CV Christoph Lhotka

Personal information :

Birth :	1978 in Vienna, Austria
Citizenship :	Austrian
Academic degrees :	Magister rerum naturalium (Universität Wien **14/12/2004**) Doktor rerum naturalium (Universität Wien **18/02/2009**)

Habilitation :

Duration :	**17/10/2014 → 17/10/2023**
Type :	**Associate Professor in Mathematical Physics**
Authority :	Abilitazione Scientifica Nazionale 2013 https://asn.cineca.it/ministero.php/public/esitoAbilitati/settore/01%252FA4/fascia/2

Contact details :

Office :	Dipartimento di Matematica, Univ. Roma Tor Vergata, Via della Ricerca Scientifica 1, 00133 Roma (Italy)
Phone :	+39.06.7259.4665
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Scientific job experience :

10 / 2020 – now	**Associate Researcher in Mathematical Physics**, *Università degli Studi di Roma Tor Vergata*, *Dipartimento di Matematica*, Rome, Italy [Bracci].
04 / 2020 – 09 / 2020 (6 months)	**PostDoc Scientist**, *Institut für Astrophysik*, Universität Wien, Vienna, Austria [Güdel].
11 / 2014 – 03 / 2020 (64 months)	**PostDoc Scientist**, *Österreichische Akademie der Wissenschaften*, *Institut für Weltraumforschung*, Graz, Austria [Baumjohann].
01 / 2014 – 06 / 2014 (6 months)	**PostDoc Scientist**, *Universität Wien*, *Institut für Astronomie*, Wien, Vienna, “Dissipative normal forms”, FWF J-3206 [Lhotka].
01 / 2013 – 12 / 2013 (12 months)	**PostDoc Scientist**, *Università degli Studi di Roma Tor Vergata*, *Dipartimento di Matematica*, Rome, Italy, FWF, J-3206 [Lhotka].
07 / 2011 – 12 / 2012 (18 months)	**PostDoc Scientist**, *Université de Namur*, *Département de Mathématique*, Namur, Belgium, BELSPO (Belgian Space Agency) [Lemaître].
06 / 2009 – 05 / 2011 (24 months)	**PostDoc Scientist**, *Università degli Studi di Roma Tor Vergata*, *Dipartimento di Matematica*, Rome, Italy, ASI (Italian Space Agency), “Studi di Esplorazione del Sistema Solare” [Celletti].
03 / 2009 – 05 / 2009 (3 months)	**PostDoc Scientist**, *Universität Wien*, *Institut für Astronomie*, Vienna, Austria, FWF P-18930 [Dvorak].
07 / 2006 – 02 / 2009 (32 months)	**PhD Research Fellow**, *Universität Wien*, *Institut für Astronomie*, Vienna, Austria, “Effective stability in non-linear dynamical systems”, FWF P-18930 [Dvorak].
05 / 2005 – 06 / 2006 (14 months)	**Employee**, *Austria Wirtschaftsservice GmbH*, Vienna, Austria, ideenreich, uni:invent [Buchtela, Winter].

Working stays abroad :

09 - 12 / 2008 [3 months]	**Invited Lecturer**, *Shanghai Normal University 200234*, *Department of Mathematics*, Shanghai, China [Maoan Han].

11, 12 / 2006; 02, 07, 11, 12 / 2007; 01 / 2009 [3 months total]

Invited Researcher, *Academy of Athens*, *Research Center for Astronomy and Applied Mathematics*, Athens, Greece [Efthymiopoulos].

Language skills :

- **German** (mother tongue) - **English** (excellent) - **French** (basic) - **Italian** (basic)

Short summary of scientific achievements :

- **Author** : 1 Wiley textbook (320 pages), 40+ publications (50% first author, visit https://l-sgn.org/ or click here for **selected papers**).

- **Invited Speaker :** 40+ talks at conferences (8 invited).

