Oral Comm. 25 CBDO 075	Oral Comm. 34 CBDO 042					
11:40										
11:50		Oral Comm. 8 CBDO 100	Oral Comm. 17 CBDO 133	Oral Comm. 26 CBDO 125	Oral Comm. 35 CBDO 117					
12:00										
pm	12:10	Registration and reception of participants	Lunch	Lunch	Lunch	Closing Ceremony				
	12:20									
	12:30									
	12:40									
	12:50									
	1:00									
	1:10									
	1:20									
	1:30									
	1:40					Opening				
	1:50	Wagner Sessin Ward	Invited talk 3 Hauke Hussmann CBDO 186	Oral Comm. 18 CBDO 139	Oral Comm. 27 CBDO 129					
	2:00	Opening talk 1 Ignazio Dimino CBDO 187		Oral Comm. 19 CBDO 142	Oral Comm. 28 CBDO 143					
	2:10			Oral Comm. 20 CBDO 182	Oral Comm. 29 CBDO 209					
	2:20		Oral Comm. 21 CBDO 183	Invited talk 7 Rafael Sfair CBDO 139						
	2:30	Oral Comm. 1 CBDO 001	Oral Comm. 10 CBDO 025		Oral Comm. 30 CBDO 089					
	2:40	Oral Comm. 2 CBDO 002	Oral Comm. 11 CBDO 054							
	2:50	Oral Comm. 3 CBDO 006	Oral Comm. 12 CBDO 045	Invited talk 5 Marcelo Santos CBDO 119						
	3:00	Coffee break	Coffee break		Coffee break	Coffee break				
	3:10									
	3:20									
3:30										
3:40										
3:50										
4:00										
4:10										
4:20	Poster Session 1 CBDO 001 – CBDO 105	Poster Session 2 CBDO 001 – CBDO 105	Poster Session 3 CBDO 106 – CBDO 210	Poster Session 4 CBDO 106 – CBDO 210						
4:30	Except oral Comm.	Except oral Comm.	Except oral Comm.	Except oral Comm.						
4:40										
4:50										

List of abstracts accepted for CBDO 2024 in order of submission, November 25, 2024.

CBDO 001 – Oral communication

The Orbital Eccentricities of Directly Imaged Companions Using Observable-based Priors:
Implications for Population-level Distributions

Clarissa R. Do Ó

CBDO 002 - Oral Communication

The co-orbital dynamics in binary systems

Fernando Roig

CBDO 003 – Poster

ALR_Sim_tracks - trajectory simulator software to assist the search for favourable trajectories for
the exploration of the triple Asteroid 2001-SN263 from the Laser Altimeter point of view

Antonio G. V. de Brum

CBDO 004 - Poster

Capture trajectories for NEAs using three-body dynamics

Priscilla Sousa-Silva

CBDO 005 - A - Poster

Dimensioning and design (2D and 3D) of the laser altimeter for the ASTER Mission

Ana Liriel Claudio Santos, Antonio Gil Vicente de Brum

CBDO 006 - A - Oral communication

Vision Transformers for identifying asteroids interacting with secular resonances

Valerio Carruba

CBDO 007 - Poster

Understanding and describing a phase transition from limited to unlimited diffusion for a billiard
system

Anne Kétri Pasquinelli da Fonseca

CBDO 008 - A - Poster

The five largest satellites of Uranus: astrometric observations spread over 29 years at the Pico dos
Dias Observatory

Camargo, J.I.B.

