List of Publications (not including abstracts in meetings)

A. Dissertations

A 1. *Diffusion of chaotic trajectories in Hamiltonian systems: applications is celestial mechanics* (in Greek), K. Tsiganis, 2002, Publications of AUTh, Greece.

B. Review articles and "News & Views" (by invitation)

B 1. *Early dynamical evolution of the Solar System: Models and constraints from Asteroid and KBO dynamics*. K. Tsiganis, 2005. In: *IAU Colloquium No 196 - Transits of Venus: New views of the Solar System and the Galaxy"*, D.W Kurtz and G.E. Bromage (eds), Cambridge University Press, p. 209.

B 2. *Chaotic Diffusion of Asteroids*, K. Tsiganis, 2007, *Lecture Notes in Physics* **729**, (D. Benest, C. Froeschle and E. Lega eds.), Springer-Verlag Berlin, p. 111.

B 3. *Dynamics of small bodies in the solar system*, K. Tsiganis, 2010, *Eur. Phys. J.* Special Topics **186**, 67.

B 4. *Late stages of solar system formation and implications for extra-solar systems*, K. Tsiganis, 2011, In *"Extra-Solar Planets: The detection, formation, evolution and dynamics of planetary systems"*, (B.A. Steves, M. Hendry and A.C. Cameron eds), CRC Press, p. 123.

B 5. *Planetary Science: How the Solar System didn't form*, K. Tsiganis, 2015 *Nature* **528**, p. 202

Γ. Publications in International refereed journals

Γ 1. *On the relationship between the maximal LCNs and the width of the stochastic layer in a driven pendulum*, K. Tsiganis, A. Anastasiadis and H. Varvoglis, 1999, *J.Phys.* **A 32**, 431-442.

Γ 2. *Dimensionality differences between sticky and non-sticky chaotic trajectory segments in a 3-D Hamiltonian system.* K. Tsiganis, A. Anastasiadis and H. Varvoglis, 2000, *Chaos Sol. & Fractals*, **11**(14), 2281-2292.

Γ 3. *Stable chaos in the 12:7 mean motion resonance with Jupiter and its relation to the stickiness effect.* K. Tsiganis, H. Varvoglis and J.D. Hadjidemetriou, *Icarus*, **146**, 240-252.

Γ 4. *Thersites: a `jumping' Trojan?* K. Tsiganis, R. Dvorak and E. Pilat-Lohinger, 2000, *Astron. & Astrophys.*, **354**, 1091-1100.

Γ 5. *The power spectrum of geodesic divergences as an early detector of chaotic motion.* Ch,.L. Vozikis, H. Varvoglis and K. Tsiganis, 2000, *Astron. & Astrophys*, **359**, 386-396.

Γ 6. *Chaotic evolution of (719)-Albert, the recently recovered minor planet*. K. Tsiganis and H. Varvoglis, 2000, *Astron. & Astrophys.*, **361**, 766-769.

Γ 7. *Why do Trojan ASCs (not) escape?* R. Dvorak and K. Tsiganis, 2000, *Cel. Mech. Dyn. Astron.*, **78**, 125-136.

Γ 8. *Stable chaos in high-order Jovian resonances*. K. Tsiganis, H. Varvoglis and J.D. Hadjidemetriou, 2002, *Icarus*, **155**, 454-474.

Γ 9. *Stable chaos vs. Kirkwood Gaps in the asteroid belt: A comparative study of mean motion resonances*. K. Tsiganis, H. Varvoglis and J.D. Hadjidemetriou, 2002, *Icarus*, **159**, 284-299.

Γ10. *Short-lived asteroids in the 7/3 Kirkwood gap and their relationship to the Eos and Koronis families*. K. Tsiganis, H. Varvoglis and A. Morbidelli, 2003, *Icarus*, **166**, 131-140.

Γ11. *Chaos and the effects of planetary migration on the orbit of S/2000 S5 Kiviuq*. V. Carruba, D. Nesvorny, J. Burns, M. Cuk and K. Tsiganis, 2004, *Astron. J*, **128**, 1899-1915.