Acquired grants :

Project Lead, FWF P-30542 "Stability of charge and orbit of cosmic dust particles" (310,000 €, 2017/06/26)

Project Lead, FWF J-3206 "Dissipative normal forms in the Lagrange problem" (73,585 €, 2011/06/27)

Teaching experience :

University of Vienna, Austria 2008 – 2020 (50+ ECTS) : **Lecturer**

Technical University of Graz, Austria 2016 – 2018 (10 ECTS) : **Lecturer**

University of Rome Tor Vergata, Italy 2011 – 2014 (20 hours) : **Invited Lecturer**

University of Namur, Belgium 2012 (6 ECTS) : **Maître de conférences**

Shanghai Normal University, China 2008 (16 hours) : **Invited Lecturer**

Activities in international meetings and organizations :

SOC Chair, *"9th Alexander von Humboldt Colloquium for Celestial Mechanics"* (Austria 2017)

SOC Member, *"Dynamics and Physics of Asteroids"* (Turkey, 2019)

Session Chair, *"Dust and Solar Wind"*, DPS 48 / EPSC 11 Pasadena, California, USA (2016)

Lecturer, *"Natural Space Risks"*, Paris Observatory (France) in 2017, 2019

Member of LOC, "*IAU-Symposium: Complex Planetary Systems*" (Belgium 2014) -- *International Meeting on Celestial Mechanics* (Italy 2013, 2009) -- *Humboldt Colloquium for Celestial Mechanics* (2011, 2008)

IAU individual member (Divison A, E, F, Inter-Division A-F) since June 2020

Reviewer activity and editorial work :

Guest Editor "Close Approaches and Collisions in Planetary Systems", ISSN: 0923-2958

Invited Reviewer in over **10** peer-reviewed journals (over **50+** manuscripts).

Outstanding Reviewer Award *Celestial Mechanics & Dynamical Astronomy"*, Springer ISSN:0923-2958.

Reviewer award Icarus, Elsevier, ISSN: 0019-1035

Reviewer of grant proposals from Belgium, Germany, and Italy.

Expert in project evaluation for European Commision

www : https://l-sgn.org/, https://www.linkedin.com/in/chrlho/, http://orcid.org/0000-0002-7552-2941, https://www.researchgate.net/profile/Christoph_Lhotka, https://www.iwf.oeaw.ac.at/user-site/christoph-lhotka/

Publication list

(top 5 marked with *)

A. Books :

* [**1**] Dvorak R., **Lhotka C.**, 2013: *"Celestial Dynamics"*, Wiley ISBN-13: 978-3527409778 (320 pages).

B. Peer-reviewed papers :

[**37**] **Lhotka** C., Rubab N., Roberts O.W., Holmes J.C., Torkar K., Nakamura R., 2020: *"Charging time scales and magnitudes of dust and spacecraft potentials in space plasma scenarios "*, Physics of Plasmas 27, 103704 (13 pages).

[**36**] Roberts O.W., Nakamura R., Torkar K., Narita Y., Holmes J.C., Vörös Z., **Lhotka C.**, Escoubet C.P., Graham D.B., Gershman D.J., Khotyaintsev Y., Lindqvist P.-A., 2020: *"Sub-ion Scale Compressive Turbulence in the Solar Wind: MMS Spacecraft Potential Observations"*, The Astrophysical Journal Supplement Series 250, 35 (20 pages).

[**35**] Milillo A., Fujimoto M., Murakami G., … **Lhotka** C. et al., 2020: *"Investigating Mercury's Environment with the Two-Spacecraft BepiColombo Mission"*, Space Science Reviews 216, 93 (78 pages).

[**34**] Krauss S., Behzadpour S., Temmer M., **Lhotka** C., 2020: *"Exploring Thermospheric Variations Triggered by Severe Geomagnetic Storm on 26 August 2018 Using GRACE Follow-On Data"*, Geophysical Research: Space Physics 125, e27731 (14 pages).

[**33**] Celletti A., Gales C., **Lhotka** C., 2020: *"(INVITED) Resonances in the Earth's space environment"*, Communications in Nonlinear Science and Numerical Simulation 84, 105185.