CBDO 009 - Poster

Assessment of Relative Motion in Autonomous Spaceflight

Rodolfo Batista Negri

CBDO 010 - Poster

The geomagnetic field and charge generation for satellites

Eric D'Antona, Helton Gaspar

CBDO 011 - Poster

Rendezvous formalism applied into final stage correction maneuverings of LEO-DRO Cislunar Transfer

Ricardo José Schwarz

CBDO 012 - Poster

Numerical validation of electric charging from current induced by the geomagnetic field

Helton da Silva Gaspar

CBDO 013 - A - Poster

Low-energy trajectories generated in the Earth-Moon system destined to the Jovian system

Victor Ayres Peres

CBDO 014 - Poster

A Magnetotorque Model with External Coils for CubeSat Attitude Control

Yan da Silva Moura

CBDO 015 - Poster

Characterization of the Rings of the Centaur Chariklo

A. L. R. Mitidiero

CBDO 016 - Poster

Orbital Precision of Himalia through Numerical Integrations and Statistical Analysis of Observations

Evelyn C. M. Prais

CBDO 017 - Poster

Light Deflection in Stellar Occultations: A Challenge for Astrometry

Maísa Poiani

CBDO 018 - Poster

Qualitative analysis of the dynamic evolution of planetary systems

Eduardo Verrone Sanches

CBDO 019 Poster

The effect of impactor mass-ratio in the accretion of Uranus and Neptune

Leandro Esteves

CBDO 020 - A - Poster

Orbital dynamics of space debris considering natural perturbations and resonance effects

Calisto José da Silva Neto

CBDO 021 - Poster

Machine Learning Applied to Asteroid Study in the LSST Era

M. M. P. de Sá

CBDO 022 - Poster

Searching for long lasting natural orbits around moons in the Solar System

Lucas S. Ferreira

CBDO 023 - Poster

An analytical model for the dynamical evolution of two-planet extrasolar systems in wide binaries stars

Jorge Correa-Otto

CBDO 024 - A - Poster

Orbital Stability of Small Satellites in Trans-Neptunian Dwarf Planet Systems

Lucas dos Santos Cadavez

CBDO 025 – Oral communication

Analytical Modeling of the Gravitational Potential of Irregularly Shaped Celestial Bodies considering three distinct internal structures: Application to (21) Lutetia

Marcelo Lisboa Mota

CBDO 026 - Poster

Analytical Modeling of the Gravitational Potential of Irregularly Shaped Celestial Bodies: Application to (285263) 1998 QE2

Marcelo Lisboa Mota

CBDO 027 - Poster

Investigation of orbits around the asteroid (16) Psyche

Alessandra F. S. Ferreira

CBDO 028 - A - Poster

Energy Variation of Space Debris Considering Orbital Maneuvers and Ground-Based Laser

Jorge K. S. Formiga

CBDO 029 - Poster

Stellar Occultations Observed by the CHEOPS Space Telescope

A. R. Gomes-Júnior

CBDO 030 – Withdrawn by the authors

CBDO 031 - A - Poster

A study on the chaotic dynamics of Comet 1P Halley

Lucas Soares Pereira

CBDO 032 - Poster

OGLE-2019-BLG-1470L AB c Exoplanet Orbital Dynamics Analysis

C.E Borges

CBDO 033 - Poster

Tridimensional Dynamics of Small Satellites

Bruno Foltran Junior

CBDO 034 - Poster

Comparison of aerodynamic control algorithms for satellites in LEO to increase its orbital decay

Prof. Dr. Antônio Fernando Bertachini de Almeida Prado

CBDO 035 - Oral communication

Non-transiting exoplanet characterization using TTV pattern and Deep Learning

Marco Antonio Petersem-Domingues

CBDO 036 - Poster

Analysis and two-dimensional modelling of diffraction effects in stellar occultations

Lucas Naves Rodrigues

CBDO 037 - Poster

Prediction of Gravitational Microlensing

Fabício Santos Kalaki

CBDO 038 - Poster

Stellar Occultations by the Trojan (2363) Cebriones

I. B. Batista

CBDO 039 - A - Oral communication

The Effect of Triton's Evolution on Neptune's Spin Axis

Rodney S Gomes

CBDO 040 - Poster

Impact of Insertion Errors on the Performance of Small Satellite Constellations

Antonio Fernando Bertachini de Almeida Prado

CBDO 041 - Poster

Aster Project: A New Launch Window with Multiple Swing-bys and Technological Parameters

