

CURRICULUM VITAE

July 2020

Name: Anastasios (Tassos) Bountis
Date of Birth: May 31, 1950, Athens, Greece
Current Position: Professor Emeritus, Department of Mathematics, University of Patras, Patras 26500, Greece
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Other Positions (-2016):

- Director of Center for Research and Application of Nonlinear Systems University of Patras, Greece (founded in 1996) <https://thalis.math.upatras.gr/~crans/>
- Director of Laboratory of Nonlinear Systems and Applied Analysis, Department of Mathematics University of Patras (founded in 1991)

Honors and Awards:

- Member of European Academy of Sciences and Arts, Class of Natural Sciences, September, 2015
- Corresponding Member of the Academy of Athens, chair “Complex Systems”, Class of Natural Sciences, April 2014
- Charles Hermite Science Ambassador Award, Saar Region, Germany, September 2014
- International Conference on “Nonlinear Dynamics and Complexity”, July 12 – 16, 2010 was organized in honor of my 60th birthday, <http://nonlinear.web.auth.gr/>
- Academy of Athens Award G. Fwteinos for work on “Dynamical Systems”, 2009
- Associate Member of National Council of Research and Technology of Greece (appointed by the Minister of Development, January 2005 - 2009)
- Magna cum Laude, Undergraduate Diploma, Dartmouth College, 1972.

Citizenship: Greek

Marital Status: Married, one child

Education and Professional Experience:

- 1972: B.A. Degree in Physics (Minor in Mathematics) Dartmouth College, USA, Magna Cum Laude, Honors in Physics.
- 1974: M.S. Degree in Physics, University of Rochester, N.Y.
- 1978: Ph. D. Degree in Theoretical Physics, University of Rochester, N.Y., U.S.A.
- 1978-79: Bateman Research Instructor, Department of Applied Mathematics, California Institute of Technology.

- 1979-81: Visiting Assistant Professor, Department of Mathematics and Computer Science, Clarkson University, N.Y.
- 1981-84: Assistant Professor, Department of Mathematics and Computer Science, Clarkson University, N.Y.
- 1982-83: Research Associate (on leave from Clarkson University), Institute for Theoretical Physics, University of Amsterdam, the Netherlands.
- 1984-86: Associate Professor, Department of Mathematics and Computer Science, Clarkson University, Potsdam, N.Y.
- 1985-86: Visiting Professor (on leave from Clarkson University), Physics Department, University of Thessaloniki, Thessaloniki, Greece.
- 1986-90: Associate Professor, Department of Mathematics, University of Patras, Patras, Greece.
- 1989-90: Visiting Professor, Physics Department, University of Texas at Austin.
- 1990-2016: Professor, Department of Mathematics, University of Patras.
- 2016 - 2020: Professor, Department of Mathematics, Nazarbayev University, Astana, Kazakhstan.

Recent Scientific Visits:

- January 1993, Visiting Professor at India Institute of Technology, New Delhi and Bharathidasan University, Tiruchirapalli, Tamilnadu, India
- December 1996 – March 1997 Visiting Professor, Department of Mathematics, University of Amsterdam, the Netherlands.
- January 9 – February 8, 2000, Visiting Researcher, Centro Internacional de Ciencias, Universidad de Morelos, Mexico.
- September 2000-January 2001 Visiting Professor, Department of Mathematics, University of Cyprus, Cyprus.
- September 2000 - 2007: Coordinator of the course "Mathematics I" for the Study Program in Informatics of the Hellenic Open University
- March 1 – May 31, 2005: Visiting Researcher at Max Planck Institute for Complex Systems, Dresden. Germany.
- January 14 – February 6, 2006, Visiting Scientist, Centro Internacional de Ciencias, Universidad de Morelos, Cuernavaca, Mexico.
- January 3 – January 20, 2007, Visiting Scientist, Centro Internacional de Ciencias, Universidad de Morelos, Cuernavaca, Mexico.
- March 30 – April 22, 2007, Visiting Scientist, Waseda University, Tokyo, Japan and Kyoto University, Japan.
- April 12 – 27, 2009, Visiting Professor, Physics Department, University of Rostov – on – Don, Russia.
- March 1 – April 2, 2010, Visiting Researcher, Centro Brasileiro de Pesquisas Fisicas (Brazilian Center of Physics Research), Rio de Janeiro, Brasil.
- April 5 – June 25, 2010: Visiting Researcher at Max Planck Institute for Complex Systems, Dresden. Germany.
- March 1 – April 15, 2013, Visiting Researcher, New Zealand Institute of Advanced Studies, University of Massey, New Zealand.
- April 20 – May 15, 2013, Visiting Researcher, Centro Brasileiro de Pesquisas Fisicas (Brazilian Center of Physics Research), Rio de Janeiro, Brasil.
- 2013, June 4 – 24, Visiting Researcher, Department of Applied Mathematics and Theoretical Physics, Cambridge University, England.

- 2015, June 18 – 25, Visiting Researcher, Weizmann Institute of Sciences, Department of Chemical Physics, Rehovot, Israel.
- 2015, 1-11 September, Visiting Researcher, Center for theoretical Physics of Complex Systems, Institute of Basic Science, Daejeon, Korea.

Research Grants and Education Programs:

- 1980-82: Principal Investigator (P.I.) of an N.S.F. grant, Applied Mathematics Division (USA).
- 1983-84: P.I. of a Department of Energy (D.O.E.) grant, Division of Mathematical Sciences (USA).
- 1984-85: P.I. of a D.O.E. grant from the Division of High Energy Physics, and one from Engineering and Mathematical Sciences (USA).
- 1985-86: P.I. of an N.S.F. grant, Mathematical Sciences Division.
- 1985-87: P.I. of a continuation grant from D.O.E., Division of High Energy Physics, on the "Application of Nonlinear Dynamics to the Beam-Beam Interaction".
- 1988-90: P.I. of a grant on the "Applications of Nonlinear Dynamics to Josephson Junctions", Greek Ministry of Industry, Energy and Technology, Secret. Gen. of Research and Technology.
- 1989-91: P.I. of a grant from the E.E.C., Science-Stimulation Program, on "Chaotic Behavior of Classical Mechanical Systems".
- 1990-: University of Patras Representative in 2 "Erasmus" ICP Programs, coordinated by Prof. Sp. Pnevmatikos, University of Crete and Prof. G. Nicolis, ULB, Belgium.
- 1993-96: Participant in 3 Networks of Laboratories entitled "Nonlinear Phenomena and Complex Systems", "Coherent Structures and Fluctuating Processes in Condensed Matter and Optical Physics" and "Nonlinear Problems in Beam Dynamics and Transport", funded by the "Human Capital and Mobility" program of the EEC.
- 1993-96: P.I. of a grant on "Applications of Chaotic Dynamics to Meteorology and Biology", Greek Ministry of Industry, Energy and Technology, General Secretariat of Research and Technology (GSRT).
- 1996-98: P.I. of a grant on "Theory of Chaos and Complexity of Nonlinear Systems", GSRT, Greek Ministry of Development.
- 1999-2001: P.I. of a PENED grant on "Applications of Nonlinear Dynamics to Biological and Biochemical Systems". Greek Ministry of Development, General Secretariat of Research and Technology (GSRT).
- 2000-01: Supervisor of Marie Curie Fellowship by Dr. Elka Yankulova on "Dimensional and Genetic Analysis of Drosophila Cardiac Function", EEC, European Research Program on "Quality of Life and Management of Living Resources".
- 2000-02: P.I. of a Research Exchange Program between Greece and China on "Applications of Nonlinear Dynamics to Biology and DNA Sequences", Greek Ministry of Development, GSRT.
- 2001-03: P.I. of a Research "Caratheodory" Program of the University of Patras entitled "Chaotic Dynamics and Statistical Analysis of Multidimensional Nonlinear Systems", supporting the post-doctoral fellow Dr. Charalampos Skokos.
- 2002-05: P.I. of a Research grant of the "HERAKLEITOS" Program of the Greek Ministry of Education, supporting the doctoral candidate Mr. Christos Antonopoulos.
- 2004 -2005: Representative of Greece in an ERA –NET (European Research Area Network) Specific Support Action Program on "COMPLEXITY".

- 2005-07: P.I. of a Research grant of the "PYTHAGORAS II" Program of the Greek Ministry of Education, supporting the post – doctoral scientist, Dr. Vassilios Basios.
- 2006 -2010: Representative of Greece in an ERA –NET (European Research Area Network) Coordinated Action Program on “COMPLEXITY”.
- 2007-2008: P.I. of a Research Exchange Program between Greece and Egypt on "Mathematical Study and Applications of Control and Synchronization of Nonlinear Oscillators", Greek Ministry of Development, GSRT.
- 2009 – 2012: Scientific Responsible of Inter-University Network at the University of Patras, entitled “Mathematical Analysis of Complex Systems”, consisting of different research groups from the Departments of Mathematics, Physics, Medicine and Engineering www.math.upatras.gr/mabiphys
- 2010 - 2012: P.I. with Prof. J. P. van der Weele of ERA-Complexity NET project “Complex Matter”, involving CRANS from the University of Patras and groups from the Universite Libre de Bruxelles, the University of Twente, Netherlands and the University of Manchester. <http://complexmatter.wordpress.com> (120000 euro)
- 2012 – 2014: P.I. of post – doctoral fellowship, entitled “Nonlinear Dynamics and Control of Waves in Complex Optical Structures”, funded by the Ministry of Education of Greece, supporting the post – doctoral fellow Dr. Yannis Kominis.
- 2012 – 2015: P.I. of project entitled “Mathematical Modeling of Complex Systems with Applications to Biomedicine, Physics and the Technology of Materials”, in the THALES Program of the Greek Ministry of Education (600000 euro)
- 2017 – 2020: P.I. of ORAU project entitled “Taming Chimeras to Achieve the Superradiant Emitter”, at School of Science and Technology, funded by Nazarbayev University, Astana, Kazakhstan (390000 USD).

Recent Conferences and Lectures:

- Invited lecturer at Second International Conference on "Basic Science and Advanced Technology", Assiut, Egypt, November 5-9, 2000.
- Invited lecturer at Workshop "Chaos, Demons and Wavelets", Symposium, University of Amsterdam, June 5-7, 2001.
- Lecturer at Workshop "Localization in Nonlinear Lattices", Max Planck Institute for Complex Systems, Dresden, 24-28 September, 2001.
- Invited lecturer at European Advanced Studies Conference, "Nonlinearity, Non-commutativity and Applications", Tracoscan, Croatia, May 9 - 11, 2002.
- Invited lecturer at Summer School/Conference on "Let's Face Chaos Through Nonlinear Dynamics", Maribor, Slovenia, June 29-July 14, 2002.
- Invited lecturer at International Conference "Galaxies and Chaos", Research Center of Astronomy and Applied Mathematics, Academy of Athens, September 16-19, 2002.
- Invited lecturer at European Advanced Studies Conference 4 on "Chaos and Complex Systems" Novacella, Southern Tyrol, Italy, May 29 - June 1, 2003.
- Invited lecturer at International Conference on "Dynamical Chaos in Classical and Quantum Physics", Novosibirsk, August 4-9, 2003 (did not attend).
- Invited lecturer at International Conference on "Invariance and Model Reduction for Multiscale Phenomena" ETH - Zurich, August 26 - 29, 2003.
- Lecturer in “200 Verhulst on Chaos”, Workshop organized by the Royal Academy of Belgium, Brussels, 16-18 September, 2004.

