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Publications

Book chapter/contribution

S. Rodrigues, **N. Crasta**, A. P. Aguiar, and F. Leite. *Dynamics, Games and Science II in honour of Mauricio Peixoto and David Rand*, chapter An exponential observer for systems on $SE(3)$ with implicit outputs. Springer Verlag, Berlin, 2011.

Dennis S. Bernstein. *Matrix Mathematics: Theory, Facts, and Formulas*, page 204. Princeton Press University, Princeton, second edition, 2009.

Journal articles

M. Bayat, **N. Crasta**, A. P. Aguiar, and A. M. Pascoal. Range-based underwater vehicle localization in the presence of unknown ocean currents: Theory and experiments. *IEEE Transactions on Control Systems Technology (ACCEPTED)*, 2014.

Sanjay P. Bhat and **N. Crasta**. Closed rotation sequences. *Discrete and Computational Geometry (ACCEPTED)*, 2014.

N. Crasta, Romeo Ortega, and Harish K. Pillai. On the matching equations of energy shaping controllers for mechanical systems. *International Journal of Control (ACCEPTED)*, 2014.

Peer reviewed conferences

Sanjay P. Bhat and **N. Crasta**. Closed attitude trajectories. In *First Indian Control Conference*, January 5-7, 2015. Indian Institute of Madras, India (ACCEPTED).

Thomas Glotzbach, **N. Crasta**, and Christoph Ament. Observability analyses and trajectory planning for tracking of an underwater robot using empirical gramians. In *The 19th IFAC World Congress*, August 24-29, 2014. Cape Town, South Africa.

N. Crasta, M. Bayat, A. A. Pedro, and A. M. Pascoal. Observability analysis of 3D AUV trimming trajectories in the presence of ocean currents using single beacon navigation. In *The 19th IFAC World Congress*, August 24-29, 2014. Cape Town, South Africa.

T. Glotzbach, **N. Crasta**, and Christoph Ament. Navigation for marine robots: Observability analyses for tracking of an underwater robot using empirical Gramians. In *Conference on*

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Computer Applications and Information Technology in the Maritime Industries (COMPIT), May 12-14, 2014. Redworth/UK.

N. Crasta, M. Bayat, A. A. Pedro, and A. M. Pascoal. Observability analysis of 2D single beacon navigation in the presence of constant currents for two classes of maneuvers. In *The 19th IFAC Conference on Control Applications in Marine Systems (CAMS)*, September 17-20 2013. Osaka, Japan.

Cheikh A.B. Hann, Vincent Van Assche, **N. Crasta**, and Françoise Lamnabhi-lagarrigue. Dynamical continuous high gain observer for sampled measurements systems. In *IEEE Control and Decision Conference*, December 10-12, 2012. Hawaii, USA.

N. Crasta, Romeo Ortega, Harish Pillai, and R V Jose Guadalupe. The matching equations of energy shaping controllers for mechanical systems are not simplified with generalized forces. In *Fourth IFAC workshop on Lagrangian and Hamiltonian Methods for Nonlinear Control*, August 29-41, 2012. Bertinoro, Italy.

N. Crasta, Tarek Ahmed-Ali, and Françoise Lamnabhi-Lagarrigue. Dynamical high-gain observer design with sampled measurements. In *Advances in Control and Optimization of Dynamic Systems (ACODS)*, February 2012. Indian Institute of Science Bangalore, India.

S. Rodrigues, **N. Crasta**, A. P. Aguiar, and F. Leite. State estimation for systems on SE(3) with implicit outputs: An application to visual servoing. In *Nonlinear Control Systems (NOLCOS)*, August 2010. Bologna, Italy.

N. Crasta and S. P. Bhat. Observability of nonlinear input-affine systems. In *Eighteenth International Symposium on Mathematical Theory of Networks and Systems (MTNS)*, July 26-August 1, 2008. Virginia Tech, Blacksburg, VA, USA.

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PhD thesis

N. Crasta. *Observability of nonlinear input-affine systems with application to attitude dynamics*. PhD thesis, Indian Institute of Technology Bombay, Department of Aerospace Engineering, Powai Mumbai 400 076, India, August 2009.