[**32**] Xu, Y.B., Zhou, L.Y., **Lhotka** C., Ip, W.H., 2020: *"Asteroid migration due to the Yarkovsky effect and the distribution of the Eos family"*, Monthly Notices of the Royal Astronomical Society 493, 1447-1460.

[**31**] **Lhotka** C., Gales C., 2019: *"Charged dust close to outer mean-motion resonances in the heliosphere"*, Celestial Mechanics & Dynamical Astronomy 131, 49-72.

[**30**] **Lhotka** C., Bourdin P., Pilat-Lohinger E., 2019: *"Orbital stability of ensembles of particles in regions of magnetic reconnection in Earth's magneto-tail"*, Physics of Plasmas 26, 072903 (11 pages).

[**29**] **Lhotka** C., Narita Y., 2019: *"Kinematic models of the interplanetary magnetic field"*, Annals of Geophysics 37, 299-314.

[**28**] Souchay J., **Lhotka** C., Heron G., Hervé Y., Puente V., Folgueira Lopez M., 2018: *"Changes of spin axis and rate of the asteroid (99942) Apophis during the 2029 close encounter with Earth: a constrained model"*, Astronomy & Astrophysics 617, A74 (11pages).

* [**27**] **Lhotka** C., 2017: *"Steady state obliquity of a rigid body in the spin-orbit resonant problem: application to Mercury"*, Celestial Mechanics & Dynamical Astronomy 129, 397-414.

[**26**] **Lhotka** C., Bourdin P., Narita Y., 2016: *"Charged dust grain dynamics subject to solar wind, Poynting-Robertson drag, and the interplanetary magnetic field"*, The Astrophysical Journal 828:10 (10 pages).

* [**25**] **Lhotka** C., Celletti A., Gales C., 2016: *"Poynting-Robertson drag and solar wind in the space debris problem"*, Monthly Notices of the Royal Astronomical Society 460, 802–815.

[**24**] **Lhotka C.**, Reimond S., Souchay J., Baur O., 2016: "*Gravity field and solar component of the precession rate and nutation coefficients of Comet 67P/Churyumov–Gerasimenko*", Monthly Notices of the Royal Astronomical Society 455, 3588-3596.

[**23**] Sansottera M., **Lhotka C.**, Lemaître A., 2015: "*Effective resonant stability of Mercury*", Monthly Notices of the Royal Astronomical Society 452, 4145-4152.

[**22**] **Lhotka C.**, 2015: "*Sitnikov's planet*", Rivista dell'Unione Matematica Italiana Ser I: 8,1-31.

* [**21**] **Lhotka C.**, Celletti A., 2015: "*The effect of Poynting-Robertson drag on the triangular Lagrangian points*", Icarus 250, 249-261.

[**20**] Sansottera M., **Lhotka C.**, Lemaître A., 2014: *"Effective stability around the Cassini state in the spin-orbit problem"*, Celestial Mechanics & Dynamical Astronomy 119, 75-89.

[**19**] Celletti A., **Lhotka C.**, 2014: *"Transient times, resonances and drifts of attractors in dissipative rotational dynamics"*, Communications in Nonlinear Science and Numerical Simulation 19, 3399-3411.

[**18**] Souchay J., Souami D., **Lhotka C.**, Puente V., Folgueira M., 2013: *"Rotational changes of the asteroid 99942 Apophis during the 2029 close encounter with the Earth"*, Astronomy & Astrophysics 563, A24.

[**17**] Petit A., Souchay J., **Lhotka C.**, 2013: *"High precision model of precession and nutation of the asteroids (1) Ceres, (4) Vesta, (433) Eros, (2867) Steins, and (25143) Itokawa"*, Astronomy & Astrophysics 565, A79.

[**16**] **Lhotka C.**, Souchay J., Shahsavari A., 2013: *"Obliquity, precession rates, and nutation coefficients for a set of 100 asteroids"*, Astronomy & Astrophysics 556, A8, (9 pages).