- Invited lecturer at Conference on "Advances in Classical and Quantum Mechanics" held in Novacella, Southern Tyrol, Italy, October 1-4, 2004.
- Invited lecturer at Summer School/Conference on "Let's Face Chaos Through Nonlinear Dynamics", Maribor, Slovenia, June 26-July 10, 2005.
- Lecturer at Workshop on Accelerator Beam Dynamics, Senigallia, Italy, September 12 - 16, 2005.
- Lecturer at Conference "Physics and the City", Bologna, Italy, December 14 - 17, 2005.
- Plenary Speaker in 2nd International Conference of Nonlinear Science, organized by the Society of Chaos in Psychology and Life Sciences, March 10 – 12, 2006, Heraclion , Crete, Greece.
- Invited speaker at International Conference on the Frontiers of Nonlinear and Complex Systems (ICFNCS) in honor of Prof. Bambi Hu's 60th birthday, Hong – Kong Baptist University, 24-26 May, 2006 (did not attend).
- Invited Speaker at International Conference "Dynamics Days 2006", Heraclion, Crete, September 25 – 29, 2006.
- Invited Speaker at International Conference "Chaos and Complex Systems 2006", Monastery of Novacella, Italian Alps, 9th - 12th October 2006.
- Invited Speaker at International Conference "5th Christmas Symposium of Physicists", 14 - 16 Dec. 2006, Maribor, Slovenia.
- Invited Speaker at International Conference "Complexity, Metastability and Extensivity», University of Catania, Italy, July 1-5, 2007.
- Plenary Speaker in the Conference in Numerical Analysis NumAn2007, "Recent Approaches to Numerical Analysis, Theory and Applications", Kalamata, Hellas, September 3 - 7, 2007.
- Invited Speaker at International Conference "Nonlinear Dynamics: Advances and Perspectives", University of Aberdeen, Scotland, September 17 – 22, 2007.
- Invited Speaker at XVth Conference on Applied and Industrial Mathematics (CAIM 2007), Mioveni, Arges county, Romania, October 12-14, 2007.
- Lecturer at Workshop on "Nonlinear Waves in Continuous and Discrete Media", UNAM, Mexico City, 24 – 28 January 2008.
- Lecturer at 7th Alexander v. Humboldt Colloquium for Celestial Mechanics "The Chaotic Dynamics of Small Bodies and Planets", Bad Hofgastein, Salzburg, Austria, 30 March - 5 April 2008.
- Invited lecturer at International Conference, "Nonlinear Dynamics and its Applications", University of Pescara, Italy, July 3 – 8, 2008.
- Invited lecturer at Summer School/Conference on "Let's Face Chaos Through Nonlinear Dynamics", Maribor, Slovenia, June 28-July 13, 2008.
- Invited speaker in "Coping With Complexity: Model Reduction and Data Analysis", Organized by: University of Leicester, at Ambleside, Lake District, UK, August 31 – September 4, 2009.
- Invited Plenary Lecture at the Meeting of the INCT de Sistemas Complexas, March 1 – 5, 2010, Centro Brasileiro de Pesquisas Fisicas (Brazilian Center of Physics Research), Rio de Janeiro, Brasil.
- Invited lecture at GRTR-Conference on "Statistical Mechanics and Dynamical Systems", Marmaris - Symi, September 5 - 12, 2010.
- Invited lecture at 9th Christmas Physics Conference, Maribor, Slovenia, December 9 - 11, 2010.

- Lecture at 8th Alexander von Humboldt Colloquium for Celestial Mechanics, Bad Hofgastein, Salzburg, Austria, March 20 - 26, 2011.
- Lectures (4 hours) at the 1st International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 18 – 29, 2011, Patras, Greece.
- Presentation of First Year Activities of the “Complex Matter” ERA-NET Project at European Conference on Complex Systems 2011, Vienna, September 12 – 16, 2011.
- Invited lecture on “Complex Hamiltonian Dynamics”, University of Maribor, Slovenia, October 26, 2011.
- Invited Lecture for the 50 years anniversary of the National Research Center “Demokritos”, Athens, Greece, March 22, 2012.
- Invited Lecturer at the “Out of the Box” Conference, Maribor, Slovenia, May 15-17, 2012.
- Lectures (4 hours) at the 2nd International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 16 – 28, 2012, Pescara, Italy.
- Lectures (6 hours) at the New Zealand Institute for Advanced Studies, University of Massey, Auckland, New Zealand, on “Mathematical Modeling of Complex Systems”, March 10 – April 10, 2013.
- Lecture at 5th Workshop of INCT – SC on Complex Systems in the Physical Sciences, Centro Brasileiro de Pesquisas Fisicas, 22 – 24 April, 2013
- Invited Lecture at Universidad Federal de Rio Grande da Norte, “Mathematical Modeling of Complex Systems”, Natal, Brazil, May 10, 2013.
- Invited semi – plenary lecture entitled “Complex Problems in Theoretical and Applied Mechanics”, 10th Congress HSTAM, 25-27 May, 2013, Chania, Crete, Greece.
- Lectures (4 hours) at the 3^d International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 15 – 26, 2013, Heraklion, Crete, Greece.
- Lectures (4 hours) at the 4th International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 14 – 25, 2014, Athens, Greece.
- Invited Lecture at the Conference "Statistical Mechanics Foundations of Complexity - where do we stand now?", May 8 – 10, 2014, Santa Fe, Institute, Santa Fe, New Mexico, USA.
- Invited Lecture in the Special Session " Dynamics of chaotic and complex systems and applications" (SS25), at the 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain, July 7-11, 2014.
- Invited Lecturer (5 hours) at 9th Summer School/Conference on "Let's Face Chaos Through Nonlinear Dynamics", Maribor, Slovenia, 22 June - 6 July, 2014.
- Lecturer and organizer of the Workshop “Mathematical Modeling of Complex Systems: Computational Approaches”, NumAn Conference on “Recent Approaches to Numerical Analysis: Theory, Methods and Applications”, Chania, Crete, 2 – 5, September, 2014.
- Invited Lecture at European Advanced Studies Conference 2014, Symposium on Differential Equations and Difference Equations, Homburg, Germany, September 5 – 8, 2014.
- Invited Lecture at Symposium on “Classical and Quantum Chaos: What Comes Next?”, Ljubljana, Slovenia, October 9 – 11, 2014.
- Invited lectures at the Physics Department and The Singapore Institute for Neurotechnology of the National University of Singapore, December 10 – 15, 2014.
- Invited Plenary Lecture at International Conference IMSQUARE, 4th International Conference on Mathematical Modeling in Physical Sciences, June 5-8, 2015 Mykonos, Greece.

- Invited Lectures at Weizmann Institute of Science, Department of Chemical Physics (invited by Professor Itamar Procaccia), June 18 – 25, 2015.
- Invited Lecture at the Center for Theoretical Physics of Complex Systems, Institute of Basic Science, Daejeon, Korea, 1-11 September 2015.
- Invited Lecturer at the Latin-American School and Workshop on Complex Systems, Centro Brasileiro de Pesquisas Fisicas, Rio de Janeiro, Brazil, 18 – 30 October, 2015.
- Invited Visitor and Lecturer at Nazarbayev University, Astana, Kazakhstan (23-28 November, 2015).
- Invited lecture at International “Christmas Physics Symposium”, December 10 – 12, 2015, Maribor Slovenia.
- Lecture at “Dynamics of Complex Systems”, International Conference in honor of Robert MacKay’s 60th Birthday, 18 – 20 May, 2016, University of Warwick, UK.
- Lecture at “3d Dynamics Days Central Asia”, Nazarbayev University, Astana, Kazakhstan, 2 – 5 September, 2016.
- Invited speaker at the “Dynamics Days Latin America and the Caribbean”, Puebla Mexico, October 24 – November 1, 2016.
- Invited speaker at the International Workshop “Recent Advances in Hamiltonian and Nonholonomic Dynamics”, Inst. Of Computer Science, Moscow, 15 - 20 June 2017 <http://hnh-conf.rcd.ru/>
- Invited speaker at the “Let’s Face Complexity: New Bridges Between Physical and Social Sciences”, Lake Como School of Advanced Studies, Como, Italy, September 4-8, 2017, <http://lfcslakecomoschool.org/>
- Invited speaker at the conference “Dynamics Days Central Asia”, Bukhara, Uzbekistan, 21 – 23 October 2017.
- Invited Speaker at the International Conference “16th Christmas Symposium of Physicists”, 14 - 16 December 2017, Maribor, Slovenia.
- Invited Speaker at the International Conference “Quantum and Nonlinear Optics 2018”, Kuala Lumpur, Malaysia, 2 – 6 February 2018.
- Invited Speaker at the International Conference “Localization in Nonlinear Lattices”, Spetses, Greece, 18 – 22 June 2018.
- Lecturer in the 25th Summer School/Panhellenic Conference on "Dynamical Systems and Complexity", Athens, Greece, 9 – 17 July, 2018.
- Speaker at International Conference Pacific Rim CLEO, Hong Kong 29 July – August, 2018.
- Invited Speaker, 18th IFAC Conference on Technology, Culture and International Stability, Baku, Azerbaijan, 13 – 15 September, 2018.
- Invited Speaker and Organizer of the Workshop “Dynamics in Multidimensions”, Universidad Autonoma Mexico, Institute of Applied Mathematics, March 20 – 22, 2019.
- Plenary Speaker, International Conference CHAOS 2019, June 18 – 22, 2019, Chania, Greece.
- Plenary lecture, International Conference on “Actual Problems in Algebra, Analysis and Differential Equations”, October 16 – 19, 2019, Eurasian National University, Nur-Sultan, Kazakhstan.
- Invited Lecture, International Conference on “Dynamical Systems Theory and Applications”, Lodz Polytechnic University, December 2 – 5 2019.

Conference and Summer School Organization:

- One of 12-member organizing committee for a Workshop on "Orbital Dynamics and Applications to Accelerators", March 7-12, 1985, Lawrence Berkeley Lab., USA.
- Chairman of organizing committee for International Conference on "Non-linear Dynamics and Chaos", Aug. 25-30, 1986, Thessaloniki, Greece.
- Chairman of organizing committee for "Summer School I on Nonlinear Systems", July 1-11, 1987, Patras, Greece.
- One of 3-member organizing committee for the International Conference "Singular Behavior and Nonlinear Dynamics", August 18-26, 1988, Samos, Greece.
- Organizing committee member for 2nd, 3rd 4th and 5th "Summer School on Nonlinear Systems" (July 1988, August 1989 and August 1990, Samos, Greece and July, 1992, Crete, Greece).
- Director of NATO Advanced Research Workshop on "Proton Transfer in Hydrogen-Bonded Systems", May 21-25, 1991, Heraclion, Crete, Greece.
- Director of NATO Advanced Studies Institute on "Chaotic Dynamics: Theory and Practice", July 11-20, 1991, Patras, Greece.
- Organizing Committee member of "Integrability and Chaotic Behavior in Hamiltonian Systems", NATO ARW, June 28 - July 2, 1993, Torun, Poland.
- Organizing Committee Chairman for 6th, 7th, 8th, 9th, 12th, 14th, 15th and 16th Summer School/Panhellenic Conference) on "Nonlinear Systems and Chaotic Dynamics", University of Patras, Greece, July 1993, Xanthi, July 1994 and July 1995, Patras, July 1996, Patras, July 1999, Patras, July 2001, Patras, August 2002 and Chalkis, July 2003.
- Organizing Committee Member for 10th, 11th and 13th Summer School/Panhellenic Conference) on "Nonlinear Dynamics: Chaos and Complexity", Thessaloniki, 1997, Livadeia, 1998 and Chania, 2000.
- Organizing Committee member for International Summer School and Conference on "Let's Face Chaos Through Nonlinear Dynamics", Maribor, Slovenia, June 1996, June 1999, June 2002 and June 2005 and June 2008.
- Session Chairman for 4th Conference of Greek Association of Computational Mechanics, Patras, June 27-29, 2002.
- Session Chairman for 1st International Conference "From Scientific Computing to Computational Engineering" 1st IC-SCCE, Athens, 8-10 September, 2004.
- Organizing Committee Chairman for International Summer School and Conference on "Complexity in Science and Society", 14 – 26 July, 2004, Patras and Olympia, Greece.
- Organizing Committee Chairman for the 18th Summer School/Panhellenic Conference on "Nonlinear Science and Complexity", Volos, Greece, 18 – 30 July 2005.
- Co – Chairman of the Organizing Committee (with Prof. E. Aifantis of the University of Thessaloniki) of the 19th Summer School/Panhellenic Conference on "Nonlinear Science and Complexity", Thessaloniki, Greece, 12 – 22 July 2006.
- Organizing Committee Chairman for the International Gathering at Cuernavaca on "Nonlinear Lattice Dynamics: From Localization to Statistical Mechanics", Centro Internacional de Ciencias, Universidad de Morelos, Cuernavaca, Mexico. , 8 – 24 January, 2007.
- Organizing Committee Chairman for the 20th Summer School/Panhellenic Conference on "Nonlinear Science and Complexity", Patras, Greece, 14 – 26 July 2007.