Felipe C. Peixoto

CBDO 042 - A - Oral communication

On the Dynamics around Quaoar: its shape and the unstable limit

Othon Winter

CBDO 043 - Poster

Conceptual analysis of interplanetary missions involving gravity-assisted maneuvers with the moon and the use of solar sails

Cristiano F. de Melo

CBDO 044 - A - Oral communication

Isochronous Bifurcations

Iberê L. Caldas

CBDO 045 - A - Oral communication

Long and short-duration orbits around the Moon for different types of missions

Jean P. S. Carvalho

CBDO 046 - A - Poster

Heliotropic Orbits around the 65803 Didymos Binary Asteroid System: Effects of Zonal Harmonics, Solar Radiation Pressure, and Third-Body Perturbations

Guilherme de Oliveira Paes

CBDO 047 - A - Poster

The Tesseral Resonance 3:1 in the Jacobi Ellipsoid

Dairo Antonio Cuellar Mateus

CBDO 048 - A - Poster

Double lunar swing-by from periodic orbits in the restricted four-body problem

Rebeca S. Ribeiro

CBDO 049 - Oral Communication

Analysing the dynamics of Kepler-90 planetary system

Silvia Giuliatti Winter

CBDO 050 - A - Poster

Design of a Frozen Orbit for GARATÉA-L mission

Luiz Arthur Gagg Filho

CBDO 051 - A - Poster

Semi-Analytical Theory for a Lunar Probe Orbit

Sandro da Silva Fernandes

CBDO 052 - Poster

Analysis of the asteroid Phereclos from stellar occultations

Matheus V. Marques

CBDO 053 - A - Poster

Multi-objective optimization applied to a satellite constellation for the BiomeSat mission

Evandro Marconi Rocco

CBDO 054 - A - Oral communication

Study of a satellite constellation for INPE's BiomeSat mission

Liana Dias Gonçalves

CBDO 055 - A - Poster

Retrograde Symmetrical Periodic Orbits in the Circular Restricted 3-body Problem

Maria Júlia Fassis

CBDO 056 - A - Oral communication

Use of a Rational Agent to determine the attitude of a Solar Sail

Lucas Gouvêa Meireles

CBDO 057 - Poster

Orbital analysis of the Kiruna Meteor (2023/2/27)

Daniela Cardozo Mourão

CBDO 058 - Poster

The Moon as a possible source of Earth's co-orbital bodies

Luiz Claudio Gomes

CBDO 059 - Poster

Application of Orbital Correction Maneuvers by Continuous Thrust in Frozen Orbits Around Venus

Rita de Cássia Domingos

CBDO 060 - Poster

Optimizing Hyperparameters in a Convolutional Neural Network Model for Image Analysis

Isadora R. C. Silva

CBDO 061 - A - Oral communication

A numerical analysis of planar colliding binary companions

Gabriel Antonio Caritá

CBDO 062 - Poster

Monitoring the movement of small celestial bodies at FESJ/UNESP Station.

Clara Sepe Lemos

CBDO 063 - Poster

Genetic Algorithm Simulation of Mitigation Maneuver Spacecraft-Asteroid Bennu and Yarkovsky Effect

Daniel dos Anjos Costa

CBDO 064 - Oral communication

Dynamical evolution of a system composed by extended deformable bodies with complex rheologies

Vitor M. de Oliveira

CBDO 065 - Poster

Island myriads in periodic potentials

Matheus Lazarotto

CBDO 066 - A - Poster

Deep Learning Identification of Asteroids Interacting with $g - s$ Secular Resonances

Abreuçon A. Alves

CBDO 067 - A - Poster

Surface Properties of the Jovian Trojan (58931) Palmys

Viviane Figueiredo Peixoto

CBDO 068 - Poster

Dynamical structure of compact planetary systems

Gabriel Teixeira Guimarães

CBDO 069 - Poster

Multi-fluid hydrodynamical simulations of circumbinary planet formation via pebble accretion