Γ12. *Chaotic diffusion and effective stability of Jupiter Trojans*. K. Tsiganis, R. Dvorak and H. Varvoglis, 2005, *Cel. Mech. Dyn. Astron.* **92**, 71.

Γ13. *Origin of the orbital architecture of the Giant Planets of the Solar System*. K.Tsiganis, R. Gomes, A. Morbidelli and H. Levison, 2005, *Nature* **435**, 459.

Γ14. *Origin of the Cataclysmic Late Heavy Bombardment of the Terrestrial Planets*. R. Gomes, H. Levison, K. Tsiganis, and A. Morbidelli, 2005, *Nature* **435**, 466.

Γ15. *The chaotic capture of Jovian Trojan asteroids during the early dynamical evolution of the Solar System.* A. Morbidelli, H. Levison, K. Tsiganis and R. Gomes, 2005 *Nature* **435**, 462.

Γ16. *Dynamics of the Giant Planets of the Solar System in the Gaseous Protoplanetary Disk and Their Relationship to the Current Orbital Architecture*, A. Morbidelli, K. Tsiganis, A. Crida, H. Levison and R. Gomes, 2007, *Astronomical Journal* **134**, 1790.

Γ17. *Reconstructing the orbital history of the Veritas family*. K. Tsiganis, Z. Knezevic and H. Varvoglis, 2007, *Icarus* **186**, 484.

Γ18. *Kozai Resonance in Extrasolar Systems*, A.S. Libert and K. Tsiganis, 2009, *A&A* **493**, 697.

Γ19. O*rigin of the structure of the Kuiper belt during a dynamical instability in the orbits of Uranus and Neptune.* H. Levison, A. Morbidelli, C. Vanlaerhoven, R. Gomes, K. Tsiganis, 2008, *Icarus* **196**, 258.

Γ20. *Quasi-critical orbits for artificial lunar satellites*, S. Tzirti, K. Tsiganis and H. Varvoglis, 2009, *Cel Mech Dyn Astron* **104**, 227.

Γ21. *Contamination of the asteroid belt by primordial trans-Neptunian objects*, H. Levison, W.

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Γ22. *Chaotic transport and chronology of complex asteroid families*. B. Novakovic, K. Tsiganis and Z. Knezevic, 2010, *MNRAS* **402**, 1263.

Γ23. *Trapping in high-order orbital resonances and inclination excitation in extrasolar systems.* Libert A.-S. and Tsiganis K., 2009, *MNRAS* **400**, 1373.

Γ24. *Constructing the secular architecture of the solar system I: the giant planets.* Morbidelli A., Brasser R., Tsiganis K., Gomes R., and Levison H.F., 2009, *A&A* **507**, 1041.

Γ25. *Constructing the secular architecture of the solar system II: the terrestrial planets.* Brasser R., Morbidelli A., Gomes R., Tsiganis K., Levison H.F., 2009, *A&A* **507**, 1053.

Γ26. *Dynamical portrait of the Lixiaohua asteroid family*. Novakovic B., Tsiganis K. and Knezevic Z., 2010, *Cel Mech Dyn Astron* (doi 10.1007/s10569-010-9263-9) in press.

Γ27. *Origin of the near-Earth asteroid Phaethon and the Geminids meteor shower*. J. de Leon, H. Campins, K. Tsiganis, A. Morbidelli and J. Licandro, 2010, *A&A* **513**, A26.

Γ28. *Effect of higher degree gravity harmonicsand Earth perturbations on lunar artificial satellite orbits,* S. Tzirti, K. Tsiganis and H. Varvoglis, 2010, *Cel Mech Dyn Astron.* **108**, 389.

Γ29. *Evidence from the asteroid belt for a violent past evolution of Jupiter's orbit.* A. Morbidelli, R. Brasser, R. Gomes, H. Levison, K. Tsiganis, 2010, *Astron. J.* **140**, 1391.

Γ30. *The Origin of Asteroid 101966 (1999 RQ 36)*, H. Campins, A. Morbidelli, K. Tsiganis, J. de Leon, J. Licandro and D. Lauretta, 2010, *Astrophys. J.* **721**, L53.