- Organizing Committee member for Workshop on “Nonlinear Waves in Continuous and Discrete Media”, UNAM, Mexico City, 24 – 28 January 2008.
- Organizing Committee member for Workshop on “Nonlinear Dynamics and Its Applications”, University of Chieti – Pescara, Italy, 3 – 8 July 2008.
- Co – Chairman of the Organizing Committee (with Prof. K. Hizanidis of the National Technical University of Athens) of the 21st International Summer School – Conference on "Nonlinear Science and Complexity", Athens, Greece, 21 July – 2 August 2008.
- Organizing Committee Chairman for the 22nd Summer School/Panhellenic Conference on "Nonlinear Science and Complexity", Patras, Greece, 15 – 24 July, 2009.
- Organizing Committee Member for Workshop on “Nonlinear Dynamics and Complex Systems”, University of Chieti – Pescara, Italy, July 28 – 31, 2009.
- Organizing Committee Chairman of University of Patras Workshop, "Control of Dynamical Systems: Theory and Applications", February 19-20, 2010, Achaia Beach Hotel
- Organizing Committee Chairman of Synthesis Workshop, "Conflict and Risk in Dynamical Processes", Thursday, December 22, 2011, Conference Center of the University of Patras
- Organizing Committee Chairman of the 1st International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 18 – 29, 2011, Patras, Greece.
- Organizing Committee Member of the 2nd International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 16 – 28, 2012, Pescara, Italy.
- Organizer of Mini – Symposium on “Complex Problems in Theoretical and Applied Mechanics”, at the 13th Congress of HSTAM, 25-27, May, 2013, Chania, Crete.
- Organizing Committee Co – Chairman of the 3d International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 15 – 26, 2013, Heraklion, Crete, Greece.
- Organizing Committee Co – Chairman of the 4th International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 14 – 25, 2014, Athens, Greece.
- Organizer of Symposium on Mathematical Modeling of Complex Systems: Computational Approaches”, NumAn Conference on “Recent Approaches to Numerical Analysis: Theory, Methods and Applications”, Chania, Crete, 2 – 5, September, 2014.
- Organizing Committee Chairman of the 5th International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 20 – 30, 2015, Patras, Greece.
- Organizing Committee Member for the 23rd Summer School/Panhellenic Conference on "Dynamical Systems and Complexity", Chalkidiki, Greece, 27/8/2016 – 3/9/2016.
- Organizing Committee Chairman of the 1st Summer School on “Mathematical Methods in Science and Technology”, June 5 – 10, 2017, Nazarbayev University, Astana, Kazakhstan.
- Organizing Committee Member for the 24th Summer School/Panhellenic Conference on "Dynamical Systems and Complexity", Volos, Greece, 12 – 20 July, 2017.
- Member of 4 - Director team of organizers for the “Let’s Face Complexity: New Bridges Between Physical and Social Sciences”, Lake Como School of Advanced Studies, Como, Italy, September 4-8, 2017, <http://lfc.s.lakecomoschool.org/>
- Organizing Committee Member for the 25th Summer School/Panhellenic Conference on "Dynamical Systems and Complexity", Athens, Greece, 9 – 17 July, 2018.

- Co-Chair of Organizing Committee of the 2nd Summer School on “Mathematical Methods in Science and Technology”, May 28 – June 8, 2018, KazNU Al Farabi University, Almaty, Kazakhstan.
- Organizing Committee Member and main lecturer of the 6th International Ph.D. School on “Mathematical Modeling of Complex Systems”, July 3 – 11, 2019, Pescara, Italy. See <http://www.j-npcs.org/abstracts/vol2020no2.html>
- Chairman of Organizing Committee for Virtual (online) 6th Dynamics Days Central Asia Conference, June 2-5, 2020, Nazarbayev University, Nur-Sultan, Kazakhstan.

Book Authorship:

1. "Dynamical Systems and Chaos", volume 1, in Greek (G. Pappasotiriou, Athens, 1995).
2. "Dynamical Systems and Chaos", volume 2, in Greek (University of Patras Press, Patras, 1997).
3. "Nonlinear Ordinary Differential Equations", in Greek (G. Pnevmatikos. Athens, 1997).
4. "Differential Equations I", in Greek (Hellenic Open University Press, 2002).
5. “The Wonderful World of Fractals”, in Greek (Leader Books, Athens, 2004).
6. “Complex Hamiltonian Dynamics”, in English (Synergetics series of Springer Verlag, April 2012).
7. «Speaking to Athena about Chaos and Complexity», Pataki Publ. House, Athens, 2017.

Editorial Activities:

- "Singular Behavior and Nonlinear Dynamics" Proceedings of Intern. Conf. August 18-26, 1988, Samos, Greece, ed. with Sp. and St. Pnevmatikos (World Scientific, 1989).
- Editor of Proceedings of NATO ARW on "Proton Transfer in Hydrogen-Bonded Systems" (Plenum, London, 1992).
- Editor of Proceedings of NATO ASI on "Chaotic Dynamics: Theory and Practice" (Plenum, London, 1992).
- Co - editor of the series "Order and Chaos", Proceedings of Panhellenic Summer Schools on "Nonlinear Dynamics: Chaos and Complexity”, 7 volumes edited by G. Pnevmatikos (Athens, 1987, 1988, 1990, 1992, 1998, 2000, 2002) and 8th volume with K. Sfakianaki (Thessaloniki, 2003).
- Co – editor (with Professor Nikolaos Vlahos of the University of Thessaly) of the 9th volume of the series “Taksi kai Xaos” (Order and Chaos), University of Thessaly Press, 2006.
- Editor of two Special Issues of the International Journal of Bifurcation and Chaos, Volume: 16, Issue: 6 (June 2006) Volume: 16, Issue: 7 (July 2006) for the Proceedings of the Conference “Complexity in Science and Society”, Patras and Olympia, 14 – 26 July, 2004.
- Co – editor (with Professor Spyros Pnevmatikos of the University of Patras) of the 10th volume of the series “Taksi kai Xaos” (Order and Chaos), University of Patras Press, 2008.
- Co – editor (with Prof. K. Hizanidis and Dr. A. Provata) of the volume 11(2) of the International Journal of “Nonlinear Phenomena and Complex Systems”, Proceedings of the 20th International Conference –Summer School “Nonlinear Dynamics: Chaos and Complexity”, June 2008.

- Chairman of Editorial Committee for European Physics Journal Special Theme issue with the proceedings of the 5th Ph.D. School Conference on “Mathematical Modeling of Complex Systems”, EPJST **225 (5)**, Springer, 2016.
- Co -Editor of Proceedings of 6th Ph.D. School on “Mathematical Modeling of Complex Systems”, University of “G. d’ Annunzio”, Pescara, July 3 – 10, 2019, Nonlinear Phenomena in Complex Systems, **2 (3)**, 2020.

Editorial Board Membership:

- Member of the Editorial Board of the "International Journal of Bifurcation and Chaos", Editor-in-Chief Prof. Guanron Chen, World Scientific.
- Member of Editorial Board of the journal "Russian Journal of Nonlinear Dynamics ", Editors-in-Chief A. Borisov, I. Mamaev, Institute of Computer Science Izhevsk.
- Member of the Editorial Board of the "Nonlinear Phenomena in Complex Systems", Editors-in-Chief A. Gaisyonov and V I. Kuvshinov, Minsk, Belarus.

M. Sc. Theses Supervision:

1. G. Thanassoulia, "Period Doubling Bifurcations and Break – Up of Invariant Curves in Conservative Dynamical Systems", University of Patras, May 1998.
2. Y. Exintaridis, "Analytical and Numerical Solution of Linear and Nonlinear Partial Differential Equations", University of Patras, May 1999.
3. C. Georgalakis, "Study of the Dynamics and Breather Solutions of 1-Dimensional Non-linear Lattices", University of Patras, June 1999.
4. E. Tzanaki, "Nonlinear Analysis of Time Series of Seismological Data", University of Patras, June 2000.
5. C. Apokis, "Propagation of Solitary Surface Waves in a Shallow Water Layer", University of Patras, March 2003.
6. P. Soulis, “Regular and Chaotic Motion in Sitnikov’s Circular 3-Body Problem”, University of Patras, October 2003.
7. A. Manos, “Regular and Chaotic Motion of Multi-Degree of Freedom Hamiltonian Systems”, University of Patras, October 2004.
8. Th. Vardaxis, “Dynamics of Epidemics: Analytical and Numerical Study of Nonlinear Models”, University of Patras, July 2006.
9. P. Yannopoulos, “Transport and Diffusion of Atmospheric Pollution by the Wind”, University of Patras, October 2007.
10. A. Vlisidou, “Study of the Function of a Catalytic Converter Using Partial Differential Equations”, October 2008.
11. V. Soulioti, “Study of a Dynamical System in Discrete Time with a Linear Part and Discontinuity”, October 2008.
12. O. Pandis, “Traces of Chaos in Quantum Mechanics: Some Examples of Quantum Billiards”, June 2009.
13. S. Koutsokeras, “Models of Population Evolution: Stable and Chaotic Dynamics”, March 2009.
14. M. Pashalidou, “Description and Study of Boundary Value Problems”, February 2010.
15. D. Koliniati, “Study of Bifurcations and Normal Forms of Vector Fields”, February 2010.
16. Ch. Papanicolaou, “Study of the van der Pol Equation in the plane and in the Presence of Periodic Perturbations”, April 2014.

17. Ilias Panagiotopoulos, "Localized Oscillations in Nonlinear Hamiltonian Lattices", October 2014.
18. Dimitra Karatzia, "Ordinary Differential Equations of Physical Sciences and Applications of q-Distributions, July 2016.
19. Evangelos Mitsokapas, "Statistical Mechanics and Entropy of Complex Systems", July 2016.
20. Christos Katsivelos, "Dynamics of Hamiltonian Systems and Localized Oscillations in a 2- Dimensional Lattice of Graphene", December 2016.
21. Banu Zharas, "Synchronization Properties of Coupled Nonlinear Oscillators With Applications to Photonic arrays", MSc. Thesis, Nazarbayev University (May 2019).
22. Aigerim Zholmaganbetova, "The Dynamics of Hamiltonian Lattices with Application to Hollomon Oscillators", MSc. Thesis, Nazarbayev University (May 2019).