Ana Guimarães

CBDO 070 - Poster

Machine learning approach for mapping stability regions around planetary systems

Tiago Francisco Leal Pinheiro

CBDO 071 - A - Poster

A semi-analytical approach to retrograde mean motion resonances

Luis Renato de Campos Damin

CBDO 072 - Poster

Numerical Analysis of CubeSat Orbit Using Aerodynamic Perturbative Forces and Debris Monitoring in Low Earth Orbit

Ana Paula Alves do Prado

CBDO 073 - A - Poster

Resonant interactions between objects on counter-revolving orbits

Helena Morais

CBDO 074 - Poster

Innovative Approaches in Nanosatellite and Tether Systems for Cost-Effective Space Missions

Fabio Augusto da Silva Borges

CBDO 075 – Oral communication

Tidal Evolution and Spin-Orbit Dynamics: The Critical Role of Rheology

Clodoaldo Grotta Ragazzo

CBDO 076 - Poster

Dynamical evolution of a debiased size distribution of Near Earth Objects

Pryscilla Pires

CBDO 077 - Poster

Orbital dynamics of the third body in the polar V808 Aurigae

Isabel J. Lima

CBDO 078 - Poster

Space Debris: Analysis and Preventive Mitigation

Denilson P. Souza dos Santos

CBDO 079

Transfer of Near-Earth Objects (NEOs) to the Centaurs' region

Rosana Araujo

CBDO 080 – Withdrawn by the author

CBDO 081 - Poster

Machine learning techniques for the design of Spinning Theter System

Ernesto Vieira Neto

CBDO 082 - Poster

Multivariate analysis as a Spatial Debris mitigation strategy

Dimitrie Hristov Sobrinho

CBDO 083 - A - Poster

Investigation about the internal structure of the trans-Neptunian asteroid Arrokoth

Raí Machado-Oliveira

CBDO 084 - A - Oral communication

The secular tidal evolution of a binary system in the viscous regime and singular perturbation theory

Lucas Ruiz dos Santos

CBDO 085 - A - Oral communication

Orbital mechanics around non-homogeneous elongated asteroids

José D. Gutiérrez

CBDO 086 - Poster

Exocomet dynamics in the Kepler-90 extrasolar system

Nilce da Silva dos Santos

CBDO 087 - A - Poster

Evaluation of centroiding algorithms for an autonomous star tracker

Marcio Afonso Arimura Fialho

CBDO 088 – A - Poster

Tidal evolution in dwarf planets systems

Karyna Gimenez

CBDO 089 - A - Oral communication

Stable configurations for the retrograde planet in the ν Octantis system

Alan C. Signor

CBDO 090 - Poster

A Study on Space Debris Generated by a Break-Up Event

Gabriel Homero Barros Vieira

CBDO 091 - A - Oral communication

Planetary resonances: properties for arbitrary eccentricities and mutual inclinations

Tabare Gallardo

CBDO 092 - Poster

Accretion and Uneven Depletion of the Main Asteroid Belt

Rogério Deienno

CBDO 093 - A - Poster

Stellar Occultation Technique for studying the Trojan (1172) Aneas

Isabelle Batista Gil

CBDO 094 - A - Poster

A scenario for the origin of moons around super-Earths and their detectability

Nilce da Silva dos Santos

CBDO 095 - A - Poster

Equilibrium figure for Quaoar using stellar occultation

Giuliano Margoti

CBDO 096 - A - Poster

Secular dynamics of small bodies perturbed by an eccentric giant planet

Rodrigo Cabral-Fontes

CBDO 097 - A - Oral communication

Exploring the Formation of the TOI-1130 Planetary System Using a Hydrodynamic Approach

Bárbara Celi Braga Camargo

CBDO 098 - Poster

Development of an electronic system for a CanSat

Bruno Gabriel Santos Prestes

CBDO 099 - Poster

Earth-to-Earth transfer via powered lunar swing-by

Artur Robson Cutolo

CBDO 100 - A - Oral communication

Estimation of the viscosity of trans-neptunian dwarf planets through the synchronous motion of Eris