[**15**] Noyelles B., **Lhotka C.**, 2013: *"The influence of time, shape and tides on the obliquity of Mercury"*, Advances in Space Research 52, 2085-2101.

[**14**] **Lhotka C.**, 2013: *"A symplectic mapping for the synchronous spin-orbit problem"*, Celestial Mechanics & Dynamical Astronomy 115 405-426.

[**13**] **Lhotka C.**, Celletti A., 2013: *"Stability of nearly-integrable systems with dissipation"*, International Journal of Bifurcation & Chaos 23, 1350036 (25 pages).

[**12**] Dvorak R., **Lhotka C.**, Zhou L., 2012: *"The orbit of 2010 TK7: possible regions of stability for other Earth Trojan asteroids"*, Astronomy & Astrophysics 541, A127 (10 pages).

[**11**] Celletti A., **Lhotka C.**, 2012: *"Normal form construction for nearly-integrable systems with dissipation"*, Regular and Chaotic Dynamics 17, 273-292.

[**10**] Celletti A., **Lhotka C.**, 2011: *"A dynamical system approach to Astrodynamics"*, Acta Futura 4, 53-68.

[**9**] Di Ruzza S., **Lhotka C.**, 2011: *"High order normal form construction near the elliptic orbit of the Sitnikov problem"*, Celestial Mechanics & Dynamical Astronomy 111, 449-464.

[**8**] Celletti A., Di Ruzza S., **Lhotka C.**, Stefanelli L., 2010: *"Nearly-integrable dissipative systems and celestial mechanics"*, European Physical Journal, Special Topics 186, 33-66.

[**7**] Bazso A., Dvorak R., Pilat-Lohinger E., Eybl V., **Lhotka Ch.**, 2010: *"A survey of near-mean-motion resonances between Venus and Earth"*, Celestial Mechanics & Dynamical Astronomy 107, 63-76.

[**6**] Hongyan M., Maoan H., **Lhotka C.**, 2009: *"Limit cycles of some Z3-equivariant near-Hamiltonian systems of degree 3 and 4"*, Annals of Differential Equations 2, 170-178.

[**5**] **Lhotka C.**, 2009: *"Dynamic expansion points: an extension to Hadjidemetriou's mapping method"*, Celestial Mechanics & Dynamical Astronomy 104, 175-189.

[**4**] Dvorak R., **Lhotka C.**, Schwarz R., 2008: *"The dynamics of inclined Neptune Trojans"*, Celestial Mechanics & Dynamical Astronomy 102, 97-110.

* [**3**] **Lhotka C.**, Efthymiopoulos C., Dvorak R., 2008: *"Nekhoroshev stability at L4 and L5 in the elliptic restricted three-body problem - application to Trojan asteroids"*, Monthly Notices of the Royal Astronomical Society 284, 1165-1177.

[**2**] **Lhotka C.**, Funk B., 2008: *"BRITE orbits – visibility and feature plots"*, Communications in Astroseismology 152, 51-54.

[**1**] Hagel J., **Lhotka C.**, 2005: *"A high order perturbation analysis of the Sitnikov problem"*, Celestial Mechanics & Dynamical Astronomy 93, 201-228.

C. Abstracts and posters :

[**15**] Krauss S., Temmer M., Behzadpour S., **Lhotka C.**, 2020: *"Analysis of a severe geomagnetic storm on August 26, 2018 and the related effects on the GRACE-FO mission "*, EGU 2020, Vienna, Austria 04-08/05/2020.

[**14**] Roberts O., Nakamura R., Narita Y., Holmes J., Voros Z., **Lhotka C.**, Thwaites J., 2020: *"Sub-ion scale measurements of compressible turbulence in the solar wind MMS Observations"*, EGU 2020, Vienna, Austria 04-08/05/2020.

[**13**] **Lhotka C.**, Bourdin P., Pilat-Lohinger E., 2019: *"Finite-time Lyapunov exponents in zones of magnetic reconnection in Earth's magneto-tail"*, EGU 2019, Vienna, Austria 07-12/04/2019.

