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- C07-236 Parametric Studies on Ground Vibration Test Modeling for Highly Flexible Aircraft.** Chong-Seok Chang and Dewey H. Hodges, *Georgia Institute of Technology* (**44**, 6, p. 2049) Article
- C07-237 Proposal to Use Reaction Jets for Variable Stability Airplanes.** Brijesh Kumar and S. Pradeep, *Indian Institute of Science, India* (**44**, 6, p. 2060) Technical Note
- C07-238 Ground Dynamics Model Validation by Use of Landing Flight Test.** Michel Nadeau Beaulieu, Ruxandra M. Botez, and Adrian Hiliuta, *École de Technologie Supérieure, Canada* (**44**, 6, p. 2063) Technical Note based on AIAA Paper 2006-6811
- C07-239 Improving the Stability and Efficiency of the Pseudocompressibility Method.** Junke Ye, Bifeng Song, and Wenping Song, *Northwestern Polytechnical University, China (PRC)* (**44**, 6, p. 2068) Technical Note
- C07-240 Bending-Torsion Divergence of a Clamped-Clamped Composite Wing.** Dewey H. Hodges, *Georgia Institute of Technology* (**44**, 6, p. 2070) Technical Note
- C07-241 Specific Weight: A Challenge for a Fuel-Cell-Powered Electric Helicopter.** Domingo M. Guinea, *Ceramics and Glass Institute, Spain*; Miquel Roura, *Politechnical University, Spain*; María del Carmen García-Alegre, Ângela Ribeiro, and Domingo Guinea, *Industrial Automation Institute, Spain* (**44**, 6, p. 2073) Technical Note
- C07-242 Evaluation of Effectiveness of Periodic Flight by a Hypersonic Vehicle.** Takeshi Kanda and Tetsuo Hiraiwa, *Japan Aerospace Exploration Agency, Japan* (**44**, 6, p. 2076) Technical Note
- C07-243 Effect of High-Altitude Airship's Attitude on Performance of its Energy System.** Haifeng Wang, Bifeng Song, and Liankai Zuo, *Northwestern Polytechnical University, China (PRC)* (**44**, 6, p. 2077) Technical Note
- C07-244 Experimental Studies on Unsteady Lateral Blowing on NACA 0012.** Chi Wong and Konstantinos Kontis, *University of Manchester, Great Britain* (**44**, 6, p. 2080) Technical Note
- C07-245 Aerodynamic Hysteresis of a Low-Reynolds-Number Airfoil.** Hui Hu, Zifeng Yang, and Hirofumi Igarashi, *Iowa State University* (**44**, 6, p. 2083) Technical Note
- C07-246 Reduced-Order-Model-Based Flutter Analysis at High Angle of Attack.** Weiwei Zhang and Zhengyin Ye, *Northwestern Polytechnical University, China (PRC)* (**44**, 6, p. 2086) Technical Note