Adrián Rodríguez

CBDO 101 - Poster

Study of the Transport Dynamics in the Three-Body Problem

Júlia Gomes da Costa

CBDO 102 - Poster

Studying plasma with electrostatic energy analyzer with different geometries and a RF choker filter

João David Moreira

CBDO 103 - Poster

Rendezvous Maneuvers Optimized by Genetic Algorithm for Space Debris Removal

Paulo Victor Silva Do Monte Santos

CBDO 104 - A - Poster

Testing (911) Agamemnon 3D model with new Stellar Occultations and synthetic light curve generations.

Eros O. Gradovski

CBDO 105 - Poster

Conception and build of a Langmuir's probe for analysis of a RF discharge generated plasma.

William Wenner Teixeira Sinésio

CBDO 106 - Poster

Constraining physical and orbital parameters for possible extrasolar ring systems

Tiago Pinheiro

CBDO 107 - Poster
Cloud Space Debris: Behavior Analysis of Debris in Clouds and Prospection of Collection Missions
Peterson dos Santos Maurício

CBDO 108 - A - Oral communication
A Hamiltonian for 1/1 rotational secondary resonances, and application to small satellites of Saturn and Jupiter
Nelson Callegari Júnior

CBDO 109 - Poster
Stable Regions in the Kepler-80 System
João Pedro Siqueira Monteiro

CBDO 110 - A - Poster
Determining the size and shape of the Trojan (1143) Odysseus through stellar occultation technique, reverse light curve analysis and 3D modeling
Johannes Antunes Nascimento Rodrigues

CBDO 111 - A - Poster
Rings diversity around Small Solar System bodies: Discoveries and Detection Limits
Chrystian Luciano Pereira

CBDO 112 - Poster
Collision Avoidance Maneuvers Optimization Using Evolutionary Algorithms
Guilherme Marcos Neves

CBDO 113 - A
Staging and trajectory optimization of VLM-1 satellite launch vehicle
Guilherme da Silveira

CBDO 114 - Poster
Twistless bifurcations on isochronous islands
Michele Mugnaine

CBDO 115 - Poster
Exploring the Lambert Problem: An Analysis of Orbital Maneuvers
Eduardo Oliveira Noveti

CBDO 116 - Poster
University Satellite Instrumentation - Cubesat V2
Carlos V. B. Domingues

CBDO 117 - Oral communication
Dynamic tides in the exoplanetary system CoRoT-3b.
Sylvio Ferraz Mello

CBDO 118 - A - Poster
Surface Characteristics of Asteroid (346724) 2011 UW158: A Large Super-Fast Rotator
Caio Gomes de Oliveira

CBDO 119 - Invited talk
Decomposition of Symmetrical Classes of Central Configurations
Marcelo Pedro dos Santos.

CBDO 120 - A - Poster
On the Absence of Coorbital Satellites in the Galilean System
Ricardo Moraes

CBDO 121 - Poster
Searching for orbits around Io considering the Laplacian resonance
Thamis C. F. Carvalho Ferreira

CBDO 122 - A - Poster
Dynamics around Psyche
Andreza Martin

CBDO 123 - Poster
hotometric Study of TNOs and Centaurs Observed by the Dark Energy Survey
Feliphe S. Ferreira

CBDO 124 - Poster
Dynamics of dust particles from IDP collisions in the Saturn system.
Vanessa Moura

CBDO 125 - A - Oral communication
On the attraction of ellipsoids and the properties of the Newtonian attraction
Alain Albouy

CBDO 126 - Poster
Faint Young Sun Paradox: dynamic evolution and habitability
Sofia Leite Fonseca

CBDO 127 - A - Poster
Mapping Slopes Across the Surface of Red Asteroid (269) Justitia
Leonardo Braga

