Prof. Stefano Casotto

Università degli Studi di Padova
Dipartimento di Fisica e Astronomia e Centro di Ateneo per gli Studi e le Attività Spaziali (CISAS)
Vicolo dell'Osservatorio 3, I-35122 Padova
Tel.: +39-049-8278224 ; Fax: +39-049-8278212; stefano.casotto@unipd.it

Titoli di studio

- Dottorato in *Ingegneria Aerospaziale*, The University of Texas at Austin, Austin, Texas (1989).
- Laurea in *Fisica*, Università degli Studi di Padova, Padova (1983).

Interessi professionali

My professional interests lie in the area of theoretical and applied Astrodynamics and Celestial Mechanics and the associated analytical and numerical methods as applied to Earth Observation and Solar System Exploration. I find the combination of teaching and research extremely stimulating and an occasion for continuous advancement on my part by keeping up-to-date with progress in the field and the profession by attending specialists conferences and participation or leadership in contracts related to both real space missions or feasibility studies. My past experience working at ESA and NASA has steered my activities toward the applications side, but I have always retained a fundamental interest in analytical studies. My inclination for analytical theories and developments is on a par with that for precise numerical work. I try to pass it on to my students, as well as my passion for the investigation of the historical roots Astrodynamics in the old science of Dynamical Astronomy, or Celestial Mechanics, which is now facing many new challenges posed by space exploration.

Esperienze presso università straniere

- Senior Research Fellow, *Center for Space Research*, U. of Texas at Austin, Austin, Texas, 2016.
- Visiting Associate in Aeronautics, *California Institute of Technology*, 2004-2005.
- Visiting Scientist, *Center for Space Research*, UT Austin, Austin, Texas, 2000.
- Visiting Fellow, *Flight Dynamics Division*, ESA/ESOC, 1990-1995.

Esperienze professionali

- Principal Investigator, *Real Time Reduced Dynamic POD for LEO Satellites with sequential filtering from GNSS measurements*. Software development funded by the European Space Agency (ESA), Noordwijk, NL (2017-18)
- Principal Investigator, *Navigation Kalman Filter for GTO and GEO Applications*. Software development funded by ThalesAleniaSpace-Italy, Turin (2016-17).
- Co-Investigator of the Ganymede Laser Altimeter (GALA) Science Team of the ESA/JUICE Mission (since 2013).
- Member, ESA/ESOC-funded study team on *New Concepts for relative Navigation at Planetary Approach* (2010-2013)
- Co-Investigator, Ocean Tide recovery and POD of the ASI-funded *GOCE–Italy Consortium* (2009–2012)

- Co-Investigator, Precise Orbit Determination within the ASI-funded *ROSA Radio Occultation Project* (2007–2010)
- Member of the *Italian Cassini Radio Science Team* (2002-2012)
- Member of the *Jovian Satellites Working Group* of Laplace study team (2007)
- Principal Investigator, ESA/ESTEC ACT-funded study *Interstellar Travel and Stellar Libration Points Study* (2003)
- Principal Investigator, ASI-funded study *GPS-Based POD of the SAC-C Mission With the LAGRANGE Receiver* (2000-2001)
- Co-Investigator, ASI-funded *SAGE Mission Phase A Study* (1998)
- Project Manager of the ASI-funded *OSIRIS/WAC Wide-Angle Camera* at CISAS (1995-1998)

Società professionali

- Membro *American Geophysical Union* (AGU), *European Geosciences Society* (EGS), *American Institute of Aeronautics and Astronautics* (AIAA), *American Astronautical Society* (AAS).
- Membro dell' *AIAA Technical Chairs Committee* (Since 2013)
- Membro dell' *AIAA Astrodynamics Technical Committee* (Since 2010)

Referee di riviste scientifiche

- *Celestial Mechanics and Dynamical Astronomy*
- *Journal of Geodesy*
- *Planetary and Space Science*
- *Journal of Guidance, Navigation and Dynamics*
- *Journal of Advances in Space Research*
- *Acta Astronautica*
- *Icarus*