Γ31. *Formation of "3-D" multi-planet systems by dynamical disruption of multiple-resonance cofnigurations*, A.-S. Libert and K. Tsiganis, 2010, *MNRAS* **412**, 2353.

Γ32. *Formation and evolution of planetary systems in presence of highly inclined stellar perturbers*, Batygin K., Morbidelli A., Tsiganis K., 2011 *A&A*, **533**, A7.

Γ33. *Trapping in three-planet resonances during gas-driven migration*, Libert A.-S., Tsiganis K., 2011, *Cel Mech Dyn Astron* **111**, 201.

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Γ35. *Interaction of free-floating planets with a star-planet pair*. Varvoglis H., Sgardeli V., and Tsiganis K., 2012, *Cel Mech Dyn Astron.* **113**, 387.

Γ36. *Explaining why the Urnian satellites have equatorial prograde orbits despite the large planetary obliquity*. Morbidellli A., Tsiganis K., Batygin K., Crida A., Gomes R., 2012, *Icarus*

219, 737.

Γ37. *Constraining asteroid dynamical models using GAIA data*, Tsiganis K., Varvoglis H., Tsirvoulis G., Voyatzis G., 2012, *Plan. & Spa. Sci*. **73**, 47.

Γ38. *Lightcurve Analysis of 266 Aline, 664 Judith, (16959) 1998 QE17 and (32910) 1994 TE15*, C. Avdellidou, P. Ioannidis, D. Skulidou, K. Tsiganis and J.H. Seiradakis, 2012, *Minor Plan. Bull.* **39**, 103

Γ39. *Secular dynamics of a lunar orbiter: a global exploration using Prony's frequency analysis*, S. Tzirti, A. Noullez, K. Tsiganis, 2014, *Cel Mech Dyn Astron.* **118**, 379.

Γ40. *Vertical instability and inclination excitation during planetary migration*, G. Voyatzis, K. I. Antoniadou, K. Tsiganis, 2014, *Cel Mech Dyn Astron.* **119**, 221.

Γ41. *The origin of long-lived asteroids in the 2:1 mean-motion resonance with Jupiter*, O. Chrenko, M. Broz,, D. Nesvorny, K. Tsiganis, D. K. Skoulidou, 2015, *MNRAS* **451**, 2399

Γ42. *Is Vesta an intact and pristine protoplanet?*, G.J. Consolmagno, G.J. Golabek, D. Turrini, M. Jutzi, S. Sirono, V. Svetsov, K. Tsiganis, 2015, *Icarus* **254**, 190.

Γ43. *Satellite orbits design using frequency analysis*, A. Noullez, K. Tsiganis, S. Tzirti, 2015, *Adv. Sp. Res.* **56,** 163

Γ44. *AstRoMap European Astrobiology Roadmap*, G. Horneck, N. Walter, F. Westall, J. L. Grenfell, W. F. Martin, F. Gomez, S. Leuko,, N. Lee, S. Onofri, K. Tsiganis, R. Saladino, E. Pilat-Lohinger, E. Palomba, J. Harrison, F. Rull, C. Muller, G. Strazzulla, J. R. Brucato, P. Rettberg and M.-T. Capria, Astrobiology **16**, 201-243,

Γ45. *Science case for the Asteroid Impact Mission (AIM): A component of the Asteroid Impact & Deflection Assessment (AIDA) mission*, P. Michel, A. Cheng, M. Kuppers, P. Pravec, J. Blum, M. Delbo, S.F. Green, P. Rosenblatt, K. Tsiganis, J.B. Vincent, J. Biele, V. Ciarletti, A. Herique, S. Ulamec, I. Carnelli, A. Galvez, L. Benner, S.P. Naidu, O.S. Barnouin, D.C. Richardson, A. Rivkin, P. Scheirich, N. Moskovitz, A. Thirouin, S.R. Schwartz, A. Campo Bagatin, Y. Yu, 2016, *Adv. Sp. Res.* **57,** 2529

Γ46. *Magnitude and timing of the giant-planet instability: A re-assessment from the asteroid belt perspective*, A. Toliou, A. Morbidelli and K. Tsiganis, 2016, *A&A* in press.