Ph. D. Theses Supervision:

1. N. Budinsky, "Stability of Periodic Orbits and Chaotic Behaviour in Hamiltonian Systems" Math. Dept., Clarkson University (1984).
2. G.M. Mahmoud, "Analytical and Numerical Approaches to Periodic Orbits of Dynamical Systems", Math. Dept., Clarkson University (1987).
3. M. Bier, "On Global Properties of Solutions of Nonlinear Systems", Math. Dept., Clarkson University (1988).
4. V. Papageorgiou, "Analytical Approaches to Integrable and Near-Integrable Dynamical Systems", Math. Dept., Clarkson University (1988).
5. L. Drossos, "Analytical and Numerical Methods of Chaotic Dynamics", Math. Dept., University of Patras, (1993).
6. G. Papaioannou, "Analysis and Prediction of Chaotic Time Series Using Methods of Nonlinear Dynamics", Math. Dept. University of Patras, June 1998.
7. V. M. Rothos, "Mel'nikov Analysis and Homoclinic Chaos in Nonlinear Dynamical Systems", Math. Dept., University of Patras, September 1998.
8. M. Kollmann, "Coherence and Diffusion in Classical and Quantum Nonlinear Systems", Co – advisor with Professor Hans W. Capel, Dept. of Physics, University of Amsterdam, December 1998 .
9. V. Marinakis, "Integrability and Solvability of Nonlinear Systems with Algebraic Singularities", Math. Dept., University of Patras, November, 2001.
10. J. Bergamin, "Localized Oscillations in 1-D Nonlinear Lattices", Math. Dept., University of Patras, October 2003.
11. C. Antonopoulos, "Stability and Chaos in Multi-Degree of Freedom Hamiltonian Systems: From Classical to Statistical Mechanics", Math. Dept., University of Patras, July 2007.
12. A. Manos, "A Study of Hamiltonian Dynamics With Applications to Models of Barred Galaxies", University of Patras and University of Marseille I (Université de Provence), November 2008.
13. H. Christodoulidi, "The Dynamics of Low – Dimensional Tori in Multidimensional Hamiltonian Systems", Math. Dept., University of Patras, February, 2010.
14. K. Andriopoulos, "Mathematical Methods in Microeconomics and Finance", Math. Dept., University of Patras, February, 2011.
15. S. Scarlatos, "Voter Models with Confidence Parameter", Math. Dept., University of Patras, July 2013.

16. (Co – Promotor) G. Papantonopoulos, “On the use of complexity methods in “personalized Periodontology and Implant Dentistry”, University of Amsterdam, December 2016.

List of Publications:

(More than 4800 citations, excluding myself and co-authors, h-index: 39, g-index: 69, Source: Google Scholar, Research Gate Score: 39)

In Refereed Journals:

1. T. Bountis, R. Helleman, "Exact Statistical Mechanics of Some Classical 1D Systems", *J. Math. Phys.* **19** (2), 477 (1978).
2. R. Helleman, T. Bountis, "Periodic Solutions of Arbitrary Period, Variational Methods", *Lectures Notes in Physics* **93**, 353 (1978).
3. T. Bountis, R. Helleman, "On the Stability of Periodic Orbits of Two-Dimensional Mappings", *J. Math. Phys.* **22** (9), 1867 (1981).
4. T. Bountis, "Period-Doubling Bifurcations and Universality in Conservative Systems", *Physica* **3D**, 577 (1981).
5. T. Bountis, H. Segur, F. Vivaldi, "Integrable Hamiltonian Systems and the Painleve Property", *Phys. Rev.* **A25**, 1257 (1982).
6. N. Budinsky, T. Bountis, "Stability of Nonlinear Modes and Chaotic Properties of FPU Lattices", *Physica* **8D**, 445 (1983).
7. T. Bountis, M. Bier, J. Hijmans, "On the Integrability of Some Generalized Lotka-Volterra Systems", *Physics Letters* **97A** (1,2) 11 (1983).
8. T. Bountis, "Note on the Painleve Property of Anharmonic Systems with an External Periodic Field", *Physics Letters* **97A** (3), 85 (1983).
9. T. Bountis, N. Budinsky, C.R. Eminhizer, "Resonance Criteria for Minimizing Blow-Up Effects in Colliding Beams", *Nucl. Instr. Meth.* **227**, 205 (1984).
10. A. Ramani, B. Grammaticos, T. Bountis, "Integrability and the Painleve Property of Low-Dimensional Systems", *J. Math. Phys.* **25**(4), 878 (1984).
11. T. Bountis, B. Grammaticos, A. Ramani, "On the Complete and Partial Integrability of Non-Hamiltonian Dynamical Systems", *Physica* **128A**, 268, (1984).
12. M. Bier, T. Bountis, "Remerging Feigenbaum Trees in Dynamical Systems", *Phys. Letters* **104A** (5), 239 (1984).
13. G. Stephanedes, T. Bountis, "Dynamic Transit Scheduling Under Efficiency Constraints", *Transp. Res.* **19B** (2), 95 (1985).
14. T. Bountis, V. Papageorgiou, P. Winternitz, "On the Integrability of Nonlinear ODE's with Superposition Principles", *J. Math. Phys.* **27**(5), 1215 (1986).
15. T. Bountis, "Analytical and Numerical Studies of 4-D Mapping Models of Colliding Beams", *J. of Part. and Accel.* **19**, 1981 (1986).
16. T. Bountis, V. Papageorgiou, M. Bier, "On the Singularity Analysis of Intersecting Separatrices in Near-Integrable Dynamical Systems", *Physica* **24D**, 292 (1986).
17. T. Bountis, G.M. Mahmoud, "Synchronized Periodic Orbits of Beam-Beam Interaction Models in One and Two Space Dimensions", *Journal of Part. and Accel.*, Vol. **22**, pp. 129-147 (1987).
18. G.M. Mahmoud, T. Bountis, "Synchronized Periodic Solutions of a Class of Periodically Driven Nonlinear Oscillators", *J. of Appl. Mech.*, vol. **55**, 721 (1988).
19. T. Bountis, G. Tsarouhas, R. Herman, "Normal Form Solutions of Dynamical Systems in the Basin of Attraction of their Fixed Points", *Physica* **33D**, 34 (1988).
20. T. Bountis, G. Tsarouhas, "On the Application of Normal Forms Near Attracting Fixed Points of Dynamical Systems", *Physica* **133A**, 160 (1988).

21. V. Papageorgiou, L. Glasser, T. Bountis, "Mel'nikov's Function for 2-Dimensional Maps", *SIAM J. of Appl. Math.* **49**(3), 692 (1989).
22. A. Ramani, B. Grammaticos, T. Bountis, "The Painleve Property and Singularity Analysis of Integrable and Non-Integrable Systems", *Physics Reports*, **180** (3), 159 (1989).
23. G. Sohos, C. Polymilis, T. Bountis, "Is the Hamiltonian $H = 1/2(\dot{x}^2 + \dot{y}^2 + x^2 y^2)$ Completely Chaotic?", *Nuovo Cim.* **104B** (3), 339 (1989).
24. M. Vrahatis, T. Bountis, "A Convergence-Improving Method for Computing Periodic Orbits of Dynamical Systems Near Bifurcation Points", *J. Comp. Phys.* **88** (1), 1 (1990).
25. L. Drossos, J. Nicolis, T. Bountis, "Chaos in Nonlinear Paradoxical Games", *Nuovo Cim.* **12D**(2), 155 (1990).
26. T. Bountis, St. Pnevmatikos, "Josephson Junction Dynamics in the Presence of Inhomogeneities", *Phys. Lett.* **143A** (4,5), 221 (1990).
27. L. Drossos, T. Bountis, "Period-Doubling Bifurcations in Measure-Preserving Flows", *Phys. Lett.* **143A** (8), 379 (1990).
28. T. Bountis, St. Pnevmatikos, St. Protogerakis, G. Sohos, "Fluxon Trapping by Inhomogeneities in Long Josephson Junctions", *Lecture Notes in Physics* **353** (Springer, 1990).
29. T. Grapsa, M. Vrahatis, T. Bountis, "Solving Systems of Nonlinear Equations Using a Rotating Hyperplane in R^{n+1} ", *Int. J. Comp. Math.* **35**, 133 (1990).
30. T. Bountis, L. Drossos, I.C. Percival, "On Nonintegrable Systems With Square Root Singularities in Complex Time", *Phys. Lett* **159A** , 1 (1991).
31. M. Ding, T. Bountis, E. Ott, "Algebraic Escape in Higher Dimensional Hamiltonian Systems", *Phys. Lett.* **151A** (8), 395 (1991).
32. T. Bountis, L. Drossos, I.C. Percival, "Nonintegrable Systems with Algebraic Singularities in Complex Time", *J. Phys.* **24A**, 3217 (1991).
33. T. Bountis, "What Can Complex Time Tell Us About Real Time Dynamics?", *Int. J. of Bifurcation & Chaos*, **2** (2), 217 (1992).
34. G. Papaioannou, T. Bountis, G. Pavlos and L. Karakatsanis, "Determinism and Noise in Surface Temperature Time Series", in *Ann. Geophys.* **11**, 947 (1993).
35. T. Bountis, L. Drossos, M. Lakshmanan and S. Parthasarathy, "On the Non-Integrability of a Family of DVP Oscillators", *J. Phys. A: Math. Gen.* **26**, 6927 (1993).
36. St. Komineas, M.N.Vrahatis and T. Bountis, "2-D-Universality of Period-Doubling Bifurcations in 3-D Conservative, Reversible Mappings", *Physica* **A211**, 218-233 (1994).
37. Th. Pavlopoulos and T. Bountis, "Impurity Effects in a Double Sine-Gordon Equation", *Phys. Lett.* **192A**(2), 215-221(1994).
38. T. Bountis and M. Kollmann, "Diffusion Rates in a 4-D Mapping Model of Accelerator Dynamics", *Physica* **71D** 122-131 (1994).
39. T. Skiniotis and T. Bountis, "Soliton Propagation in a System of Two Inductively Coupled Long Josephson Junctions", *Solitons, Fractals and Chaos*, **5** (12), 2571-2584 (1995).
40. A. Bezerianos, T. Bountis, G. Papaioannou and P. Polydoropoulos, "Nonlinear Time Series Analysis of Electrocardiograms", *Chaos* **5** (1), 95-101 (1995).
41. T. Bountis, "Investigating Non-Integrability and Chaos in Complex Time", *Physica* **D86** , 256-267 (1995).
42. T. Bountis, A. Goriely and M. Kollmann, "A Mel'nikov Vector for N-Dimensional Mappings", *Phys. Lett.* **206A**, 38-48 (1995).