[**12**] **Lhotka C.**, Bourdin P., Pilat-Lohinger E., 2018: *"Chaotic motions of plasma and dust particles in magnetic reconnection regimes in Earth's magnetotail"*, COSPAR 2018, Pasadena, USA 14-22/07/2018.

[**11**] **Lhotka C.**, 2018: *"Cassini states in p:q spin-orbit resonances"*, EGU 2018, Vienna, Austria 08-

13/04/2018.

[**10**] **Lhotka C.**, 2017: *"The role of the interplanetary magnetic field on charged dust dynamics"*, EGU 2017, Vienna, Austria 08-13/04/2017.

[**9**] **Lhotka C.**, Sansottera M., Lemaitre A., 2016: "*Effective resonant stability of Mercury"* EGU 2016, Vienna, Austria 17-22/04/2016.

[**8**] **Lhotka C.**, Reimond S., Souchay J., Baur O. 2015: "*Obliquity, precession rate, and nutation coefficients of 67/P Churyumov-Gerasimenko*" , EGU 2015, European Geosciences Union - Vienna, Austria 04/2015.

[**7**] Noyelles B., **Lhotka C.**, D'Hoedt S., 2013: "*Towards an accurate modelization of the obliquity of Mercury*" , American Astronomical Society DDA Meeting - Paraty, Brazil 05/2013.

[**6**] Noyelles B., **Lhotka C.**, 2012: "*Modelling the obliquity of Mercury*", AGU 2012 Francisco, USA 12/2012.

[**5**] **Lhotka C.**, 2007: *"Nekhoroshev Estimates in the Elliptic Restricted Three-Body Problem II"*, conference in honour of C. Froeschlé - Spoleto, Italy 06/2007.

[**4**] **Lhotka C.**, 2007: *"Nekhoroshev Estimates in the Elliptic Restricted Three-Body Problem"*, CRANS summer school and conference in Patras - Patras, Greece 07/2007.

[**3**] **Lhotka C**., 2007: *"Nekhoroshev Estimates in the 1:1 Resonance of Our Solar System I: Symplectic Mappings in the Elliptic Restricted Three Body Problem*" , Wissenschaftliche Jahrestagung der ÖGA - Vienna, Austria 04/2007.

[**2**] Funk B., **Lhotka C.**, Pilat-Lohinger E., Dvorak R., Schwarz R., 2005: *"The Stability of few Body Systems (The Sitnikov Problem, Our Solar System, Extra solar Systems)"* conference Maribor, Slovenia 06/2005.

[1] Lhotka C., 2003: *"A High Order Perturbation Analysis of the Sitnikov Problem by Using Mathematica"* – CRANS summer school and conference in Patras, Greece 07/2003.

D. Further scientific publications :

[**7**] Dvorak R., **Lhotka C**., 2014: *"Sitnikov problem"*, www.scholarpedia.org, online 9 (12) 11096, doi:10.4249/scholarpedia.11096.

[**6**] **Lhotka C**., Zhou L., Dvorak R., 2012: *"On the stability of Earth's Trojan asteroids"*, Journees 2011, Earth rotation, reference systems, and celestial mechanics: synergies of geodesy and astronomy, Eds. Shuh H., Böhm S., Nilson T., Capitaine N., 221-224.

[**5**] **Lhotka C.**, 2011: *"Birkhoff normal form and remainder of the Sitnikov problem"*, 5-th Austrian-Hungarian Workshop, Proceedings, Eötvös University Budapest, Hungary, PADEU 20, 179-190.

[**4**] **Lhotka C.**, 2009: *"Nekhoroshev stability in the elliptic restricted three-body problem"*, Thesis University of Vienna, http://othes.univie.ac.at/3528/ .

[**3**] Dvorak R., Schwarz R., **Lhotka C.**, 2008: *"On the dynamics of Trojan planets in extra-solar planetary systems"*, Proceedings of the International Astronomical Union, IAU Symposium 249, 461-468.

