THE JOURNAL OF THE

ASTRONAUTICAL SCIENCES



VOLUME 54, NOS. 3 and 4

JULY-DECEMBER 2006

Special Issue: The Malcolm D. Shuster Astronautics Symposium

Guest Editors:

John L. Crassidis, F. Landis Markley, John L. Junkins, Kathleen C. Howell

CONTENTS

_	hn L. Crassidis, F. Landis Markley, L. Junkins, and Kathleen C. Howell	261
Biography	V	263-264
Select Bibliography in Astrona	nutics	265-266
Foreword	Malcolm D. Shuster	267-271
In My Estimation	Malcolm D. Shuster	273-297
Sherman's Theorem	James R. Wright	299-319
Differential Games: A Pole Placement Approach Jiann-Woei Jang and Norman Fitz-Coy		321-336
Satellite Electricity on Orbital	Time Scales Peter J. Melvin	337-357
On the Use of Chaos Indicator	s in Rigid-Body Motion R. Barrio, F. Blesa, and A. Elipe	359-368
Attitude Dynamics of Satellites Orbiting an Asteroid Arun K. Misra and Yulia Panchenko		369-381
MRAD: Modified Rodrigues Vector Attitude Determination Christian Bruccoleri and Daniele Mortari		383-390

(Contents continued on back cover)

Published by the

AMERICAN ASTRONAUTICAL SOCIETY

www.astronautical.org

The Journal of the Astronautical Sciences Vol. 54, Nos. 3 and 4 July-December 2006 CONTENTS (continued)

Attitude Filtering on SO(3)	F. Landis Markley	391-413
Estimation Using Quaternion Proba Unit Hypersphere	ability Densities on the Mark L. Psiaki	415-431
Attitude Estimation for Large Field Yang Cheng, John L. Cu	l-of-View Sensors rassidis, and F. Landis Markley	433-448
Cascaded and Decoupled RIMU Ca	alibration Filters Mark E. Pittelkau	449-466
Attitude and Orbit Error in <i>n</i> -Dime Daniele Mortari, Sante R. S	ensional Spaces Scuro, and Christian Bruccoleri	467–484
Optimal Altitude-Constrained Low- Inclined Circular Orbits	-Thrust Transfer Between Jean A. Kéchichian	485-503
	Orbit Uncertainty and cheeres, FY. Hsiao, R. S. Park, B. F. Villac, and J. M. Maruskin	505-523
Necessary Conditions for Circularly Coulomb Formations Hanspeter	y-Restricted Static er Schaub, Christopher D. Hall, and John Berryman	525-541
Asynchronous Optimal Mixed P2P Atr	Satellite Refueling Strategies i Dutta and Panagiotis Tsiotras	543-565
Study of the Gravitational Capture Three-Body Problem	in the Elliptical Restricted	
Antônio Fernand	o Bertachini de Almeida Prado and Ernesto Vieira Neto	567-582
Alexa	rlos Renato Huaura Solórzano, inder Alexandrovich Sukhanov,	
and Antônio Fernand	o Bertachini de Almeida Prado	583-593
Attitude Estimation with GPS-Like	Measurements Luc Fraiture	595-617
Nonlinearity Index of the Cayley F Andrew J. Sinclair, John E.	orm Hurtado, and John L. Junkins	619-634
Attracting Manifolds for Attitude Es Otherlands Maruthi R. Akella, D	timation in Flatland and ongeun Seo, and Renato Zanetti	635-655
The Quest for Better Attitudes	Malcolm D. Shuster	657-683
Index		685-688