References

[1] S. Blanes, F. Casas, and J. Ros. Processing symplectic methods for near-integrable hamiltonian systems. *Celestial Mechanics and Dynamical Astronomy*, 77(1):17–36, 2000.

[2] S. Blanes, F. Casas, and J. Ros. High-order runge–kutta–nyström geometric methods with processing. *Applied Numerical Mathematics*, 39(3–4):245 – 259, 2001. Themes in Geometric Integration.

[3] S. Blanes, F. Casas, and J. Ros. New families of symplectic runge-kutta-nyström integration methods. In Lubin Vulkov, Plamen Yalamov, and Jerzy Waśniewski, editors, *Numerical Analysis and Its Applications*, volume 1988 of *Lecture Notes in Computer Science*, pages 102–109. Springer Berlin Heidelberg, 2001.

[4] Ben K. Bradley, Brandon A. Jones, Gregory Beylkin, Kristian Sandberg, and Penina Axelrad. Bandlimited implicit runge–kutta integration for astrodynamics. *Celestial Mechanics and Dynamical Astronomy*, 119(2):143–168, 2014.

[5] Siu A. Chin. Symplectic integrators from composite operator factorizations. *Physics Letters A*, 226(6):344 – 348, 1997.

[6] Vacheslav Vasilievitch Emel'yanenko. A method of symplectic integrations with adaptive time-steps for individual hamiltonians in the planetary n-body problem. *Celestial Mechanics and Dynamical Astronomy*, 98(3):191–202, 2007.

[7] Ariadna Farrés, Jacques Laskar, Sergio Blanes, Fernando Casas, Joseba Makazaga, and Ander Murua. High precision symplectic integrators for the solar system. *Celestial Mechanics and Dynamical Astronomy*, 116(2):141–174, 2013.

[8] William M. Folkner, James G. Williams, Dale H. Boggs, Ryan S. Park, and Petr Kuchynka. The planetary and lunar ephemerides de430 and de431. *Interplanetary Network Progress Report*, 42(196), 2014.

[9] E. Hairer, R. I. McLachlan, and A. Razakarivony. Achieving brouwer's law with implicit runge–kutta methods. *BIT Numerical Mathematics*, 48(2):231–243, 2008.

[10] Ernst Hairer and Gustaf Söderlind. Explicit, time reversible, adaptive step size control. *SIAM Journal on Scientific Computing*, 26(6):1838–1851, 2005.

[11] A. C. Long, Jr. J. O. Cappellari, C. E. Velez, and A. J. Fuchs. Goddard trajectory determination system (gtds) mathematical theory revision 1. Technical Report FDD/552-89/001 CSC/TR-89/6001, Computer Sciences Corporation and National Aeronautics and Space Administration/Goddard Space Flight Center, July 1989.

[12] Robert McLachlan. Symplectic integration of hamiltonian wave equations. *Numerische Mathematik*, 66(1):465–492, 1993.

[13] Robert I. McLachlan. On the numerical integration of ordinary differential equations by symmetric composition methods. *SIAM J. Sci. Comput.*, 16(1):151–168, January 1995.

[14] Robert I. McLachlan. A new implementation of symplectic runge–kutta methods. *SIAM Journal on Scientific Computing*, 29(4):1637–1649, 2007.

[15] Robert I Mclachlan, G Reinout, and W Quispel. Geometric integrators for ODEs. *J. Phys. A*, 39:5251–5285, 2006.

[16] O. Montenbruck. Numerical integration methods for orbital motion. *Celestial Mechanics and Dynamical Astronomy*, 53(1):59–69, 1992.

[17] Etienne Pellegrini and Ryan P. Russell. F and g taylor series solutions to the circular restricted three body problem. In *AAS/AIAA Spaceflight Mechanics Meeting*, volume 152 of *Advances in the Astronautical Sciences*, 2014.

[18] James R. Scott and Michael C. Martini. High-speed solution of spacecraft trajectory problems using taylor series integration. *Journal of Spacecraft and Rockets*, 47(1):199–202, 2010.

[19] PhilipW. Sharp, MohammadA. Qureshi, and KevinR. Grazier. High order explicit runge–kutta nyström pairs. *Numerical Algorithms*, 62(1):133–148, 2013.

[20] E. M. Standish. Jpl planetary and lunar ephemerides, de405/le405. Interoffice Memorandum IOM 312.F–98–048, Jet Propulsion Laboratory, August 1998.

[21] V. Lainey, L. Duriez, and A. Vienne. New accurate ephemerides for the galilean satellites of jupiter. *A&A*, 420(3):1171–1183, 2004.