43. G. Mahmoud, T. Bountis and G. Turchetti, "Synchronization in Parametrically Driven Hamiltonian Systems", *Nuovo Cimento*, **110B** (11), 1311-1322 (1995).
44. A. S. Fokas and T. Bountis, "Order and the Ubiquitous Occurrence of Chaos", *Physica* **A228** (1996), 236-244.
45. M. N. Vrahatis, T. Bountis and M. Kollmann, "Periodic Orbits and Invariant Surfaces in 4-D Nonlinear Mappings", *Int. J. of Bifurc. Chaos* **6** (8), pp. 1425-1437 (1996).
46. L. Drossos, O. Ragos, M. Vrahatis and T. Bountis, "A New Method for Computing Long Periodic Orbits of Dynamical Systems", *Phys. Rev. E*, **53** (1) (1996).
47. T. Bountis and V.M. Rothos, "On the Analytic Structure of 2 Degree of Freedom Hamiltonian Systems Around an Elliptic Fixed Point", *Nonlinearity* **9**, 877-886 (1996).
48. G.P. Kremmydas, A.V. Holden, M.J. Poole, A. Bezerianos, and T. Bountis, "Representation of Sinoatrial Node Dynamics by Circle Maps", *Intern. J. of Bifurc. and Chaos*, vol. **6** (10), pp. 1799-1805 (1996).
49. T.C. Bountis and L. Drossos, "Evidence of Natural Boundary and Nonintegrability of the Mixmaster Universe Model", *Journal of Nonlinear Science* **7** (1) (1997) 1-11.
50. S. Papadimitriou, A. Bezerianos and T. Bountis, "Secure Communication with Chaotic Systems of Difference Equations", *IEEE Trans. on Computers*, **46** (1), pp. 27-38 (1997).
51. V. M. Rothos and T. Bountis, "The Second Order Mel'nikov Vector", in "Regular and Chaotic Dynamics" **1** (2), (1997).
52. V. M. Rothos and T. Bountis, "Melnikov Analysis of Phase Space Transport in N-d.o.f Hamiltonian Systems", *Journal of Nonlinear Analysis*, **30** (3), (1997).
53. M. N. Vrahatis, H. Isliker and T. Bountis, "Structure and Breakdown of Invariant Tori in a 4-D Mapping Model of Accelerator Dynamics", *Int. J. of Bifurc. and Chaos* **7**(12), 2707-2722 (1997).
54. J. Laugesen, N. Carlsson, E. Mosekilde and T. Bountis, "Anomalous Statistics for Type-III Intermittency", *Open Systems and Information Dynamics*, **4**, 393--405, (1997).
55. V. M. Rothos and T. Bountis, "The Dynamics of Coupled Perturbed Discretized NLS Equations", *Physica* **113 D**, p. 326 (1998).
56. M. Kollmann and T. Bountis, "A Melnikov Approach to Soliton-like Solutions of Systems of Discretized Nonlinear Schrödinger Equations", *Physica* **113 D**, p. 397 (1998).
57. V. Marinakis, S. Abenda and T. Bountis, "Finitely and Infinitely Sheeted Solutions in Some Classes of Nonlinear ODEs", *Regular and Chaotic Dynamics*, Vol. **3** (4) (1998).
58. M. Kollmann, H.W. Capel and T. Bountis, "Breathers and Multi-Breathers in a Damped, Periodically Driven Discretized NLS Equation", *Phys. Rev. E* **60**, 1195 (1998).
59. S. Papadimitriou, A. Bezerianos and T. Bountis, "Radial Basis Function Networks as Chaotic Generators for Secure Communication Systems", *Int. J. Bifurc. Chaos* **9** (1), 221-232 (1999).
60. V. Basios, T. Bountis and G. Nicolis, "Controlling the Onset of Homoclinic Chaos Due to Parametric Noise", *Phys. Lett. A* **251**, 250-258 (1999).
61. J. Laugesen, E. Mosekilde, T. Bountis and S. P. Kuznetsov, "Type-II Intermittency in a Class of Two Coupled 1-D Maps", *Discr. Dyn. Nat. and Soc.* **5**, 133-245 (2000).
62. T. Bountis, C.F. Starmer and A. Bezerianos, "Solitary Pulses and Wave Front Formation in an Excitable Medium", *Progr. Theor. Phys. Suppl.* **139**, 12-33 (2000).

63. V. Marinakis, T. Bountis, "Special Solutions of a New Class of Water Wave Equations", *Comm. Appl. Anal.* **4** (3), 433-445 (2000).
64. I. Kyprianidis, I. Stouboulos and T. Bountis, "Antimonotonicity and Chaotic Dynamics in a 4th Order Electrical Circuit", *Int. J. Bifurc. Chaos* **10** (8), 1903-1915 (2000).
65. T. Bountis, H.W. Capel, M. Kollmann, J.C. Ross, J.M. Bergamin and J.P. van der Weele, "Multibreathers and Homoclinic Orbits in 1-Dimensional Lattices", *Phys. Lett.* **268A**, 50-60 (2000).
66. N. Lambrakis, A.S. Andreou, P. Polydoropoulos, E. Georgopoulos, T. Bountis, "Nonlinear Analysis and Forecasting of a Salt Water Karstic Spring", *Water Resources Research*, **36** (4) (2000), 875-884.
67. G. M. Mahmoud, T. Bountis and S. Ahmed, "Stability Analysis for Systems of Nonlinear Hill's Equations", *Physica* **286A**, 133-146(2000).
68. J. Bergamin, T. Bountis and C. Jung, "A Method for Locating Symmetric Homoclinic Orbits Using Symbolic Dynamics", *J. Phys. A: Math. Gen.*, **33**, 8059-8070 (2000).
69. S. Papadimitriou, A. Bezerianos, T. Bountis and G. Pavlides, "Secure Communication Protocols With Discrete Nonlinear Chaotic Maps", *J. Syst. Archit.* **47**, 61-72 (2001).
70. S. Papadimitriou, T. Bountis, S. Mavroudi and A. Bezerianos, "A Probabilistic Symmetric Encryption Scheme for Very Fast Secure Communication Based on Chaotic Systems of Difference Equations", *Int. J. Bifurc. Chaos*, **11** (12) 3107-3115 (2001).
71. J. S. Nicolis, T. Bountis and K. Togias, "The Dynamics of Self-Referential Paradoxical Games", *Dynamical Systems*, **16** (4), 319 - 332 (2001).
72. S. Abenda, V. Marinakis and T. Bountis, "On the Connection Between Hyperelliptic Separability and Painleve Integrability", *J. Phys. A: Math. Gen.*, **34**, 3521-3539 (2001).
73. J. Bergamin, T. Bountis and M. Vrahatis, "Homoclinic Orbits of Invertible Maps", *Nonlinearity* **15**, 1603 – 1619 (2002).
74. T. Bountis, J. Bergamin and V. Basios, "Stabilization of Discrete Breathers Using Continuous Feedback Control", *Phys. Lett.* **A295**, 115 – 120 (2002).
75. E. Tzirtzilakis, M. Xenos, V. Marinakis and T. Bountis, "Interactions and Stability of Solitary Waves in Shallow Water", *Chaos, Solitons and Fractals*, **14**, 87 - 95 (2002).
76. G. M. Mahmoud, T. Bountis and S. Ahmed, "On the Stability Analysis of Strongly Nonlinear Coupled Hill's Equations", *Int. J. Diff. Eq. Appl.* **4** (4), 437-465 (2002).
77. J. M. Bergamin, Sp. Kamvyssis and T. Bountis, "A Numerical Study of the Perturbed Semi classical Focusing Nonlinear Schroedinger Equation", *Phys. Lett.* **A304**, 85-94 (2002).
78. E. Tzirtzilakis, V. Marinakis, C. Apokis and T. Bountis, "Soliton - Like Solutions of Higher Order Water Wave Equations of the KdV Type", *J. Math. Phys.* **43** (12) (2002) 6151.
79. A. Leontitsis, J. Pagge and T. Bountis, "Large Noise Level Estimation", *Int. J. Bifurc. Chaos* **13** (8) (2003) 2309.
80. J.E. Skinner, E.D. Yankulova, G. Yannopoulos and T. Bountis, "Nonlinear Analysis of a Drosophila ECG Time Series", *Dros. Inf. Serv.* **85** (2003) 111.
81. Ch. Skokos, C. Antonopoulos, T. Bountis and M. N. Vrahatis, "How does the Smaller Alignment Index (SALI) Distinguish Order from Chaos?", *Prog. Theor. Phys. Supp.* **150** (2003) 439.

82. A. Leontitsis, T. Bountis and J. Pagge, "An Adaptive Way for Improving Noise Reduction Using Local Geometric Projection", *Chaos* **14** (1), 106-110 (2004).
83. Ch. Skokos, C. Antonopoulos, T. Bountis and M. N. Vrahatis, "Detecting Order and Chaos in Hamiltonian Systems by the SALI Method", *J. Phys. A: Math. Gen.*, **37**, 6269-6284 (2004).
84. P. Panagopoulos, T. Bountis and C. Skokos, "Existence and Stability of Localized Oscillations in 1-D Lattices With Soft Spring and Hard Spring Potentials", *ASME Transactions, Journal of Vibration and Acoustics*, vol. **126**, 520 – 527 (October 2004).
85. G. M. Mahmoud and T. Bountis, "The Dynamics of Complex Nonlinear Oscillators: A Review", *Intern. J. of Bifurcation and Chaos*, vol. **14** (11) Vol. 14, 3821-3846, (2004) .
86. C. Efthymiopoulos, T. Bountis and A. Manos, "Explicit Construction of Integrals with Quasi-Monomial Terms from the Painleve Series", *Regular and Chaotic Dynamics*, vol. **9**, no. 3, p. 385 – 398 (2004).
87. C. Antonopoulos, T. Bountis and Ch. Skokos, "Chaotic Dynamics of N – Degree of Freedom Hamiltonian Systems", *Int. Journal Bifurc. Chaos* **16** (6), 1777-1794, June 2006.
88. C. Antonopoulos and T. Bountis , "Stability of Simple Periodic Orbits and Chaos in an FPU Lattice", *Phys. Rev. E* **73**, 056206 (2006).
89. T. Bountis and Ch. Skokos, 'Applications of the SALI Detection Method to Accelerator Mappings', *Nucl. Instr. Meth. Phys. Res. A* **561**, p. 173-179, 2006.
90. P. Maniadis and T. Bountis, 'Quasiperiodic and Chaotic Breathers in a Parametrically Driven System Without Linear Dispersion', *Phys. Rev. E* **73**, 046211 (2006).
91. Kyprianidis, I. M., Bogiatzi, A. N., Papadopoulou, M., Stouboulos, I. N., Bogiatzis, G. N. and Bountis, T., "Synchronizing Chaotic Attractors of Chua's Canonical Circuit: The Case of Uncertainty in Chaos Synchronization", *Intern. J. of Bifurc. Chaos* **16** (7), 1961 – 76 (2006).
92. T. Bountis and Ch. Skokos, "Space Charges Can Significantly Affect the Dynamics of Accelerator Maps", *Physics Letters A* **358**, Issue 2, 9 October 2006, Pages 126-133.
93. P. Katsaloulis, T. Theoharis, W.M. Zheng, B. L. Hao, A. Bountis, Y. Almirantis and A. Provata, "Long-Range Correlations in RNA-Polymerase II Promoter Sequences Across Organisms", *Physica A* **366**, p. 308 – 322, 2006.
94. T. Bountis, "Stability of Motion: From Lyapunov to N – Degree of Freedom Hamiltonian Systems", "Nonlinear Phenomena and Complex Systems", vol. **9** (3), 209 -239, 2006.
95. G. Mahmoud, T. Bountis E. E.Mahmoud, "Active Control and Chaos Synchronization of the Complex Chen and Lü Systems", *International Journal of Bifurcation and Chaos*, **17** (12) (2007).
96. P. Soulis, T. Bountis and R. Dvorak, "Stability of Motion in the Sitnikov 3 – Body Problem", *Cel. Mech. Dyn. Astron.* **99**, 129 (2007).
97. Ch. Skokos, T. Bountis and C. Antonopoulos, "Geometrical Properties of Local Dynamics in Hamiltonian Systems: The Generalized Alignment (GALI) Method", *Physica D* **231**, 30 (2007).
98. C. Antonopoulos and T. Bountis, "Detecting Order and Chaos by the Linear Dependence Index (LDI) Method", *ROMAI* **2** (2) Journal, 1 – 13 (2007).
99. H. Christodoulidi and T. Bountis, "Low-Dimensional Quasiperiodic Motion in Hamiltonian Systems", *ROMAI Journal* **2** (2), 37– 44 (2007).

