

Biographical Sketch of Andreas C. Tziolas

Variance Dynamical Corporation

Chief Scientist

Education

- Diploma in Natural Philosophy. 1st Lycium of Neapoli, Thessaloniki, Greece, 1994.
- Masters of Physics with Honors (M. Phys. Hons.) in Physics with Space Sciences and Technology. Leicester University, England, 1999.
- Ph.D. in Gravitation and Cosmology, Theoretical Physics. Department of Physics, Baylor University, Texas, USA, 2009

Research and Development Experience

- October, 2010 - Current: Co-Founder and Vice President. Icarus Interstellar Incorporated, 501(c)(3) Non-Profit, Anchorage, Alaska, USA.
- August, 2009 - Current: Chief Scientist and Vice President. Variance Dynamical Corporation, Anchorage, Alaska, USA.
- March, 2009 - Current: Founder and CEO, Venus Prime LLC. Scientific consulting, technological prototyping, systems design and analysis, scientific and entertainment software development.
- February, 2009 - Current: Deputy Project Leader. Project Icarus, British Interplanetary Society, London, England (International Non-Profit Spacecraft Development Group)
- October, 2009 - Current: Editor, Interstellar Theme. Journal of the British Interplanetary Society (JBIS), London, England.
- January, 2001 - May 2002: Graduate Technologist. L.I.S.A. Mission Development Team, Space Research Group, Birmingham University, England.
- March, 2000 - January 2001: Research Associate. Photometric Analysis of Globular Cluster Data from the Cerro Telolo Inter-American Observatory (CTIO). Regina University, Saskatchewan, Canada.
- June, 1998 - September 1998: Research Fellow. WFPC2/HST IDT Associate, Wide Field and Planetary Camera 2 / Hubble Space Telescope Mission De_nition Team, Mars Path_nder Support Team, JPL/NASA, Pasadena, USA.
- June, 1997 - September 1997: Research Fellow. Galileo Mission Support Team, Outer Planetary Atmospheres Group, JPL/NASA, Pasadena, USA.

Publications

Publications in string theory, cosmology, astronomy, astrophysics and spacecraft engineering are considered relative to this project, due to their broad theoretical and technical content.

- Andreas C. Tziolas, Andreas Hein, "Project Icarus: Architecture Development for Atmospheric Helium 3 Mining of the Outer Solar System Gas Planets for Space Exploration and Power Generation", Proceedings of the 61st International Astronomical Congress, Prague, Czech Republic, 2010 (publication pending)

- K. F. Long, R. Obousy, A. Tziolas, A. Mann, R. Osborne, A. Presby, M. Fogg, "Project Icarus: Son of Daedalus - Flying Closer to Another Star", JBIS, Vol. 62 No. 11/12, pp. 403-416 Nov/Dec 2009. arXiv:1005.3833v1 [physics.pop-ph].
- A. C. Tziolas, "Colliding Branes and Formation of Spacetime Singularities", VDM Verlag Dr. Muller Aktiengesellschaft & Co. KG, Dudweiler Landstr. 99, 66123 Saarbrücken, Germany (2009) [ISBN 978-3-639-17549-3].
- A. C. Tziolas, P. Sharma and A. Wang, "Spacetime Singularities in String and its Low Dimensional Effective Theory", to appear in JHEP (2009), arXiv:0901.2676 [hep-th].
- A. C. Tziolas, A. Wang, and Z. C. Wu, "Colliding Branes and Formation of Spacetime Singularities in String Theory", JHEP, 039, (2009), arXiv:0812.1377 [hep-th].
- A. C. Tziolas and A. Wang, "Colliding Branes and Formation of Spacetime Singularities", Phys. Lett. B661, 510, (2008), arXiv:0704.1311 [hep-th].
- A. C. Tziolas, R. K. Obousy, M. R. Sims, "Searching for Extant Life on Mars: The ATP- Firefly Luciferin / Luciferase Technique", JBIS, March/April, (2000)
- G. S. Orton, B. M. Fisher, K. H. Baines, S. T. Stewart, A. J. Friedson, J. L. Ortiz, M. Marinova, W. Ho_mann, J. Hora, M. Ressler, S. Hinkley, V. Krishnan, M. Masanovic, J. Tesic, K. Parija and A. C. Tziolas. "Characteristics of the Galileo Probe Entry Site From Earth-Based Remote Sensing Observations", J. Geophys. Res., 103, 22791- 22814, (1998)
- A. C. Tziolas, G. S. Orton, "Jovian Hubble Space Telescope, Wide Field and Planetary Camera 2 (HST/WFPC2) Data Reduction and Analysis", Caltech Undergraduate Research Journal, (1997)

Synergistic and Social Activities

- Icarus Interstellar: An international interstellar spacecraft design team, following in the footsteps of the 1970s British Interplanetary Society's Project Daedalus. A non-profit engineering design challenge for an interstellar probe, with a fusion-based main propulsion.
- Venus Prime Corporation: Founder and administrator of a for-profit scientific consultancy company that employs young physicists, engineers and computer science majors on small projects, with the objective to develop their professional potential. Last project achieved the most comprehensive Sudoku algorithm with role playing and strategy elements, deployed on Facebook as a social game called "Battle Sudoku".

Collaborators

- Richard Obousy, Project Icarus
- Kelvin Long, Project Icarus
- Andreas Hein, Project Icarus
- Andy Presby, Project Icarus
- Adrian Mann, Project Icarus
- Richard Osbourne, Project Icarus
- Martyn Fogg, Project Icarus (former)

Graduate Advisor

- Dr. Anzhong Wang, Baylor University, Waco, TX. ■