[**2**] **Lhotka C.**, Dvorak R., 2006: *"A new determination of the fundamental frequencies in our Solar system"*, Proceedings of the 4th Austrian Hungarian Workshop on Celestial Mechanics, Publications of the Astronomy Department of the Eötvös University Vol 18, 33-46.

[**1**] **Lhotka C.**, 2004: *"Störungsanalyse des Sitnikov Problems für hohe Ordnungen unter Verwendung automatisierter Herleitungsmethoden in Mathematica"*, master thesis, University of Vienna, http://www.univie.ac.at/adg/BacMac/christophdipl.html.

E. Scientific talks :

[**43**] *"Dynamics of Charged Dust in the Solar System"*, Dynamics and Physics of Asteroids, Akdeniz Üniversitesi, Antalya, Turkey (04-06/09/2019) [***invited talk***].

[**42**] *"Temporary capture of charged dust close to outer mean–motion resonance with a planet"*, Planetary Dynamics conference, Max Planck Institute for Astronomy in Heidelberg, Germany (03-07/6/2019).

[**41**] *"Charged particle dynamics in celestial mechanics "*, Institute Seminar, Department of Mathematics, University of Milan (13/12/2018).

[**40**] *"Motion of dust subject to solar wind and interplanetary magnetic fields"*, 9th Moscow Solar System

Symposium 2018, Moscow, Russia (09/10/2018).

[**39**] *"Cassini states in p:q spin-orbit resonances"*, EGU 2018, Vienna, Austria (12/04/2018).

[**38**] *"Stable Cassini states of a rigid body in the p:qspin-orbit resonant problem. Application to Mercury"*, CELMEC VII, Viterbo, Italy (4/9/2017).

[**37**] "S*table motions of charged dust grains subject to solar wind, Poynting-Robertson drag, and the mean interplanetary magnetic field"*, joint EPSC 11 – DPS 482016, Pasadena, USA (21/10/2016).

[**36**] *"Effective resonant stability of Mercury"*, EGU 2016, Vienna, Austria (20/04/2016).

[**35**] *"Perturbation theory at arbitrary expansion points – Applications in Celestial Mechanics"*, Computational perturbative methods for Hamiltonian systems, Athens, Greece (13/07/2016).

[**34**] *"Rotational study of 67P/Churyumov-Gerasimenko"*, EPSC 2015, European Planetary Science Congress, Nantes, France (30/09/2015).

[**33**] *"The use of dissipative normal forms and averaging methods in celestial dynamics"*, Theoretical and computational methods in dynamical systems and fractal geometry, University of Maribor, Slovenia (08/04/2015).

[**32**] *"Complex motion of dust-size particles in the vicinity of the 1:1 mean motion resonance with a planet"*, IAU-Symposium: Complex Planetary Systems, University of Namur, Belgium (10/07/2014).

[**31**] *"Temporary capture of dust in the 1:1 MMR with a planet"*, PhD-Seminar, Institut für Astrophysik, Universität Wien (28/04/2014).

[**30**] *"Orbit, rotation & shape of celestial bodies"*, Séminaire Interne, Université de Nice, Salle de Conference, Sophia Antipolis (10/03/2014).

[**29**] *"Poynting-Robertson drag in the 1:1 mean motion resonance"*, Astrodynamics Group, University of Vienna, Institute for Astrophysics, Vienna, Austria (07/11/2013).

[**28**] *"On the generalization of Peale's formula"*, 6th International Meeting on Celestial Mechanics (CELMEC VI) – Balletti Park Hotel, San Martino al Cimino, Viterbo, Italy (02/09/2013).

[**27**] *"On the dynamics in the Lagrange problem subject to non-gravitational forces"*, Mathematics for Planet Earth (MMPE 2013), Centre de recherches mathématiques, Montreal, Canada (24/07/2013) [***invited talk***].