100. Y.G Petalas, C.Antonopoulos, T.Bountis, M.N Vrahatis, “Evolutionary Methods for the Estimation of the Stability Domain and Frequency Optimization of Symplectic Maps”, *International Journal of Bifurcation and Chaos*, Vol. **18 No: 8**, pp. 2249-2264 (2008).
101. Ch. Skokos, T. Bountis and C. Antonopoulos, “Detecting Chaos, Determining the Dimensions of Tori and Predicting Slow Diffusion in Fermi – Pasta – Ulam Lattices by the Generalized Alignment Method”, *European Physics Journal – Special Topics*, vol. **165**, p. 5 - 14 (2008).
102. P. Soulis, K. Papadakis and T. Bountis, “Periodic Orbits and Bifurcations in the Sitnikov 4 – Body Problem”, *Celest. Mech and Dyn. Astr.* **100**, 251 – 266 (2008).
103. T. Manos, Ch. Skokos, E. Athanassoula and T. Bountis, “Studying the Global Dynamics of Conservative Dynamical Systems using the SALI Chaos Detection Method”, *Nonlinear Phenomena and Complex Systems*, vol. **11(2)** (2008).
104. G. M. Mahmoud, M. A. Al-Kashif, T. Bountis and S. A. Aly, “Dynamical Properties and Chaos Synchronization of Complex Nonlinear Equations for Detuned Lasers”, *Journal of Dynamical Systems*, Volume **24(1)** , 63 - 79 (2008).
105. S. Anastassiou, T. Bountis and Y. Petalas, “On the Topology of the Lü Attractor and Related Systems”, *J.Phys. A:Math. Theor.* **41**, 485101 (2008).
106. Andriopoulos K., Bountis T. and Papadopoulos N., “Theory of Oligopolies: Dynamics and Stability of Equilibria”, *Romanian Journal of Applied and Industrial Mathematics* **4(1)** 47-60 (2008).
107. G. M. Mahmoud, T. Bountis, G. M. AbdEl-Latif, E. E. Mahmoud, “Chaos Synchronization of Two Different Chaotic Complex Chen and Lü systems”, *Journal of Nonlinear Dynamics*, Volume **55**, Numbers 1-2 / January (2009)
108. T. Bountis, T. Manos and E. Christodoulidi, “Application of the GALI Method to Localization Dynamics in Nonlinear Systems”, *Journal of Computational and Applied Mathematics*, Volume **227**, Issue 1, Pages 17–26 (2009).
109. Y.G Petalas, C.Antonopoulos, T.Bountis, M.N Vrahatis, “Detecting Resonances in Conservative Maps Using Evolutionary Algorithms”, *Phys. Lett.* **A373**, 334 – 341 (2009).
110. T. Bountis and K. Papadakis, "The Stability of Vertical Motion in the Circular Sitnikov N--Body Problem", *Cel. Mech. Dyn. Astr.* **104(1,2)** 205 -225 (2009).
111. K. Andriopoulos, T. Bountis, J.P. van der Weele and E. Tsigaridi, “The Shape of Soliton-like Solutions of a Higher Order KdV Equation Describing Water Waves”, *J. Nonlin. Math. Physics*, **16, s-1**, 1-12 (2009).
112. H. Christodoulidi, C. Efthymiopoulos and T. Bountis, “Energy Localization on q-Tori, Long Term Stability and the Interpretation of the FPU Paradox”, *PRE* **81**, 016210 (2010).
113. C. Antonopoulos, V. Basios and T. Bountis, “Weak Chaos and the ‘Melting Transition’ in a Confined Microplasma System”, *PRE* **81**, 016211(2010).
114. Y. Kominis and T. Bountis, “Analytical Solutions of Systems with Piecewise Linear Dynamics”, *Int. J. Bifurc. Chaos* **20**, Issue: 2, 509-518 (2010).
115. T. Bountis, G. Chechin and V. Sakhnenko, “Discrete Symmetries and Stability in Hamiltonian Dynamics”, *International J. of Bifurc. Chaos*, **6** , 1539-1582 (June, 2011). <http://arxiv.org/abs/1005.4308>
116. Y. Kominis, T. Bountis, and K. Hizanidis, “Breathers in a Nonautonomous Toda Lattice with Pulsating Coupling”, *Phys. Rev. E* **81**, 066601 (2010). <http://pre.aps.org/abstract/PRE/v81/i6/e066601>

117. C. Antonopoulos, T. Bountis and V. Basios, “Quasi--Stationary Chaotic States in Multi--Dimensional Hamiltonian Systems”, *Physica A*, Vol. **390**, 3290-3307. (2011). <http://arxiv.org/abs/1009.3049>
118. S. Anastassiou, T. Bountis and Sp. Pnevmatikos, “Classification of Dynamical Systems Based on a Decomposition of their Vector Fields”, *Journal of Differential Equations*, Volume 253, Issue 7, 1 October 2012, Pages 2252–2262
119. G. Ruiz, T. Bountis and C. Tsallis, “Time--Evolving Statistics of Chaotic Orbits of Conservative Maps in the Context of the Central Limit Theorem”, *Intern. J. Bifurc. Chaos*, Vol. **22** (9), pp. 12502 (2012). <http://arxiv.org/pdf/1106.6226.pdf>
120. T. Bountis, T. Manos and Ch. Antonopoulos, “Complex Statistics in Hamiltonian Barred Galaxy Models”, *Celestial Mechanics and Dynamical Astronomy*, Volume 113, Issue 1 (2012), Page 63-80 (2012). <http://arxiv.org/abs/1108.5059>
121. S. Anastassiou, T. Bountis and Sp. Pnevmatikos, “Quadratic Vector Fields Equivariant Under the D_2 Symmetry Group”, *Int. J. Bifurcation Chaos* **23**, 1350017 (2013) [14 pages] DOI: 10.1142/S021812741350017X (2013).
122. G. Papantonopoulos, K. Takahashi, T. Bountis and B.G. Loos, “Using Cellular Automata Experiments to Model Periodontitis: A First Step Towards Understanding the Nonlinear Dynamics of the Disease”, *Int. J. Bifurcation Chaos* **23**, 1350056 [17 pages] (2013).
123. T. Manos, T. Bountis and H. Skokos, “Interplay Between Regular and Chaotic Motion in a Time-Dependent Barred Galaxy Model”, *J. Phys. A: Math. Theor.* 46 (2013) 254017. <http://arxiv.org/abs/1208.3551>
124. G. Papantonopoulos, K. Takahashi, T. Bountis, and B.G. Loos, “Aggressive Periodontitis Defined by Recursive Partitioning Analysis of Immunologic Factors”, *Journal of Periodontology*”, Vol. **84**, No. 7 , Pages 974-984 (2013).
125. G. Papantonopoulos, K. Takahashi, T. Bountis, B.G. Loos, “Mathematical Modeling Suggests That Periodontitis Behaves as a Nonlinear Chaotic Dynamical Process, *Journal of Periodontology*, Vol. **84**, No. 10, Pages e29-e39 , DOI 10.1902/jop.2013.120637 (2013).
126. Y. Kominis and T. Bountis, “Stability and Dynamics of Nonautonomous Systems with Pulsed Nonlinearity”, *Phys. Rev. E* **88**, 042924 – Published 30 October 2013.
127. J. Hizanidis, V. Kanas, A. Bezerianos, and T. Bountis, “Chimera States in Nonlocally Coupled Networks of Hindmarsh-Rose Neuron Models”, *Intern. J. Bifurc. Chaos*, vol. **24** (3) 1450030 (2014). <http://dx.doi.org/10.1142/S0218127414500308>
128. T. Bountis, V. G. Kanas, J. Hizanidis and A. Bezerianos, “Chimera States in a Two-Population Network of Coupled Pendulum –Like Elements”, to appear in *European Physics Journal Special Topics* Volume 223, Issue 4, April 2014, p. 721 – 728, “Synchronization of Pendula Systems”, Guest Editors: T. Kapitaniak and J. Kurths. <http://arxiv.org/abs/1308.5528>
129. H. Christodoulidi, T. Bountis and J. P. van der Weele, “Phase Transitions in Models of Bird Flocking”, to appear in the special volume honoring the memory of Professor John S. Nicolis, “Chaos, Information Processing and Paradoxical Games”, World Scientific Publishing Company, edited by G. Nicolis and V. Basios (2014).
130. C. Antonopoulos, T. Bountis, Ch. Skokos, and L. Drossos, “Complex Statistics and Diffusion in Disordered Nonlinear Particle Chains”, Focus Issue: "Chaos Detection Methods And Predictability" Gottwald G. & Skokos Ch. (eds.), 2014, *Chaos*, Volume 24, Issue 2, 024405 (2014); <http://dx.doi.org/10.1063/1.4871477>
131. G. Papantonopoulos, K. Takahashi, T. Bountis B.G. Loos, “Artificial neural networks for the diagnosis of aggressive periodontitis trained by immunologic parameters”, *PLoS ONE* 9(3): e89757. doi:10.1371/journal.pone.0089757, 2014.

132. Ch. Antonopoulos, G. Michas, F. Vallianatos and T. Bountis, “Evidence of q-Exponential Statistics in Greek Seismicity”, *Physica A*, Volume 409, 2014, 71–77.
133. H. Christodoulidi, C. Tsallis and Tassos Bountis, “Fermi-Pasta-Ulam model with long range interactions: Dynamics and thermostatics”, *European Physics Journal Letters EPL*, **108**, 40006, <http://arxiv.org/abs/1405.3528> (2014).
134. H. Christodoulidi, T. Bountis, C. Tsallis and L. Drossos, “Chaotic Behavior of the Fermi-Pasta-Ulam Model with Different Ranges of Particle interactions”, *J. Stat. Mech.* **12** (12) (2016) 123206. DOI: [10.1088/1742-5468/aa4f0e](https://doi.org/10.1088/1742-5468/aa4f0e)
135. G. Papantonopoulos, C. Gogos, E. Housos, T. Bountis and B. G. Loos, “Prediction of individual implant bone levels and the existence of implant phenotypes”, *Clinical Implant Oral Research*, 1st June 2016, Version of Record online: 1 JUN 2016 | DOI: 10.1111/clr.12887
136. T. Bountis, A.S. Fokas and E. Psarakis, “Fractal Analysis of Tree Paintings by Piet Mondrian (1872 – 1944)”, *International Journal of Arts and Technology to appear* (2016).
137. T. Bountis and F. D. Nobre, “Travelling-Wave and Separated Variable Solutions of a Nonlinear Schroedinger Equation”, *J. Math. Phys.* **57**, 082106 (2016).
138. T. Bountis and P. Vanhaecke, “Lotka – Volterra Systems Satisfying a Strong Painleve Property”, *Physics Letters A*, Volume 380, Issue 47, 9 December 2016, Pages 3977–3982 <http://authors.elsevier.com/sd/article/S0375960116309963>
139. Y. Kominis, T. Bountis and S. Flach, “The Asymmetric Active Coupler: Nonlinear Supermodes and Directed Transport”, *Scientific Reports* [Sci Rep.](https://doi.org/10.1038/srep33699) 2016; 6: 33699.
140. S. Anastassiou, T. Bountis and A. Bäcker, “Homoclinic Points of 2-D and 4-D Maps via the Parametrization Method”, *Nonlinearity*, 30 (10), 3799-3820, (2017). <https://arxiv.org/abs/1605.05521>
141. Y. Kominis, T. Bountis and S. Flach, “Stability Through Asymmetry: Modulationally Stable Nonlinear Supermodes of Asymmetric non-Hermitian Structures”, *Phys. Rev. A* **95**, 063832 (2017). <http://link.aps.org/doi/10.1103/PhysRevA.95.063832>
142. C. Antonopoulos, Ch. Skokos, T. Bountis and S. Flach, “Analyzing Chaos in Disordered Quartic-Sextic Klein-Gordon Lattices Using q-Statistics”, *Chaos, Solitons and Fractals* **104** (2017) 129–134. <https://arxiv.org/pdf/1705.06127.pdf>
143. Y. Kominis, V. Kovanis and A. Bountis, “Controllable Asymmetric Phase-Locked States in Coupled Semiconductor Lasers”, *Physical Review A*, **96**, 043836 (2017). <https://arxiv.org/pdf/1709.03823.pdf>
144. Y. Kominis, V. Kovanis and A. Bountis, “Spectral Signatures of Exceptional Points and Bifurcations in the Fundamental Active Photonic Dimer”, *Physical Review A* **96**, 053837 (2017). <https://arxiv.org/pdf/1710.01687.pdf>
145. S. Anastassiou, A. Bountis and A. Bäcker, “Recent Results on the Dynamics of Higher Dimensional Hénon Maps”, *Regular and Chaotic Dynamics*, 2018, Vol. 23, No. 2, pp. 161–177.
146. H. Christodoulidi, A. Bountis and L. Drossos, “The Effect of Long-range Interactions on the Dynamics and Statistics of 1D Hamiltonian Lattices with On-Site Potential”, *EPJST* **227** (5,6) 563 (2018). <https://arxiv.org/abs/1801.03282>
147. F. Parastesh, S. Jafari, H. Azarnoush, B. Hatef, A. Bountis, “Imperfect Chimera in a Ring of 4 – Dimensional Simplified Lorenz Systems”, *Chaos, Solitons and Fractals* **110** (2018) 203–208 (2018).
148. J. C. Macias Diaz, A. Bountis, “On the Transmission of Energy in β -Fermi–Pasta–Ulam Chains with Different Ranges of Particle Interactions”, *CNSNS*, vol. **63** (2018) 307–321 (2018).