Attività didattica

I have taught courses at the MSc level for the degree in Astronomy at the University of Padua since 1995. After obtaining tenure in 1997 I have been a member of the Astronomy Study Track Council and responsible for the Celestial Mechanics course (1997—present), Theory of Orbits (2005—present). Currently, each of these two courses are worth 6 EC. I also lectured for the course Physics 2 Lab from 1995 to 2000. Since 1997 I have also been a member of Sciences and Technologies for Aeronautical and Satellite Applications Study Track Council within the Doctoral School in Space Sciences, Technologies and Measurements of the University of Padua. This doctoral school is run by the Center for Space Studies and Activities (CISAS). I have taught two EC short courses both in Astrodynamics and Software Engineering. The following is a synopsis of the courses I have been teaching at the university of Padua:

- *Celestial Mechanics* (1997—present)
- *Computational Astrodynamics* (2015—present)
- *Orbital Mechanics* (1996—2003)
- *Theory of Orbits* (2005—present)
- *Software Engineering* (2000-2011)

- *Physics 2 Lab* (1995—2000)
- *Physics I for engineering students (2015)*

Supervisione di tesi di dottorato

- A. Zin, *Precise orbit determination of low-Earth orbiting satellites using the Global Navigation Satellite System (GNSS),* 2001.
- B. Padovan, Determinazione orbitale precisa per le missioni CHAMP, GRACE e GOCE, 2006.
- P. De Pascale, Preliminary design methods for optimal space trajectories to planets and asteroids, 2007.
- M. Bardella, Determination of the orbits of the natural satellites of Saturn from optial observations, 2008.
- F. Biscani, Design and implementation of a modern algebraic manipulator for Celestial Mechanics, 2008.
- S. Poltronieri, Determination of the orbit of Titan from Cassini altimeter data, 2009.
- P. Zoccarato, Precise Orbit Determination (POD) of LEO Satellites for Radio Occultation with GNSS, 2010.
- F. Panzetta, Determination of an ocean tide model from LEO satellite orbital perturbation analysis, 2013.
- F. Gini, GOCE precise non-gravitational force modelling for POD applications, 2014

Supervisione di tesi di tesi di laurea (vecchio ordinamento) e di tesi di Laurea Magistrale

- E. Fantino, *Progetto di ottimizzazione di traiettorie interplanetarie* (Design and optimization of interplanetary trajectories), 1996
- M. Gargano, *Ricostruzione della forma e del moto rotazionale di un ellissoide a partire da immagini ottiche* (Shape and rotational motion reconstruction of an ellipsoid from optical images), 1997
- A. Zin, *Determinzione orbitale precisa di un satellite in orbita bassa mediante accelerometria e misure GPS e GLONASS* (Precise orbit determination of a low-Earth satellite through accelerometry and GPS and GLONASS measurements), 1998
- S. Musotto, *Caratterizzazione dinamica di corpi minori del Sistema Solare: teoria e metodi di calcolo del potenziale gravitazionale* (Dynamical characterization of minor bodies in the Solar System: theory and methods to compute their gravitational potential), 1999
- B. Padovan, *Posizionamento puntuale di piattaforme statiche e orbitanti mediante il Global Positioning System* (Point positioning of static and orbiting platforms through the Global Positioning System), 2001
- M. Bardella, *Determinazione dei parametri di monopolo e quadrupolo di Titano nella missione Cassini* (Titan's monopole and quadrupole parameters determination in the Cassini mission), 2001
- A. Tonello, *Studio di missione per imaging ad alta risoluzione di Phobos* (Study of a high resolution imaging mission to Phobos), 2003
- A. Nardo, *Determinazione d'orbita per una sonda interplanetaria mediante misure Doppler* (Orbit determination of an interplanetary spacecraft using Doppler measurements), 2004