CBDO 128 - A - Oral communication
Machine learning techniques for autonomous satellite guidance during terminal rendezvous operations
Rogério Rodrigues dos Santos

CBDO 129 - Oral communication
Bifurcations of a Symmetric Family of Dziobek Configurations
Michelle Gonzaga dos Santos

CBDO 130 - Oral communication
Mitigating Actuator Faults in Spacecraft Formation Flying through a Reconfigurable Guidance Strategy
Willer Gomes dos Santos

CBDO 131 - Poster

Study of the Main Challenges in the Use of the Ensemble Kalman Filter in the Attitude Estimation Problem of Spacecraft
Roberta Veloso Garcia

CBDO 132 - A

Simulation of measurements for low Earth orbit satellite GPS receivers
Leandro Baroni

CBDO 133 - Oral communication

Existence and Stability of Moon's Stationary Polar Orbits
Marcelo D. Marchesin

CBDO 134 - Poster

Dynamics of a particle around a non-spherical symmetrical body with a deep depression
Paulo Victor da Silva Soares

CBDO 135 - A - Poster

Spacecraft Formation Flying Control Considering Solar Panel Failures and Differential Perturbations
Bruno Leonardo Schuster

CBDO 136 - A - Poster

Secular Regimes in the Planetary Case of the 3-Body Problem at high (e, i) .
Alfredo Suescun

CBDO 137 - Poster

Investigating Dynamical Structures in the TOI-178 System
Jovan Boskovic

CBDO 138 - Poster

Space System Engineering Process to design orbit for an electromagnetic detection payload
Márcio Martins da Silva Costa

CBDO 139 - Oral communication

Utilizing Cosmic Microwave Background Measurements for Improved Interstellar Navigation Systems
Pedro Kukulka de Albuquerque

CBDO 140 - Poster

Existence and stability of equilibrium points above the poles on the Sun-Earth-Sail Problem
Fernando Luiz Assunção de Paula

CBDO 141 - A - Poster

Design of a Stepper Motor-based Control System for a Stratospheric Probe Tracking Antenn
Chrystian Jones Maia Campos

CBDO 142 - Oral communication

Trade-off Families of Transfer Trajectories in the Cislunar region
Caio Jansen Accioly

CBDO 143 - Oral communication

Perilune Poincare Maps: a NRHO's Station Keeping Approach

Maisa de Oliveira Terra

CBDO 144 - Poster

An analytical study on the solar radiation pressure and planetary oblateness perturbations over orbital dynamical systems.

Henrique Barros Navarro

CBDO 145 - A - Poster

On the topology of mean motion resonances in the full range of eccentricity and inclination

Nicolas Pan

CBDO 146 - Poster

Formation Flying Design Applied for an Aurora Borealis Monitoring Mission

Thais Cardoso Franco

CBDO 147 - Poster

Classifying 4-body cocircular central configurations

Igor de Barros Nonato

CBDO 148 – Withdrawn by the author

CBDO 149 - A - Poster

Physical characteristics of Jupiter's Trojans combining the stellar occultation techniques with dimensionless 3D model

Hélio Honório Dutra

CBDO 150 - Poster

Lunar Artificial Satellite Constellation: Geometric Prowess Optimization

Ana Paula Marins Chiaradia

CBDO 151 - Poster

Dynamics and Control of Spacecraft Formation Flying Applied to Space-based Solar Power Missions

Caio Nahuel Sousa Fagonde

CBDO 152 - A - Poster

Convergence of orbits to the stationary state for a family of two-dimensional nonlinear mappings

Mayla A. M. de Almeida

CBDO 153 - A - Poster

The effect of eccentricity on the insolation and habitability of exoplanets

Lariele Fernanda Spatti

CBDO 154 - A - Poster

Reinforcement Learning-Based Optimization of Controller Gains for Terminal Rendezvous Maneuvers