149. Y. Kominis, Kent D. Choquette, A. Bountis and V. Kovanis, “Exceptional Points in Two Dissimilar Coupled Diode Lasers”, *Appl. Phys. Lett.* 113, 081103 (2018). <https://arxiv.org/pdf/1806.01098.pdf>
150. Y. Kominis, K. D. Choquette, V. Kovanis, and A. Bountis, “Antiresonances and Ultrafast Resonances in Coupled Twin Photonic Oscillator”, *IEEE Photonics Volume: 11 Issue: 1* (January 2019). <https://arxiv.org/abs/1808.03760>
151. Y. Kominis, J. Cuevas-Maraver, P. G. Kevrekidis, D. J. Frantzeskakis, and A. Bountis, “Continuous Families of Solitary Waves in Non-Symmetric Complex Potentials: A Melnikov Theory Approach”, *Chaos, Solitons and Fractals*, Vol. 118, 222-233 (2019).
152. J. E. Macias-Diaz, A. Bountis, H. Christodoulidi, “Energy Transmission in Hamiltonian Systems with Globally Interacting Particles and On-Site Potentials”, *Mathematics in Engineering*, 1(2): 343–358. DOI:10.3934/mine.2019.2.343 (April 2019). <https://www.aimspress.com/fileOther/PDF/MinE/mine-01-02-343.pdf>
153. A. Bountis, Zh. Zhunussova, K. Dosmagulova, “Steady States and Travelling Wave Solutions of the Heisenberg and M – I Spin Systems”, *Nonlinear Phenomena in Complex Systems*, vol. 22 (2), 116 – 127 (2019).
154. Y. Zhiyenbayev, Y. Kominis, C. Valagiannopoulos, V. Kovanis, and A. Bountis, “Enhanced Stability, Bistability, and Exceptional Points in Saturable Active Photonic Couplers”, *Physical Review A* **100**, 043834 (2019).
155. Y. Kominis, A. Bountis, and V. Kovanis. “Radically Tunable Ultrafast Photonic Oscillators via Differential Pumping”, *Journal of Applied Physics* **127**, 083103 (2020).
156. A. Bountis, Y. Kominis, A. J. Shena and V. Kovanis, “Complex Dynamics Induced by Asymmetry in Coupled Laser Systems”, *Russian Journal of Nonlinear Dynamics*, vol. 15, no. 4, pp. 429–455 (2019).
157. P. Skrzypacz, A. Bountis, D. Nurakhmetov and J. Kim, “Analysis of the Lumped Mass Model for the Cantilever Beam Subject to Grob's Swelling Pressure”, *CNSNS*, **85**, 105 230 (2020).
158. J. E. Macias Diaz and A. Bountis, “Nonlinear Supratransmission in Quartic Hamiltonian Lattices, with Globally Interacting Particles and On--Site Potentials”, *subm. for publication* (2020).
159. Sh. Kadirov, A. Kashkynbaev, P. Skrzypacz, K. Kaloudis and A. Bountis, “Periodic Solutions and the Avoidance of Pull-Instability in Non-Autonomous MEMs”, *submitted for publication* (2020).
160. J. Shena, Y. Kominis, A. Bountis and V. Kovanis, “Spatial Control of Localized Oscillations in Arrays of Coupled Laser Dimers”, *Phys. Rev. E* 102, 012201 (2020). <https://arxiv.org/pdf/2001.08430.pdf>
161. J. Shena, Y. Kominis, A. Bountis and V. Kovanis, “Coherence and Synchronization in Two Coupled groups of Semiconductor Lasers”, *submitted for publication* (2020).
162. A. Bountis, K. Kaloudis and Ch. Spitas, “Periodically Forced Nonlinear Oscillators With Hysteretic Damping”, *Journal of Computational Nonlinear Dynamics*, to appear (2020).
163. A. Bountis, K. Kaloudis, Th. Oikonomou, B. Many Manda, Ch. Skokos, “Stability Properties of 1-D Hamiltonian Lattices with Non-Analytic Potentials”, *International Journal of Bifurcation and Chaos*, to appear, 2020.
164. A. Bountis, J.J.P. Veerman and F. Vivaldi, “Cauchy Distributions for the Integrable Standard map”, *accepted for publication in Physics Letters A*, 2020. <https://arxiv.org/abs/2004.12912>

In Conference Proceedings and Other Publications:

1. T. Bountis, "Nonlinear Models in Dynamics and Statistical Mechanics", Ph. D. Thesis, Physics Dept., University of Rochester, N.Y. (1978).
2. C.R. Eminhizer, R. Helleman, T. Bountis, "Variational Studies of the Beam-Beam Interaction", BNL-25703 Report, Brookhaven National Lab., N.Y. (1979).
3. T. Bountis, E. Coutsias, "On the Application of Perturbation Methods to the Beam-Beam Interaction", A.I.P. Conf. Proc., ed. M. Month, J. Herrera, Vol. **57**, A.I.P. (1980).
4. T. Bountis, "The Role of Resonances, Stochasticity and Arnol'd Diffusion in the Beam-Beam Interaction", SLAC-2624 CONF-8005102, Stanford Linear Accelerator Center (1982).
5. G. Stephanedes, T. Bountis, "Nonlinear Dynamics in Transportation Demand and Supply", Proc. of 10th IMACS World Congress, Aug.8-13,1982.
6. T. Bountis, "Chaos in Hamiltonian Systems and Singularities in Complex Time", AIAA-82-1443, Astrodynamics Conf. AIAA, N.Y., (1982).
7. T. Bountis, C.R. Eminhizer, R. Helleman, "Global Stability in a 4D Mapping Model of Colliding Beams", in Long-Time Prediction in Dynamics, eds. W. Horton, L. Reichl (J. Wiley and Sons, 1983).
8. G. Stephanedes, T. Bountis, "Transportation and Economic Development Dynamics", Proc. of 7th Intern. Conf. on System Dynamics, Brussels, vol. **2**, 59 (1982).
9. T. Bountis, H. Segur, "Logarithmic Singularities and Chaotic Behavior in Hamiltonian Systems", A.I.P. Conf. Proc. Vol. **88**, ed. M. Tabor, Y. Treves, A.I.P. New York, (1982).
10. T. Bountis, "On the Analytic Structure of Chaos in Dynamical Systems", Proc. Sitges Conf. IV, Lecture Notes in Physics, **179**, 227 (Springer-Verlag, 1983).
11. T. Bountis, "A Singularity Analysis of Integrability and Chaos in Dynamical Systems", in Singularities and Dynamical Systems, ed. Sp. Pnevmatikos (N. Holland, Amsterdam, 1984).
12. G.M. Mahmoud, T. Bountis, "On Synchronized Periodic Orbits of a Periodically Forced van der Pol Oscillator", Proc. of Intern. Conf. Singular Behavior and Nonlinear Dynamics, ed. St. Pnevmatikos, T. Bountis and Sp. Pnevmatikos (World Scientific, 1990).
13. T. Bountis, M. Bier, V. Papageorgiou, "A Singularity Analysis Approach to the Solutions of Duffing's Equation", in Symmetries and Singularity Structures eds M. Lakshmanan, M. Daniel (Springer, Heidelberg, 1991).
14. T. Bountis, St. Tompaidis, "Strong and Weak Instabilities in 4D Mapping Models of Accelerator Dynamics" in Nonlinear Problems in Future Particle Accelerators, ed. by G. Turchetti and W. Scandale (World Scientific, 1991).
15. T. Bountis, T. Skiniotis, St. Pnevmatikos, "Fluxon Dynamics in Single and Coupled Long Josephson Junctions", in Nonlinear Superconductive Electronics and Josephson Devices, ed. by N.F. Pedersen et al (Plenum, London, 1992).
16. L. Drossos and T. Bountis, "On the Convergence of Series Solutions of Non-Integrable Systems With Algebraic Singularities in Complex Time", in Chaotic Dynamics : Theory and Practice ed. T. Bountis (Plenum, London, 1992).
17. L.B. Drossos and T. Bountis, "Iterative Fourier Methods for Computing Periodic Orbits : A Study of Stability and Chaos", Proc. of 1st Congress of Greek Association

- of Computational Mechanics, Sept. 3-4, 1992, ed. by D. Beskos (Patras University Press, Patras, 1993).
18. T. Bountis and T. Skiniotis, "Inductively Coupled Long Josephson Junctions: Collective Coordinate Analysis and I-V Characteristics", Proc. of NATO ASI, Future Directions in Nonlinear Dynamics, ed. P.L. Christiansen, J. Eilbeck and R. Parmentier (Plenum, London, 1993).
 19. M.N. Vrahatis, G. Servizi, G. Turchetti and T. Bountis, "A Procedure to Compute the Fixed Points and Visualize the Orbits of a 2-D Map", CERN Report, SL/93-06 (AP) (1993).
 20. M. N. Vrahatis, and T. Bountis, "An Efficient Method for Computing Periodic Orbits of Conservative Dynamical Systems", in "Hamiltonian Mechanics: Integrability and Chaotic Behavior", ed. J. Seimenis (Plenum, 1994).
 21. S. Papadimitriou, A. Bezerianos, T. Bountis and G.Pavlidis, "Chaotic Systems of Difference Equations for Real-Time Encryption", 1995 IEEE Workshop on "Nonlinear Signal and Image Processing", June 20-22, 145-149 (1995).
 22. V. Marinakis, T. Bountis: "On the Integrability of a New Class of Water Wave Equations". Proceedings of the Conference on Nonlinear Coherent Structures in Physics and Biology, Heriot-Watt University, Edinburgh, July 10-14 1995, eds D. B. Duncan and J. C. Eilbeck, published on WWW.
 23. T. Skiniotis and T. Bountis, "Stability of Breathers in Inductively Coupled Long Josephson Junctions", in: "Fluctuation Phenomena: Disorder and Nonlinearity", ed. A. Bishop et al. (World Scientific, 1995).
 24. P. Polydoropoulos, N. Lambrakis and T. Bountis, "Application of Nonlinear Methods to the Study of the Regime of the Saltwater Karstic Spring of "Almyros", Heraclion, Crete", Proc. of IAMG '97, ed. V. Pawlowsky-Glahn CIMNE, Barcelona (1997).
 25. T. Bountis, H. Isliker, M. Kollmann and M. Vrahatis, "Stability and Diffusion in 4-D Mappings Models of Accelerator Dynamics", Proc. of Conf. on "Nonlinear and Stochastic Beam Dynamics", Lueneburg, ed. H. Mais, DESY 97-161 Report (1998).
 26. V.M. Rothos and T. Bountis, "Mel'nikov's Vector and Singularity Analysis of Periodically Perturbed 2 D.O.F. Hamiltonian Systems", 3DHAM95 NATO ASI Proceedings, ed. C. Simo (Kluwer, 1999).
 27. V. Basios, T. Bountis and G. Nicolis, "The Effect of Parametric Noise on Escape Rates at the Onset of Homoclinic Chaos", Comp. Stoch. Mech., ed. P. Spanos (Balkema, Rotterdam, 1999).
 28. T. Bountis and L. Drossos, "On the Nonintegrability of the Mixmaster Universe Model", Proc. of 3DHAM95 NATO ASI ed. C. Simo (Kluwer, 1999).
 29. M. Vrahatis, T. Bountis and M. Kollmann, "On the Computation of Periodic Orbits and Invariant Surfaces in 4-D Mappings", Proceedings of NATO ASI 3DHAM95, ed C. Simo (Kluwer, 1999).
 30. T. Bountis and J.P. van der Weele, "Subharmonic Bifurcations and Melnikov's Theory in a System of Parametrically Driven Pendulums", Proceedings of 3rd Summer School, "Let's Face Chaos Through Nonlinear Dynamics", Maribor, Slovenia, 1996, Nonlinear Phenomena and Complex Systems, **2** (3),1-13 (1999).
 31. V. M. Rothos and T. Bountis, "Nonintegrability and Infinite Branching of Solutions of 2 D.O.F. Hamiltonian Systems", Proceedings of 3rd Summer School "Let's Face Chaos Through Nonlinear Dynamics", Maribor Slovenia, 1996, to appear in "Nonlinear Phenomena and Complex Systems" **2** (2), 63 – 71 (1999).