Δ. Conference Proceedings

Δ 1. *Effective Lyapunov Numbers and Correlation Dimensions in a 3-d.o.f. Hamiltonian system*. K. Tsiganis, A. Anastasiadis and H. Varvoglis, 1999, in *IAU Colloquium No 172 – The Impact of Modern Dynamics in Astronomy*, S. Ferraz-Mello and J. Henrard (eds.), Kluwer Academic Publishers, p. 441.

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Δ 3. *Is (1868)-Thersites an escaping Trojan?* K. Tsiganis, R. Dvorak and E. Pilat-Lohinger, 2000, in *4th Conference of HEL.A.S.*, J. Seimenis and N. Soulakelis (eds.), p. 255.

Δ 4. *Transport in the outer asteroid belt: Fokker-Planck solutions vs. Numerical Integrations.* K. Tsiganis, A. Anastasiadis and H. Varvoglis, 2000, in *4th Conference of HEL.A.S.*, J. Seimenis and N. Soulakelis (eds.), p. 135.

Δ 5. *Power Spectrum of Orbits' Divergence as a stochasticity indicator*. Ch. Vozikis, H. Varvoglis and K. Tsiganis, 2000, in *4th Conference of HEL.A.S.*, J. Seimenis and N. Soulakelis (eds.), p. 151.

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Δ 7. *Achates: a Trojan on the edge of escape*. K. Tsiganis and R. Dvorak, 2001, in *Proceedings of the 2nd Austrian-Hungarian Workshop on Trojans and related topics*, Eotvos University Press, Budapest, p. 39.

Δ 8. *Diffusion of asteroids in the outer belt*. K. Tsiganis, H. Varvoglis and A. Anastasiadis, 2002, *CELMEC III – Modern Celestial Mechanics: from Theory to Applications*, A. Celetti et al. (eds), Kluwer Academic Publishers (Netherlands), p. 451.

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Δ10. *The dynamical portrait of the Veritas family region*. Z. Knezevic, K. Tsiganis and H. Varvoglis, 2002, Proceedings of Asteroids, Comets, Meteors (*ACM 2002)*, Technical University of Berlin, Berlin, Germany, ESA SP-500 November 2002, p.335.

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Δ12. *The "third" integral in the restricted three-body problem revisited*. H. Varvoglis, K. Tsiganis and J.D. Hadjidemetriou, 2003, In *Chaos & Galaxies*, G. Contopoulos and N. Voglis (eds.), *Lecture Notes in Physics* **626**, p. 433, Springer.

Δ13. *Age of the Veritas asteroid family from two independent estimates.* Z. Knezevic, K. Tsiganis and H. Varvoglis, 2006, *Publ. Astron. Obs. Belgrade* **80**, p. 161.

Δ14. *The Collisional Evolution of Objects Captured in the Outer Asteroid Belt During the Late*

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Δ15. *Exosystems in Kozai Resonance: How to increase the mutual inclination?* A.S. Libert and K. Tsiganis, In Dynamics of Celestial Bodies: Proceedings of the 2008 International Conference in honor of John D. Hadjidemetriou (Litohoro, Greece), 2009, H. Varvoglis and Z. Knezevic (eds.), AUTh (Greece) /AOB (Serbia), p. 143

Δ16. *Local diffusion characteristics and the age of the Veritas asteroid family*. B. Novakovic, K. Tsiganis and Z. Knezevic. In Dynamics of Celestial Bodies: Proceedings of the 2008 International Conference in honor of John D. Hadjidemetriou (Litohoro, Greece), 2009, H. Varvoglis and Z. Knezevic (eds.), AUTh (Greece) /AOB (Serbia), p. 151

Δ.17 *Quasi-critical orbits for artificial Lunar satellites.* S. Tzirti, K. Tsiganis and H. Varvoglis. In Dynamics of Celestial Bodies: Proceedings of the 2008 International Conference in honor of John D. Hadjidemetriou (Litohoro, Greece), 2009, H. Varvoglis and Z. Knezevic (eds.), AUTh (Greece) /AOB (Serbia), p. 189