Gabriel Goes

CBDO 155 – Withdrawn

CBDO 156 - A - Poster

Evolution and Stability of Low Orbits Around the Moon

Rayne Marcondes dos Santos

CBDO 157 - Poster

Development of AI for Navigation of Space Systems Considering Orbital Dynamics and Astronomy: A Case Study with SpaceX Crew Dragon Docking Simulation

Narayane Ribeiro Medeiros

CBDO 158 - Poster

Space Communication Protocols: A Comprehensive Review of Standards and Technologies for Satellite and Nano Satellite Missions

Júlia Fernandes de Lima Oliveira

CBDO 159 - A - Poster

The Dynamics About Trojan Asteroid (11351) Leucus: A Very Slow Rotator

Andre Amarante

CBDO 160 - A - Poster

Evolution of a Space Debris Cloud

Giovanna Mendes Cruz Alves

CBDO 161 - Poster

Development of AI for Analysis of Public NASA Images to Discover New Celestial Bodies

Narayane Ribeiro Medeiros

CBDO 162 - A - Poster

Revisiting the dynamics of the Prometheus-Pandora System

Demétrio Tadeu Ceccatto

CBDO 163 - A - Poster

Space Situational Awareness: an Overview of Satellite Collision Avoidance Maneuvers

Fernanda Helena Lobato Santos

CBDO 164 - Poster

Orbital and spectral analysis of the meteor captured on April 25, 2024, over the state of Mato Grosso

Felipe C. Franco

CBDO 165 - A – Withdrawn by the author

CBDO 166 - A - Poster

Batch-Differential Correction for Orbit Determination

Carlos Eduardo de Sa Amaral Oliveira

CBDO 167 - Poster

The three-dimensional creep tide theory - Averaged equations and applications to long-term evolution of close-in exoplanetary systems

Raphael Alves-Silva

CBDO 168 - A - Poster

Equilibrium Points and Surface Dynamics About Comet 67P/Churyumov-Gerasimenko

Luis Ceranto

CBDO 169 - Poster

Dynamics of Rotation of Small Satellites of Saturn

Leonardo Vicente Jin Tetsuya Aoki

CBDO 170 - Poster

Asteroids were born bigger: An implication of surface mass ablation during gas-assisted implantation into the asteroid belt

Rafael Ribeiro de Sousa

CBDO 171 - A - Poster

Dynamics of a Solar Sail in Resonant Conditions with Solar Radiation Pressure Perturbation: Case of Mercury and Earth.

João Pedro Fagionato Agostinho

CBDO 172 – N - Poster

Dynamics Study of Hippocamp: Future Resonant Scenario 13:11

Victor Hugo Mota

CBDO 173 - A - Poster

Assessing the Collision Potential of Space Debris after Fragmentation

Ricardo O. Silva

CBDO 174 - A - Poster

Analysis of the stable regions of the Kepler-20 system through frequency analysis

Luiz A. G. Boldrin

CBDO 175 - Poster

Particle regions around Quaoar system

Thamiris de Santana

CBDO 176 - Poster

Revisiting derivative-free nonlinear Kalman filtering: implementation aspects of algorithms

CDKF, DDKF, CKF, AND UKF

Helio Koiti Kuga

CBDO 177 - A - Poster

Fundamentals of Dynamical Astronomy and Elementary Applications in Resonant Dynamics of Saturn's Small Satellites - The Pan-Prometheus Case

Ana Julia Mendes Pereira dos Santos

CBDO 178 - Poster
Development of an electronic system for a CanSat
Bruno Gabriel Santos Prestes

CBDO 179 - Poster
Current scenario of space debris removal mechanisms
Cláudia Celeste Celestino

CBDO 180 - Poster
Space Debris Evolution: Case Studies
Cláudia Celeste Celestino

CBDO 181 - Poster
Quasi-critical and quasi-heliosynchronous orbits
M. L. G. T. X. Costa, Rodolpho Vilhena de Moraes

CBDO 182 - Oral communication
Mathematical model of the orbital elevator motion
Sergei Kupreev

