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.edu/titles/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

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)


"Random Walk in Celestial Mechanics”, Regular and Chaotic Dynamics, (Jürgen Moser-80), Volume 14, number 1, pp 7-17, February 2009.

"Recollections of Jürgen Moser”, Regular and Chaotic Dynamics, (Jürgen Moser-80), Volume 14, number 1, pp 3-4, February 2009.


Peer Reviewed Publications - Conference Proceedings


"Mars Mission Design and Maximizing Performance Utilization”, In Proceedings IEEE Aerospace Conference, Big Sky, Montana, pages 1-18, March 2014 (co-authors: Kevin Post, Ulhas Kamath) doi 10.1109/AERO.2014.6836181


"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,


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.


Harkin, Senator Thomas, "Reach for the Moon”, Smithsonian Air and Space Magazine, March 2000, pp54-55.

Frank, Adam, "Gravity’s Rim: Riding Chaos to the Moon", Discover(Featured Article), September 1994, pp 74-79.