- F. Biscani, *Sviluppo analitico del Potenziale Generatore di Marea nel sistema Sole-Terra-Luna* (Analytical development of the tide-generating potential in the Sun-Earth-Moon system), 2004
- S. Poltronieri, *Progettazione di orbite di trasferimento planetocentriche ed interplanetarie* (Design of planetocentric and interplanetary transfer orbits), 2004
- P. Borin *Sulla rappresentazione del potenziale gravitazionale in armoniche sferiche e sferoidali* (On the representation of the gravitational potential in spherical and spheroidal harmonics), 2004
- E. M. Alessi, *Ricerca di orbite di trasferimento a bassa energia nel problema dei tre corpi ellittico ristretto* (2004)
- S. Padovan, *Alla ricerca dell'oceano interno di Europa: indizi dalla deformazione mareale della superficie e dalle perturbazioni orbitali di un satellite altimetrico in orbita bassa* (Searching for the internal ocean of Europa: clues from the tidal deformation of the surface and from the orbital perturbations of a low-altitude altimetric satellite), 2007
- S. Milani, *Ricostruzione della forma tridimensionale e dello stato rotazionale di un asteroide da immagini ottiche* (Reconstruction of the three-dimensional shape and the rotational state of an asteroid from optical images), 2008
- F. Panzetta, *Studio di missione per il volo di satelliti in formazione con applicazioni alla missione astronomica SIMBOL-X* (Mission study for satellites flying in formation with application to the astronomical mission SIMBOL-X), 2008
- M. Gazzola, *Posizionamento puntale di un satellite in orbita bassa tramite GPS* (Point positioning of a low-Earth orbit satellite through the Global Positioning System), 2010
- A. De Biasi, *Effetti mareali della galassia su orbite di proto-comete della nube di Oort* (Galactic tidal effects on the orbits of Oort cloud proto-comets), 2010
- N. Baresi, *Controllo ottimo di satelliti in formazione* (Optimal control of formation flying satellites), 2011
- L. Rossi, *Dynamics of globular clusters in the galactic bulge*, 2013
- N. Giacobbo, *Orbit determination of celestial binary objects*, 2016
- F. Darugna, SolaR Radiation Pressure Modeling for the QZS-1 Satellite, 2017

Supervisione di tesi di tesi Laurea Triennale

- A. Contri, *Pianificazione di Orbite di Esplorazione nel Sistema Solare*, 2018.
- A. Ruggeri, *Vulcanism and Cryovulcanism in the Solar System: from Mercury to Charon*, 2018.
- S. Cammisa, *Esiste un nono pianeta nel Sistema Solare?,* 2017.

Attività di servizio

- AIAA Technical Chair, AAS/AIAA Space Flight Mechanics Meeting, Williamsburg, VA (2015)
- Membro del *Technical Chairs Committee* dell'*American Institute of Aeronautics and Astronautics* (AIAA) (dal 2013) (uno dei tre membri stranieri eletti in questo comitato che organizza e gestisce lle conferenze annuali "*Space Flight Mechanics Meeting*" e "*Astrodyncamics Specialist Conference*" e ne edita gli atti)
- Membro dell'ESA JUICE PRR Science Review Panel (2013)

- Co-I, JUICE/GALA Science Team (since 2013)
- AIAA Astrodynamics Technical Committee (since 2010)
- Member, *Jovian Satellites Working Group*, Laplace Study Team (2007)
- Governing Board member (elected), Department of Physics and Astronomy, University of Padua (since 2007)
- Governing Board member (elected), Center for Space Studies (CISAS), University of Padua (since 2005)
- Scientific and Technical Committee, Center for University Libraries, University of Padua (2008—2013)
- President, Quality Committee, AstroMundus Programme (since 2011)
- Advisory Board, University Computing Center, University of Padua (2007-2012)
- High Performance Computation Committee, University of Padua (since 2007)
- ASI Board of Acceptance, LAGRANGE GPS receiver (2002)
- Member of LOC, *AAS/Division of Planetary Sciences Meeting*, Abano Terme, Italy, 1999
- Member of Admission Board, Doctoral School in Space Sciences, Technologies and Measurements
- President, Selection Committee of various fellowships and study contracts
- President, Departmental HPC System Procurement Board (2006)
- Member of the ASI Technical Board of Acceptance for the GPS/GLONASS LAGRANGE onboard the SAC-C mission (Acceptance tests performed at *Vandenberg Air Force Base*, Lompoc, California, 4-9 Aprile 2002).
- Program Manager, WAC/OSIRIS project (CISAS) (1996-98)
- Member, IAG Special Study Group 2.132 on "*Time Varying Gravitational Effects on Satellite Orbits*"

