Publications
Edward Belbruno

Books

1. Title: *Fly Me to the Moon*
   Subtitle: *An Insiders Guide to the New Science of Space Travel*
   Author: Edward Belbruno
   Publisher: Princeton University Press
   Publication date: February, 2007
   Pages: 150
   Type of Book: General mathematics and science

2. Title: *Capture Dynamics and Chaotic Motions in Celestial Mechanics*
   Subtitle: *With Applications to the Construction of Low Energy Transfers*
   Author: Edward Belbruno
   Publisher: Princeton University Press
   Publication Date: February 2004
   Pages: 211
   (see www.pupress.princeton.edutitles/7687.html)
   Type of book: Graduate text in mathematics

Proceedings Volumes

1., 2. Special issues of journal *Celestial Mechanics and Dynamical Astronomy*
   Guest Editor: Edward Belbruno, Regular Editor: Sylvio Ferraz-Mello
   Publisher: Springer Verlag

3. Title: *Astrodynamics*
   Editors: P. Gurfil, Edward Belbruno
   Publisher: Elsevier
   COSPAR(ASR), Volume 42
   Publication Date: October 2008
   Pages: 131

4. Title: *New Trends in Astrodynamics and Applications III*
   Editor: Edward Belbruno
   Publisher: American Institute of Physics
   AIP Conference Proceedings, Volume 886
   Publication Date: 2007
   Pages: 336

5. Title: *Astrodynamics and Applications*
   Editor: Edward Belbruno
Research Papers

Papers Submitted

"A Dynamical Mechanism for the Big Bang and Non-Regularizability for \( w = 1 \)"
Submitted to Classical and Quantum Gravity - November 2014.
ArXiv: 1411.4071 [gr-qc], November 14, 2014

Peer Reviewed Publications - Nonconference


"Regularization of the Big Bang Singularity with Time Varying Equation of State \( w > 1 \)", Classical and Quantum Gravity, v 31, 165002, 2014.(co-author: BingKan Xue) (posted on arXiv, number:1403:2122 [gr-qc], March 10, 2014)


**Peer Reviewed Publications - Conference Proceedings**


"Biological Analogs and Emergent Intelligence for Control of Stratospheric Balloon Constellations", in Lecture Notes in Computer Science, V 2564, Springer,(Proceedings of First Inter. Workshop on Radical Agent Concepts WRAC), 2003, pp 393-407.(co-authors: N. Leonard(main author), P. Bhatta, M. Heun, R. Schlaifer, K. Aaron, K. Nock)


"Robotic Lunar Exploration Using the Pegasus Winged Rocket and Ballistic Lunar Capture: An Update,

"To the Moon from a B52: Robotic Lunar Exploration Using the Pegasus Winged Rocket and Ballistic Lunar Capture", in Proceedings of 5th Annual AIAA/USU Conf. on Small Satellites, Utah State Univ., Logan, UT, August 24, 1991. (co-author: R. Ridenoure (main author))


Key Technical Reports, Book Chapters, and Preprints


"The Dynamical Mechanism of Ballistic Lunar Capture Transfers In The Four-Body Problem From The Perspective Of Invariant Manifolds And Hill's Regions", Centre De Recerca Matematica(CRM), (Institute d'Estudis Catalans; Apartat 50; E-08193, Bellaterra(Barcelona) Spain (www.crm.es) Preprint n. 270, December 1994.

"A Ballistic Lunar Capture Trajectory for the Japanese Spacecraft Hiten", JPL IOM 312/90.4-1317, June 1990 (co-author: J. Miller)

**General Audience Science Articles**


"The Angel that Flew to the Moon", New Scientist, Turning Point column, pp51, Feb. 2007

"Through the Fuzzy Boundary: A New Route to the Moon”, Planetary Report, May 1992

**Noted Articles by Other Authors on my Work**

Hadhazy, Adam, “ A New way to Reach Mars Safely, Anytime and on the Cheap”, Scientific American (cover story on wesbite), December 22, 1014


Casselman, R., ”Chaos in the Weak Stability Boundary”, Cover of the Notices, American Mathematical Society, Volume 55, number 4, April 2008. (see www.ams.org/notices/200804/)


Editorial Staff, "Top Ten Most Influential Space Thinkers", New Scientist, 40th Anniversary Issue, September 2007

Suzuki, J., Review of Fly Me to the Moon, Mathematics Association of America (MAA), MAA Online, in Read This!, August 31, 2007 (see www.maa.org/reviews/FlyMeMoon.html)

Faust, J., Review: Fly Me to the Moon, The Space Review (online), April 9, 2007

Stockey, J., "Fly Me to the Moon: A Conversation with Mathematician and Artist Ed Belbruno", Wild River Review, V. 1, n. 3.3, September 2006


Foust, J., "From Chaos, A New Order", The Space Review, March 6, 2006. (www.thespacereview.com/article.569/1)


Chown, Marcus, "The Planet that Stalked the Earth", New Scientist (Feature Cover Story), August 14-20, 2004.


