JOURNAL ARTICLES

- 1 L. Fraiture and J. Neirynck, Optimum elliptic-function filters for distributed constant systems, (correspondence) IEEE Trans. on microwave Theory and Techniques, Vol. 15, No 8, pp. 482-483, Aug 1967..
- 2 L. Fraiture, Limits on the loads for bandpass two-ports with one dc transmission zero, IEEE Transactions of Circuit Theory, Vol.16, No 1 pp. 126-128, 1969.
- 3 L. Fraiture, A least squares estimate of the attitude of a satellite, J of Spacecraft and Rockets, Vol. 7, No 5, pp. 619-620, May 1970.
- 4 L. Fraiture, Spacecraft attitude sensing based on the Earth's radiation, ESA Bulletin No 33, pp. 29-36, Feb. 1984.
- 5 L. Fraiture, The information dilution theorem, ESA Journal, Vol. 10, No 4, pp. 381-386, Dec. 1986.
- 6 L. Fraiture, Planetary oblateness and evolution of Earth flattening, Geophysical Journal Int. Vol. 99, pp. 561-565, Dec. 1989.
- 7 L. Fraiture, Slew calibration for spin-stabilized satellites, J of Spacecraft and Rockets, Vol. 37, No 6, pp. 784-787, Nov. 2000.
- 8 L. Fraiture and K. Spindler, Spherical goniometry and spacecraft attitude determination, Elemente der Mathematik, Vol. 57, pp. 137-157, 2002.
- 9 L. Fraiture, Propagation algorithms for attitude-related ambiguity resolution, GPS Solutions, Vol. 6, No 4, pp. 219-228, Nov. 2002.
- 10 L. Fraiture, Spin axis attitude estimation by a controlled correlation method, J of Spacecraft and Rockets, Vol. 42 No 1, pp. 58-65, 2005.
- 11 L. Fraiture, Attitude Estimation with GPS-like measurements, J of the Astronautical Sciences, Vol.54, Nos 3 & 4, pp. 595-617, 2006.
- 12 L. Fraiture, Loxodromic Descent: a new regularized rotation estimation, J Guidance Control and Dynamics, vol. 30, No 4, pp. 1171-1175, 2007.

Submitted

- 13 L. Fraiture, Random directions on S^1 , S^2 and S^3 , part I: uniform distributions, submitted to the J of the Astronautical Sciences.
- 14 L. Fraiture, Intermediate variables compared to IQML in deterministic signal estimation, submitted to 'Signal Processing' (Elsevier).

ESA - PATENTS

- 1 L. Fraiture, A sun sensor magnetometer sensing system for attitude measurements on Spin Stabilized Near Earth Satellites (automatic generation of a sun magnetic vector dihedral angle around the spin axis by means of holding circuits),ESRO/ESA internal submission in 1971, official application filed in March 1973, Belgian patent granted under the No 797511 in Nov. 1973 (immediately followed by a priority application in US still filed in Nov 1973).
- 2 L. Fraiture and Juergen Fertig, Agencement de Détection d'Horizon (IR horizon scanner with four potentially folded mirrors to suppress radiation disturbances up to the

fourth harmonic), officially filed in May 1986, patent 8608241 granted in Paris in Oct. 1991.

CONFERENCE PAPERS

- 1 L. Fraiture, N. Wiengarn and B. Chambaz, Irregularities in the motion of spin-stabilized satellites, Proc. of the first Int. Symp. of spacecraft flight dynamics in Darmstadt (FRG) in May 1981, ESA SP 160, pp. 87-104, Aug. 1981
- 2 A.G. Bird, L. Fraiture, J.C. Van der Ha and P. Kohler, The dynamic attitude reconstitution method, Proc. of the first Int. Symp. of spacecraft flight dynamics in May 1981, ESA SP 160, pp.353-368, Aug. 1981.
- 3 R. Baldasini-Fontana, D. Sciacovelli and L. Fraiture, IR radiance model validation by sensor flight-measurements, Proc. of the first Int. Symp. of spacecraft flight dynamics in May 1981, ESA SP 160, pp. 461-478, Aug. 1981.
- 4 L. Fraiture, A semi-linear estimation method, Proc. of the 6-th IFAC symp. on Identification and Parameter estimation in Arlington in june 1982, Vol. 1 pp. 311-316.
- 5 L. Fraiture, Non-linear single parameter estimation, Proc. of AMSE conference "modelling and simulation", in Monastir (Tunesia) in Nov. 1985, Vol 1B, pp. 6-20.
- 6 W. Meyer, L. Fraiture and N. Wiengarn, Coverage transition times of IR pencil beam sensors, Proc. of the symp. on space dynamics for geostationary satellites in Toulouse (F), Oct. 1985, pp. 207-218 (CEPADUES Editions Toulouse, April 1986).
- 7 L. Fraiture, Attitude reconstitution filters: yes or no?, Proc. of the second Int. Symp. of spacecraft flight dynamics in Darmstadt (FRG) in Oct. 1986, ESA SP 255, pp.403-414.
- 8 L. Fraiture, Non-linear constraints in estimation, AMSE conference "modelling and simulation", Istanbul, June 1988
- 9 L. Fraiture, A calibration algorithm for in-flight application to slews on spinning satellites, Proc. Space Dynamics Symposium, Toulouse (F), Nov. 1989 pp.479-499. (CEPADUES Editions Toulouse, May 1990).
- 10 L. Fraiture, The non-linearity bias in estimation, Proc. of the IASTED int. symp. "Modelling, Simulation and Optimization", Montreal, May 1990, pp. 10-15
- 11 L. Fraiture, Covariance transformations and global errors for orbit and attitude, Proc. of the third Int. symp on Spacecraft Flight Dynamics, Darmstadt (FRG) Sept/Oct 1991, ESA SP-326, pp. 113-124.
- 12 L. Fraiture, Optimal three axis attitude determination, Proc. of the int. symp. on space Flight Dynamics, St-Petersburg-Moscow, May 1994, chapter Attitude Determination, pp.36-48.
- 13 L. Fraiture, Re-use of attitude software, Proc. of the 12th Int. symp. on space Flight Dynamics, Darmstadt (FRG), June 1997, ESA SP-403, pp.139-151.
- 14 L. Fraiture, Spherical trigonometry for GPS ambiguity resolution, presented at the 10-th Brazilian Orbital Dynamics Colloquium, Nazaré Paulista, Nov. 2000, and issued in 'Advances in Space Dynamics 3, Applications in Astronautics, INPE, Brasil, pp 132-144, 2002.

15 L. Fraiture, A survey of attitude estimation with GPS-like measurements, Proc. of the Malcolm Shuster Astronautics Symposium, Grand Island (NY/US), June 2005, AAS 05-478, Advances in Astronautical Sciences Vol. 122, pp 481-501, 2006.

In Preparation

- 16 L. Fraiture, The history of the mathematical description of the three dimensional rotation, in preparation and proposed for the AAS Landis Markley symposium, June 2008
- 17 L. Fraiture, Regularization of minimum parameter attitude estimation, in preparation and proposed for the AAS Landis Markley symposium, June 2008.