Pubblicazioni

1. S. Casotto (2018): The Keplerian Differential State Transition Matrix, *Celestial Mechanics and Dynamical Astronomy*, accepted for publication.
2. F. Darugna, P. Steigenberger, O. Montenbruck, S. Casotto (2018): Ray-Tracing Solar Radiation ressure Modeling for QZS-1, *Advances in Space Research,* accepted for publication.
3. S. Casotto (2016): The Equations of Relative Motion in the Orbital Reference Frame. *Celestial Mechanics and Dynamical Astronomy*, **124**, 215-234.
4. De Biasi A., Secco L., Masi M., Casotto S. (2015): Galactic planar tides on the comets of Oort Cloud and analogs in different reference systems. I. *Astronomy & Astrophysics,* **574**.
5. S. Casotto, R. Furfaro, A. Trask and S. Zimmer (a cura di) (2015). *Spaceflight Mechanics 2015.* Advances in the Astronautical Sciences, **155**, Washington, DC: American Astronautical Society, ISBN: 978-0-87703-623-4.
6. S. Casotto, R. Casotto (2017): Expansion of the Gravitational Potential of a Polyhedral Body in Inertial Integrals, *Advances in the Astronautical Sciences*, **xxx**, 2493-2512 (Paper AAS 17-409).
7. S. Casotto (2016): The Equations of Relative Motion in the Orbital Reference Frame, *Celestial Mechanics and Dynamical Astronomy*, **124**, 215-234.

8. S. Casotto, R. Casotto (2016): Cartesian Development of the Gravitational Potential Within the Hotine Sphere, *Advances in the Astronautical Sciences*, **158**, 3013-3032 (Paper AAS 16-308).

9. R. Furfaro, F. Topputo, J.R. Mueting, K. Kartik, S. Casotto, J. Simo (2016): *Analysis and Performance Evaluation of the ZEM/ZEV Guidance and its Sliding Robustification for Autonomous Rendezvous in Relative Motion*, 67th Int. Astronautical Congress, Guadalajara, Mexico (Paper IAC-16,C1,3,5,x34703).

10. S. Casotto (2015): Gaussian Initial Orbit Determination in Universal Variables, *Advances in the Astronautical Sciences*, **155**, 1053-1068 (Paper AAS 15-368).

11. S. Casotto (2014): A Non-Singular Keplerian Differential State Transition Matrix, *Advances in the Astronautical Sciences*, **152**, 167-183 (Paper AAS 14-213).

12. S. Casotto (2014): A new Approach to Gaussian Initial Orbit Determination, *Advances in the Astronautical Sciences*, **152**, 1313-1326 (Paper AAS 14-290).

13. F. Gini, M. Bardella, S. Casotto (2014): Precise non-gravitational forces modeling for GOCE, *Advances in the Astronautical Sciences*, **152**, 3141-3157 (Paper AAS 14-430).

14. S. Casotto, F. Gini, F. Panzetta, M. Bardella (2013): Fully Dynamic Approach for GOCE Precise Orbit Determination, *Bollettino di Geofisica Teorica e Applicata*, **54**, 367-384.

15. S. Casotto (2013): The Equations of Relative Motion in the Orbital Reference Frame, *Advances in the Astronautical Sciences*, **148**, 1769-1787 (Paper AAS 13-465).

16. S. Casotto, N. Baresi (2013): Optimal Maintenance of Relative Circular Inertial Motion for Nulling Interferometry Applications, *Advances in the Astronautical Sciences*, **148**, 2979-2995 (Paper AAS 13-392).

17. F. Gini, F. Panzetta, M. Bardella, S. Casotto (2013): GOCE Fully-Dynamic Precise Orbit Recovery, *Advances in the Astronautical Sciences*, **148**, 147-163 (Paper AAS 13-285).

18. S. Casotto, M. Bardella (2012): The equations of motion of a secularly precessing elliptical orbit, *Monthly Notices of the Royal Astron. Soc.*, **428**, 2605-2616.