CBDO 183 - Oral communication
Method of satellite constellation design for on-orbit servicing of multisatellite space systems on orbits with given parameters
Vladimir Razoumny

CBDO 184 – Invited talk
NEOMOD: Dynamical Model of Near-Earth Objects from a Decade of Catalina Sky Survey Observations
David Nesvorný

CBDO 185 - A - Invited talk
Stellar Occultations by Trans-Neptunian Objects
Felipe Braga-Ribas

CBDO 186 - Invited Talk
Geodetic and Geophysical Characterization of Ganymede with GALA, the Ganymede Laser Altimeter
H. Hussmann

CBDO 187 - N - Invited talk / Opening Talk
Italy-Brazil Joint Science and Technology Cooperation in Space technology: the SPLASH Project
Ignazio Dimino

CBDO 188 - Invited talk
Dynamic of Centaurs, link with the giant planets and other small body populations
Romina Paula Di Sisto

CBDO 189 - Invited talk

Dynamics of a non-homogeneous straight segment: relative equilibria, stability, periodic solutions and singularities

Claudio Vidal

CBDO 190 - Invited talk

Attitude Representations of Artificial Satellites and Applications

Maria Cecília Zanardi

CBDO 191 - N - Poster

Design and Construction of a System of Magnetic Field Induced by Coils in a Vacuum Chamber for Experiments with Plasma Physics

João Gabriel Borges Aquino

CBDO 192 - N - Poster

Software Development for METAR Data Estimation for Performance Simulation Optimization in the Aeronautical Sector

Eden L S C Barbosa

CBDO 193 - N - Poster

Optimization of the parameters of the covariance matrices of the Extended Kalman Filter for attitude estimation of the CBERS satellite

Geovani Augusto Xavier Ribeiro

CBDO 194 - N - Poster

Resonance Jumps in Space Debris Dynamics: Impacts on Low Earth Orbit

Jorge K. S. Formiga

CBDO 195 - N - Poster

Studying the effects of Earth's atmospheric refraction in Stellar Occultations

Jacqueline Lima Domiciano

CBDO 196 - N - Poster

Investigating the Parameter Space in Two-Dimensional Discrete Mappings by Lyapunov Exponents

Fábio H. Costa

CBDO 197 - N - Poster

New transient co-orbital asteroids of Venus

Valerio Carruba

CBDO 198 - N - Poster

Practical Aspects of LCS Detection with FTLE in Astrodynamics

Luiz E. Sivieri

CBDO 199 - N - Poster

Differential Algebra in the Three-Body Problem

Gustavo Diniz Misk

CBDO 200 - N - Withdrawn by the author

CBDO 201 - N - Poster

Seismic wave propagation in loose granular media

Gonzalo Tancredi

CBDO 202 - N - Withdrawn by the author

CBDO 203 - N - Poster

Characterization of basins of attraction in 1D models and the extrapolation for higher dimension

Lucas de Lazari Ferreira

CBDO 204 - N - Poster

The Influence of Disk Mass on the Fragmentation of Protoplanetary Disks

Fernando dos Santos Silva

CBDO 205 - N - Poster

Study of families of symmetric periodic orbits around prolate bodies

Taís Ribeiro

CBDO 206 - N - Poster

On the Spin-Orbit Phase-Space of an Artificial Satellite

Othon Winter

CBDO 207 - N - Poster

Extrasolar planets: classifications and habitable zones

Vitor Farabello Lopes

CBDO 208 - N - Poster

Controlling telescope and image acquisition with RaspberryPI for stellar occultation observations

Eduardo Fonseca Morato

CBDO 209 - N - Oral Communication

The Veronese variety associated with Dziobek central configurations

Thiago Dias Oliveira Silva

CBDO 210 - N - Oral communication

Preliminary Design of Trajectories for Rendezvous with 2001 SN263

Rodolfo Batista Negri

Co-authors, affiliations, e-mails and other information can be found in the abstracts