[**26**] *"Normal forms in dissipative systems in our Solar system"*, Astrodynamics Group, University of Vienna, Institute of Astrophysics, Vienna, Austria (02/05/2013).

[**25**] *"Higher order and time dependent effects on the obliquity of Mercury"*, Astrodynamics Group, University of Vienna, Institute for Astrophysics, Vienna, Austria (25/10/2012).

[**24**] *"A Hadjidemetriou mapping for the spin-orbit problem"*, Astrodynamics Group, University of Vienna, Institute for Astronomy, Vienna, Austria (01/03/2012).

[**23**] *"Exponential stability in non-conservative dynamical systems"*, Université de Namur, Département de Mathématique, Unité de systèmes dynamiques, Namur, Belgium (21/10/2011) [***invited seminar***].

[**22**] *"On the stability of Earth's Trojans"*, Journées Systèmes de référence spatio-temporels, Bundesamt f. Eich- und Vermessungswesen, Vienna, Austria (20/09/2011).

[**21**] *"Exponential Stability in nearly-Hamiltonian Systems"*, Università degli Studi Roma Tre, Dipartimento di Matematica - Rome, Italy (02/05/2011) [***invited seminar***].

[**20**] *"New applications of normal form theory in celestial mechanics"*, 8th Alexander v. Humboldt Colloquium, Bad Hofgastein, Salzburg, Austria (24/03/2011) [***invited talk***].

[**19**] *"Normal Form Theory with Mathematica"*, 4th Mathematica Italian User Group Meeting – Universita degli Studi di Milano, Italy (07/10/2010).

[**18**] *"Mathematica and Astronomy – new computational tools"*, II. Meeting on Cultural Astronomy, Università degli Studi del Molise, Campobasso, Italy (30/09/2010).

[**17**] *"Normal Form and Remainder of the Sitnikov Problem"*, XXXV Scuola di Fisica Matematica - Ravello, Italy (20/09/2010).

[**16**] *"Nekhoroshev estimates around Kolmogorov-Arnold-Moser tori in the Sitnikov problem"*, 5th Austrian-Hungarian Workshop, Vienna, Austria (10/04/2010).

[**15**] *"Interactive snapshots of science ... made possible by Mathematica",* 3rd Mathematica Italian User Group Meeting, Universita degli Studi di Padova, Italy (25/09/2009).

[**14**] *"Spatial diffusion rates near the 3:1 MMR of an asteroid with Jupiter",* 5th International Meeting on Celestial Mechanics (CELMEC V) - Viterbo, San Martino al Cimino, Italy (07/09/2009) [***invited talk***].

[**13**] *"Dynamic Expansion Points",* Centre Paul Langevin - Ecole de Mécanique Céleste Aussois, France (06/2009) [***invited talk***].

[**12**] *"Exponential Stability Estimates in Hamiltonian Systems. Application to Trojan Asteroids",* University of Nanjing, Center for Nonlinear Science - Nanjing, China (10/2008) [***invited seminar***].

[**11**] *"Nekhoroshev estimates in a symplectic mapping model of the 1:1 resonance of the elliptic restricted three- body problem",* Conference on Applications of Computer Algebra - RISC - Hagenberg, Austria (29/07/2008).

[**10**] *"Exponential Stability Estimates for Trojan Asteroids – Nekhoroshev Theorem meets Celestial Mechanics",* University of Maribor, Center for Applied Mathematics and Theoretical Physics – Maribor, Slovenia (04/07/2008) [***invited talk***].

[**9**] *"On the Expansion of the Generating Function in the Mapping Case. Hadjidemetriou´s method revisited",* 7th Alexander von Humboldt Colloquium - Bad Hofgastein, Austria (03/04/2008) [***invited talk***].

[**8**] *"Exponential Stability Estimates in the Elliptic Restricted Three-Body Problem",* 6th Christmas Symposium - Maribor, Slovenia (14/12/2007) [***invited talk***].