19. S. Casotto, M. Bardella, A. Zin (2012): Orbit restitution capability of a multiple-antenna GNSS receiver on a highly elliptic orbit reaching above GNSS altitude, *Advances in the Astronautical Sciences*, **143**, 1497-1515 (Paper AAS 12-203).

20. F. Vespe, G. Perona, V. De Cosmo, M. Petitta, M. Materassi, N. Tartaglione, A. Zin, R. Notarpietro, C. Benedetto, S. Casotto, A. Speranza, A. Sutera (2009): ROSA - The Italian Radio Occultation Mission Onboard the Indian OCEANSAT-2 Satellite, in A. Steiner, B. Pirscher, U. Foelsche, *New Horizons in Occultation Research: Studies in Atmosphere and Climate*, 263-274, Springer.

21. S. Casotto, E. Lorenzini, F. Panzetta (2009): Formation keeping and maneuvering for astronomical, dual spacecraft formation flying missions, *Advances in the Astronautical Sciences*, **134**, p. 1285-1304 (Paper AAS 09-187).

22. S. Casotto, S. Padovan (2008): Detecting Body Tides and Librations of Europa With an Altimetric Exploration Mission, *Proceedings of the AIAA/AAS Astrodynamics Specialists Conference (CD-Rom)*, Paper 2008-7200, AIAA, Reston, Virginia.

23. S. Casotto, S. Padovan, M. Bardella (2008): Orbital Configuration Sensitivity of an Altimetric Orbiter for a Europa Solid Tide Detection Mission, *Proceedings of the 39th Lunar and Planetary Institute Conference*, Paper 2174, LPI, Houston, Texas.

24. E. Fantino, S. Casotto (2009): Methods of harmonic synthesis for global geopotential models and their first-, second- and third-order gradients, *Journal of Geodesy*, **73**, 595-619.

25. S. Casotto, E. Fantino (2009): Gravitational gradients by tensor analysis with application to spherical coordinates, *Journal of Geodesy*, **73**, 621-634.

26. S. Casotto, E. Fantino (2007): Evaluation of methods for spherical harmonic synthesis of the gravitational potential and its gradients, *J. Adv. Space Research*, **40**, 69-75.

27. M. Vasile, P. De Pascale, S. Casotto (2007) : On the optimality of a shape-based approach based on pseudo-equinoctial elements, *Acta Astronautica*, **61**, 286-297.

28. De Pascale P., Vasile M., Casotto S., (2006): Optimal Options for Rendezvous and Impact Missions to NEOs, *Journal of the British Interplanetary Society*, **59,** No.11.

29. E. Fantino, S. Casotto (2006): Comparison among spherical hamronic synthesis methods for functionals of the gravity field, *Newton's Bulletin*, **3**, 33-49.

30. A. G. Accettura, C. Bruno, S. Casotto, F. Marzari (2004): Mission to Mars using integrated propulsion concepts: considerations, opportunities, and strategies, in *Acta Astronautica*, **54**, 471-486

31. P. De Pascale, M. Vasile, S. Casotto (2004): Preliminary Analysis of Low-Thrust Gravity Assist Trajectories by An Inverse Method and a Global Optimization Technique, in *Proceedings of the 18th International Symposium on Space Flight Dynamics (ESA SP-458)*, 493-.

32. P. De Pascale, M. Vasile, S. Casotto (2004): A Tool for the Preliminary Trajectory Design of Interplanetary Missions Exploiting Gravity-Assist and Low-Thrust Propulsion, in *Proceedings of the 55th International Astronautical Congress* (IAC Paper 04-A2.06).

33. S. Casotto, A. Tonello, M. Bardella (2004): Phobos Imaging and Mapping Preliminary Mission Design, in *Advances in the Astronautical Sciences*, **119**, 2029 (Paper AAS-04-233).

34. S. Rocca, G. Bianchini, E. Benini, S. Casotto, M. Manente, G. Navarro, D. Pavarin (2004): Optimal Low-Thrust Trajectory Analysis for Constant and Variable Specific Impulse Thrusters Generated by Direct Methods and Multi-Objective Genetic Algorithms, *Advances in the Astronautical Sciences*, **119**, 2587 (Paper AAS-04-265).