32. T. Bountis, Ch. Skokos and M. N. Vrahatis, "Computation and Stability of Periodic Orbits of Nonlinear Mappings", Proc. of 4th International Congress of Greek Association of Computational Mechanics, ed. D. Tsahalis, Patras (2002).
33. Ch. Skokos, C. Antonopoulos, T. Bountis and M. N. Vrahatis, "Smaller Alignment Index (SALI): Order and Chaos in Conservative Dynamical Systems", Proc. of 4th International Congress of Greek Association of Computational Mechanics, ed. D. Tsahalis, Patras (2002).
34. T. Bountis and J. Bergamin, «Discrete Breathers in Nonlinear Lattices: a Review and Recent Results», Proceedings of Conference "Galaxies and Chaos", Athens, September 16-19, 2002, Lecture Notes in Physics, vol. 626 (3), Springer Verlag (2003).
35. Skokos Ch., Antonopoulos Ch., Bountis T. C. & Vrahatis M. N., 2003, "Smaller alignment index (SALI): Determining the ordered or chaotic nature of orbits in conservative dynamical systems" in "Proceedings of the Conference Libration Point Orbits and Applications", eds. Gómez G., Lo M. W. & Masdemont J. J., World Scientific, 653-664.
36. P. Panagopoulos, T. Bountis and C. Skokos, "Localized Oscillations in 1-D Lattices: Existence and Stability", Proc. of 1st International Conference "From Scientific Computing to Computational Engineering" 1st IC-SCCE, Athens, 8-10 September, 2004.
37. P. Soulis, T. Bountis and M. Leftaki, "Regular and Chaotic Dynamics in Sitnikov's Circular 3-Body Problem", Proc. of 1st International Conference "From Scientific Computing to Computational Engineering" 1st IC-SCCE, Athens, 8-10 September, 2004.
38. C. Efthymiopoulos, T. Bountis and A. Manos, "Explicit Construction of First Integrals by Singularity Analysis in Nonlinear Dynamical Systems", Proc. of 1st International Conference "From Scientific Computing to Computational Engineering" 1st IC-SCCE, Athens, 8-10 September, 2004.
39. E. Tzirtzilakis, Ch. D. Skokos, and T. C. Bountis, "Numerical Solution of the Boussinesq Equation Using Spectral Methods and Stability of Solitary Wave Propagation", Proc. of 1st International Conference "From Scientific Computing to Computational Engineering" 1st IC-SCCE, Athens, 8-10 September, 2004.
40. Tzirtzilakis E. E., Skokos Ch. & Bountis T. C., 2004, "A numerical study of soliton solutions of the Boussinesq equation using spectral methods", in "ICNAAM 2004, International Conference on Numerical Analysis and Applied Mathematics 2004", eds. Simos T. E. & Tsitouras Ch., Wiley-VCH, 415-418.
41. T. Manos, Ch. Skokos and T. Bountis, "Global Dynamics of Coupled Standard Maps", Proceedings of Conference "Chaos in Astronomy", Athens, Greece, 17 - 20, September, 2007.
42. T. Manos, Ch. Skokos and T. Bountis, "Application of the Generalized Alignment Index (GALI) Method to the Dynamics of Multi - dimensional Symplectic Maps", in WSPC Conference Proceedings, "Chaos, Complexity and Transport: Theory and Applications", Marseille, France, 4 - 8 June, 2007.
43. T. Bountis, H. Christodoulidi and S. Anastassiou, "Nerve Pulse Propagation in a Chain of FHN Nonlinear Oscillators", Proceedings of 7th Summer School Conference "Let's Face Chaos Through Nonlinear Dynamics", Maribor, July 2008, AIP Conference Proceedings, vol. **1076** (New York, 2008).
44. Andriopoulos K. and Bountis T., "Dynamics of a Duopoly Model with Periodic Driving", Proceedings of the 7th International Conference: "Let's Face Chaos

- Through Nonlinear Dynamics”, M Robnik and VG Romanovski eds. (American Institute of Physics Conference Proceedings, **1076**, 9-12 (2008).
45. Bountis T., van der Weele K., Kanellopoulos G. and Andriopoulos K (2010) “Model Reduction of a Higher-Order KdV Equation for Shallow Water Waves” “Coping with Complexity: Model Reduction and Data Analysis”, Research Workshop Ambleside, Lake District, UK, August 31 – September 4, 2009 (Springer-Verlag, Heidelberg).
 46. Andriopoulos K., Bountis T. and Dimas S., “Discrete-time dynamics of an oligopoly model with differentiated goods”, Advances in Nonlinear Economical Dynamics, Puu T and Panchuk A eds. (Nova Science) (2011).
 47. T. Bountis, “Complexity Science and the Role of Mathematical Modeling”, Proceedings of “Out of the Box” International Conference, Maribor, Slovenia, May 15-17, 2012. <http://obc2012.outofthebox.si/>
 48. Bountis, T. “Complex Problems in Theoretical and Applied Mechanics”, 10th Congress HSTAM, 25-27 May, 2013, Chania, Crete, Greece.
 49. Y. Kominis, T. Bountis and K. Hizanidis, “Complex Dynamics of Piecewise Linear Systems: Theory and Applications”, Proceedings of 10th Congress HSTAM, Chania, Crete, 25-27 May, 2013.
 50. J. Hizanidis, V. G. Kanas, A. Bezerianos and T. Bountis, “Existence and Control of Chimera States in Networks of Nonlocally Coupled Models of Neuron Oscillators”, published in the IEEE Proceedings 13th Int. Conf. on Control, Automation, Robotics and Vision (ICARCV), Singapore, 10 - 12 December 2014.
 51. H. Christodoulidi and T. Bountis, “Numerical integration of variational equations for Hamiltonian systems with long range interactions”, Proceedings of NuMan 2014 Conference on “Recent Approaches to Numerical Analysis: Theory, Methods and Applications”, Chania, Crete, 2 – 5, September, 2014, Applied Numerical Mathematics **104**, June 2016, Pages 158–165, Elsevier (2015).
 52. Ch. Antonopoulos, T. Bountis and L. Drossos, “Coupled Symplectic Maps as Models for Subdiffusive Processes in Disordered Hamiltonian Lattices”, Proceedings of NuMan 2014 Conference on “Recent Approaches to Numerical Analysis: Theory, Methods and Applications”, Chania, Crete, 2 – 5, September, 2014, Applied Numerical Mathematics, **104**, June 2016, 110–119, Elsevier (2015).
 53. T. Bountis and H. Christodoulidi, “Complex Aspects in Hamiltonian Dynamics and Statistics”, Proceedings of the Symposium, “Quantum and Classical Chaos: What comes next?”, Ljubljana, October 9 – 11 May, 2014, Nonlinear Phenomena in Complex Systems, vol. **18** (3), 288 – 302 (2015).
 54. T. Bountis, “From Mechanical to Biological Oscillator Networks: The Role of Long Range Interactions”, European Physics Journal Special Theme issue on the proceedings of the 5th Ph.D. School Conference on “Mathematical Modeling of Complex Systems”, The European Physical Journal Special Topics, September 2016, Volume 225, **Issue 6**, pp 1017–1035.
<http://link.springer.com/article/10.1140/epjst/e2016-02652-5>
 55. C. Antonopoulos, A.S. Fokas and T. Bountis, “Dynamical Complexity in the *C.elegans* Neural Network”, European Physics Journal Special Theme issue on the proceedings of the 5th Ph.D. School Conference on “Mathematical Modeling of Complex Systems”, September 2016, Volume 225, **Issue 6**, pp 1255–1269.
 56. A. Bountis, “Complex Dynamics and Statistics of 1-D Hamiltonian Lattices: Long Range Interactions and Supratransmission”, Proc. of 6th Ph.D. School on “Mathematical Modeling of Complex Systems”, University of “G. d’ Annunzio”, Pescara, July 3 – 10, 2019, Nonlinear Phenomena in Complex Systems, **2** (3) (2020).

Chapters in Books and Edited Volumes:

1. T. Bountis, "Fundamental Concepts of Chaos: Part I", Chapter in volume of Proceedings of summer school "Let's Face Chaos Through Nonlinear Dynamics", Ljubljana, Sept. 1993, in "Open Systems and Information Dynamics ", **3** (1) , 23-95 (1995).
2. T. Bountis, " Fundamental Concepts in Classical Chaos, Part II: Fractals and Chaotic Dynamics", Chapter in volume of Proceedings of 2nd Summer School on "Let's Face Chaos Through Nonlinear Dynamics", Ljubljana, Slovenia, 1996 in "Open Systems and Information Dynamics ", **4**,281-322 (1997).
3. T. Bountis, "Fundamental Concepts of the Theory of Chaos and Fractals", Appendix A in the book, "Chaos Applications in Telecommunications", ed. By P. Stavroulakis, Taylor and Francis, 2005.

Review papers in the Greek series of 10 volumes on “Order and Chaos in Nonlinear Dynamical Systems”:

- 1) Bountis, T., “Chaos in Hamiltonian Dynamical Systems”, Volume 1, pp. 3 – 43 (G. Pnevmatikos, Athens, 1988).
- 2) Bountis, T., “Routes of Transition to Chaos”, Volume 2, pp. 59 – 148 (G. Pnevmatikos, Athens, 1989).
- 3) Bountis, T., “How Does Complex Time Help in the Analysis of Dynamical Systems in Real Time”, Volume 3, pp. 183 – 218 (G. Pnevmatikos, Athens, 1990).
- 4) Bountis, T., “Introduction to Mathematical Biology: Nonlinear Analysis of Cell Excitation”, Volume 5, pp. 153 – 218 (G. Pnevmatikos, Athens, 1999).
- 5) J. P. van der Weele and T. Bountis, «Multi – Breathers in Nonlinear Lattices”, Volume 6, pp.185 – 198 (G. Pnevmatikos, Athens, 2000).
- 6) Bountis, T., “Solitons and the Theory of Inverse Scattering”, Volume 7, pp. 3 – 37, (G. Pnevmatikos, Athens, 2002).
- 7) Panagopoulos,P. and Bountis, T., “Existence and Stability of Localized Oscillations in a One-Dimensional Nonlinear Lattice”, Volume 8, pp. 171 – 180 (K. Sfakianaki, Thessaloniki, 2003).
- 8) Petalas, J., Antonopoulos Ch., Bountis T., and Vrahatis M., “Investigation of Resonances in Conservative Maps Using Evolutionary Algorithms”, Volume 10, pp. 127 – 143 (University of Patras Press, 2008).