Δ18. *Formation mechanisms of highly non-coplanar systems.* Libert A.-S., Tsiganis K., 2011, EPSC-DPS Joint Meeting, p.1429

Δ19. *The Origin of Near-Earth Asteroid 1999 JU3*, Campins H., Morbidelli A., de Leon J., Tsiganis K., Licandro J., 2011, EPSC-DPS Joint Meeting, p.1365

Δ20. *Explaining why the satellites of Uranus have equatorial prograde orbits despite of the large planet's obliquity*, Morbidelli A., Tsiganis K., Batygin K., Gomes R., Crida A., 2011, EPSC-DPS Joint Meeting, p. 54

Δ21. *Influence of the inclination damping on the formation of planetary systems*, S. Sotiriadis, A.-S. Libert and K. Tsiganis. In Proceedings of IAU Symposium No 310 on Complex Planetary Systems, Namur 2014 (Z. Knezevic and A. Lemaitre eds.), p. 220.

Δ22. *Long-term evolution of asteroids in the 2:1 Mean Motion Resonance*, D. K. Skoulidou, K. Tsiganis and H. Varvoglis. In Proceedings of IAU Symposium No 310 on Complex Planetary Systems, Namur 2014 (Z. Knezevic and A. Lemaitre eds.), p. 178.

Δ23. *NELIOTA: ESA's new NEO lunar impact monitoring project with the 1.2m telescope at the National Observatory of Athens*, A.Z. Bonanos, M. Xilouris, P. Boumis, I. Belas-Velidis,
A. Maroussis, A. Dapergolas, A. Fytsilis, V. Charmandaris, K. Tsiganis, K. Tsinganos. In Proceedings of IAU Symposium No 318 on Asteroids: New Observations, new models, Hawaii 2015 (S. Chesley, A. Morbidelli, R. Jedicke, & D. Farnocchia, eds.).

Δ24. *ASTEROID IMPACT AND DEFLECTION ASSESSMENT (AIDA) MISSION: THE DOUBLE ASTEROID REDIRECTION TEST (DART)*, A. F. Cheng, P. Michel, O. Barnouin, A. Campo-Bagatin, P. Miller, P. Pravec, D. C. Richardson, A.S. Rivkin, S. R. Schwartz, A. Stickle, K. Tsiganis, S. Ulamec. In 47th *Lunar & Planetary Science Conference* (2016), p. 2023.

Δ25. *DYNAMICAL AND PHYSICAL PROPERTIES OF 65803 DIDYMOS*, D. C. Richardson, O.

S. Barnouin, L. A. M. Benner, W. F. Bottke Jr., A. Campo Bagatin, A. F. Cheng, M. Hirabayashi, C. Maurel, J. W. McMahon, P. Michel, N. Murdoch, S. P. Naidu, P. Pravec, A. S. Rivkin, D. J. Scheeres, P. Scheirich, K. Tsiganis, Y. Zhang. In 47th *Lunar & Planetary Science Conference* (2016), p. 1501.

E. Other publications

(a) periodical reviews of scientific societies:

E 1. *Chaotic diffusion of small bodies in the Solar System*. K. Tsiganis & A. Morbidelli, 2003, *Annals of MCFA*, Vol. **3**, p. 999 ***(refereed)***.

E 2. *The Chaotic Sculpting of the Solar System*, K. Tsiganis, 2006, *HIPPARCHOS*, Vol. **2** (1).

E 3. *New insights on the asteroid-meteorite connection*, K. Tsiganis, 2010, *HIPPARCHOS* Vol. 2 (7).

(b) AUTh publications (in Greek):

E 4. *"Αστεροειδείς: Από ... "μικρό" μαθαίνεις την αλήθεια!"*, Κλ. Τσιγάνης, *2009, Α.Π.Θέματα Έρευνας* **(1)**, σ. 16-17.

E 5. *"Δυναμική Εξέλιξη του Ηλιακού Συστήματος: Σύγχρονες απόψεις"*, Κλ. Τσιγάνης, 2010, περιοδικό *"Φαινόμενο"*