35. S. Casotto (2003): A Model for Satellite Position and Velocity with Respect to Ground Topography, in *Advances in the Astronautical Sciences*, **114**, 1805-1818 (Paper AAS-03-226).

36. F. Pelletier, S. Casotto, A. Zin, B. Padovan (2003): Preliminary Assessment of Interferometric SAR Baseline Determination Using GPS, in *Advances in the Astronautical Sciences*, **114**, 561-572 (Paper AAS-03-137).

37. S. Casotto (2002): On the Expansion of the External Gravitational Potential in Spheroidal Harmonics, in A. Celletti, S. Ferraz-Mello & J. Henrard (Eds.), *Modern Celestial Mechanics: from Theory to Applications,* 369-374. Kluwer.

38. S. Casotto, A. Zin, B. Padovan (2002): SAC-C Orbit Reconstruction Using the Experimental GPS/GLONASS Receiver LAGRANGE, in *Proceedings of the 15th International Technical Meeting of the Satellite Division of the Institute of Navigation*, *ION GPS 2002*, 85-93.

39. S. Casotto, A. Zin, F. Pelletier, B. Padovan, E. Banfi, S. Monti (2002): A Preliminary Analysis of the SAC-C Orbit Reconstruction using the Experimental GPS/GLONASS Receiver LAGRANGE, in *Advances in the Astronautical Sciences*, **112**, 457-474 (Paper AAS-02-226).

40. S. Casotto, M. Bardella (2002): Analytical Formulation of Fast Flyby Trajectories Around a Triaxial Body, in *Advances in the Astronautical Sciences*, **112**, 159-175 (Paper AAS-02-111).

41. A. G. Accettura, C. Bruno, S. Casotto, F. Marzari (2001): Mission to Mars Using Integrated Propulsion Concepts: Considerations, Opportunities, and Strategies, in *Proceedings of the 52nd International Astronautical Congress.*

42. S. Casotto (2001): Numerical Experiments on the Convergence of Spherical and Spheroidal Harmonic Representations of the External Potential Inside the Brillouin Sphere, in *Advances in the Astronautical Sciences*, **108**, 1151-1165 (Paper AAS-01-226).

43. S. Casotto, A. Zin (2001): Satellite Selection Strategy for LEO Orbit Determination from the GPS and GLONASS Constellations Using Double Differences, in *Advances in the Astronautical Sciences*, **108**, 1151-1165 (Paper AAS-01-186).

44. S. Casotto (2000): Translation and Rotation of the Spherical Harmonic Coefficients in the Expansion of the External Potential, in *AIAA/AAS Astrodynamics Specialist Conferenc*e, Denver, CO, Aug. 14-17, 2000, Collection of Technical Papers (A00-39758 10-13), 97-104 (Paper AIAA-2000-4024).

45. S. Casotto, S. Musotto (2000): Methods for Computing the Potential of an Irregular, Homogeneous, Solid Body and its Gradient, in *AIAA/AAS Astrodynamics Specialist Conferenc*e, Denver, CO, Aug. 14-17, 2000, Collection of Technical Papers (A00-39758 10-13), 82-96 (Paper AIAA-2000-4023).

46. S. Casotto, A. Zin (2000): An Assessment of the Benefits of Including GLONASS Data in GPS-Based Precise Orbit Determination - I: S/A Analysis*,* in *Advances in the Astronautical Sciences,* **105**, 237-256 (Paper AAS 00-115).

47. S. Casotto (2000): Representation of the external potential of a solid body within its Brillouin sphere, *Bullettin of the American Astronomical Society,* **32**, 1645.

48. S. Casotto, A. Zin (1999): Accelerometry-Aided Precise Orbit Determination of Low-Earth Satellites, *Advances in the Astronautical Sciences,* **102**, 1237-1257 (Paper AAS 99-187).

49. S. Casotto, N. Rappaport and B. Bertotti (1999): Determination of Titan's Moment of Inertia in the Cassini Mission, *Bullettin of the American Astronomical Society,* **31**, 1587.