[**7**] *"Nekhoroshev Estimates in the 1:1 Resonance of Our Solar System II: Symplectic Mappings in the case of Jupiter",* University of Patras, Center of Research and Applications of Nonlinear Systems (CRANS) - Patras, Greece (02/2007).

[**6**] *"Automated Derivation Methods in the Sitnikov problem – Lindstedt-Series done with Mathematica",* Academy of Athens, Research Center for Astronomy & Applied Mathematics, Athens, Greece (12/2006).

[**5**] *"Nekhoroshev Estimates of Asteroids in the 1:1 resonance"***,** conference on *"Asteroids and Resonances",* Observatoire de Paris - Meudon, France (09/2006).

[**4**] *"Chaos in our Solar System - The fundamental frequencies in the dynamics of our planetary system",* IV. Austrian - Hungarian Workshop, Budapest, Hungary (24/06/2005).

[**3**] *"How your Mathematica is getting faster and faster without loosing generality or functionality",* Academy of Athens, Research Center for Astronomy & Applied Mathematics - Athens, Greece (03/2005) [***invited seminar***].

[**2**] *"An introduction to Mathematica - applications to dynamical astronomy*", University of Vienna, Institute for Astronomy - Vienna, Austria (summer term 2004).

[**1**] "A *High Order Perturbation Expansion to the Sitnikov Problem by using Mathematica",* 6th Alexander von Humboldt Colloquium - Bad Hofgastein, Salzburg, Austria (23/03/2004).

F. Public relations (selection) :

[**20**] European Researcher's Night, University of Applied Arts, Vienna (28/09/2019).

[**19**] Austrian movie premiere *"Ad Astra"*, podium discussion, Village Cinemas, Vienna (19/09/2019).

[**18**] Hochsteiner G., **Lhotka C.**, news paper interview in 'Die Brücke' (29/05/2019).

[**17**] Weltraumball (Space Ball) 2019 , IWF representative, Haus Niederösterreich, Vienna (16/02/2019).

[**16**] Austrian movie premiere *"First Man"*, podium discussion, Hollywood Megaplex,Vienna (07/11/2018).

[**15**] Senarclens De Grancy A., **Lhotka C.**, news paper interview in 'Die Presse' (14/04/2018).

[**14**] European Researcher's Night, Technisch Gewerbliche Mittelschule, Vienna (28/09/2018).

[**13**] Lange Nacht der Forschung, Space Research Institute, Graz (13/04/2018).

[**12**] **Lhotka C.**, Public talks, Astronomy Days, Space Research Institute, Graz (25/03/2017).

[**11**] Guidance, Sternwarte Wien, Lange Nacht der Forschung, Vienna (22/04/2016).

[**10**] **Lhotka C.**, *"Merkur, der 'schwierige' Planet'"*, public talk, Kuffnersternwarte, Vienna 05/2014.

[**9**] Dvorak R., **Lhotka C.**, 2014: *"The Sitnikov Problem", scholarpedia.org*.

[**8**] **Lhotka C.**, 2014: *"Warum das Wasser auf die Erde kam"*, public talk, Sternwarte Wien - Lange Nacht

der Forschung 2014.

[**7**] **Lhotka C.**, Guidance, Sternwarte Wien (private groups, 'Lange Nacht der Forschung', Antares NÖ) 04/04/2014

[**6**] **Lhotka C.**, 2013: *"Leben und Forschen in der ewigen Stadt"*, Panoptikum, FWF-info Magazin 3/13, 50-51.

[**5**] **Lhotka C**., 2013: *"Merkurs sehr spezielle Rotation und seine exzentrische Bahn"*, Leser Fragen – Experten Antworten, Sterne & Weltraum 01/2013.

[**4**] Celletti A., Di Ruzza S., **Lhotka C.**, 2010: *"Stage – in Astrophysics"* high-school meets University, Università degli Studii Roma Tor Vergata, Dipartimento di Matematica, 06/2010.

[**3**] **Lhotka C.**, 2008-2019: *Online Interactive Demonstrations* Wolfram Demonstrations

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