50. T. Martin-Mur, J. M. Dow, N. Bondarenco, S. Casotto, J. Feltens, C. G. Martinez (1995): Use of GPS for Precise and Operational Orbit Determination at ESOC, *Proceedings of the 8th International Technical Meeting of the Satellite Division of the Institute of Navigation, ION GPS 95,* 619-626.

51. J.M. Dow, T.J. Martin-Mur, S. Casotto, N. Bondarenco (1995): Ground Processing of GPS Navigation Data From Low Orbiting Satellites, *Proceedings of the XXI General Assembly of the IUGG.*

52. M. K. Cheng, B. D. Tapley, S. Casotto (1995): A New Method for Computing the Perturbation Spectrum of the Gravitational Perturbations on Satellite Orbits, in *Celestial Mechanics and Dynamical Astronomy*, **62**, 117-143.

53. S. Casotto, J. M. Dow, T. Martin-Mur (1995): TOPEX/Poseidon Precise Orbit Determination using GPS Double Difference Phase Observables, in *Advances in Space Research,* **16**, No. 12, 63-66.

54. S. Casotto (1995): The Gravitational Perturbation Spectrum in Linear Satellite Theory, in *Celestial Mechanics and Dynamical Astronomy*, **62**, 117-143.

55. J. M. Dow, R. Zandbergen, S. Martin, M. Romay-Merino, R. Piriz, S. Casotto (1994): ERS-1 Orbits: The Routine Operation and High Precision Products, in *Advances in Space Research*, **14**, No. 5, 105-114.

56. S. Casotto (1994): An Efficient Method to Compute the Perturbation Spectrum in Linear Satellite Theory, in *Advances in Space Research*, **14**, No. 5, 123-126.

57. J. M. Dow, J.Feltens, T. Martin-Mur, S. Frey, C. Garcia-Martnez, S. Casotto (1993): Satellite Determination of Earth Orientation with Emphasis on GPS, in *Advances in Space Research*, **13**, No. 11, 203-212.

58. S. Casotto (1993): Orbit Injection Errors for the Proposed Lageos III Mission, in *Celestial Mechanics and Dynamical Astronomy*, **56**, 397-408.

59. S. Casotto (1993): The Mapping of Kaula's Solution into the Orbital Reference Frame, in *Celestial Mechanics and Dynamical Astronomy*, **55**, 223-241.

60. S. Casotto (1993): Ocean Tide Modeling for Precise Orbit Determination, *Annales Geophysicæ,* **11**, Suppl. I, C109.

61. S. Casotto (1993): Position and Velocity Perturbations in the Orbital Frame in Terms of Classical Elements Perturbations, in *Celestial Mechanics and Dynamical Astronomy*, **55**, 209-221.

62. S. Casotto (1991): Spectral Decomposition of Geopotential, Earth and Ocean Tidal Perturbations in Linear Satellite Theory, in *Celestial Mechanics and Dynamical Astronomy*, **50**, 125-141.

63. S. Casotto, I. Ciufolini, F. Vespe, G. Bianco (1990): Earth Satellites and Gravitomagnetic Field, *Il Nuovo Cimento*, **105**, 589-599.

64. S. Casotto (1989): An Ocean Tide Model for Use in TOPEX Orbit Determination, in *EOS, Transactions, American Geophysical Union*, **70**, 15.

65. R. Talamo, S. Casotto (1988): Progetto di un programma di calcolo geodetico spaziale – Architettura del programma di calcolo, *Bollettino di Geodesia e Scienze Affini*, Anno XLVII, No. 1, 61-67.

66. S. Casotto, R. Talamo (1988): Progetto di un programma di calcolo geodetico spaziale: l'elaborazione statistica delle misure, *Bollettino di Geodesia e Scienze Affini*, Anno XLVII, No. 2, 168-190.

67. F. Palutan, A. Cenci, S. Casotto, A. Caporali (1986): Operations and Performance of the Matera Laser Station and Estimation of the Position of the European Stations, *Il Nuovo Cimento*, **9C**, 675-689.

68. A. Caporali, F. Palutan, A. Cenci, S. Casotto (1984): Polar Motion and European Baselines Determined by Analysis of Satellite Laser Ranging Data, *Lettere al Nuovo Cimento*, **44**, 513-518.

Giugno 2018