Regular Papers

Stochastic Filtering Using Periodic Cost Functions ............................................................. 123
Eyal Nitzan, Ben-Gurion University of the Negev, Israel
Tirza Routtenberg, Ben-Gurion University of the Negev, Israel
Joseph Tabrikian, Ben-Gurion University of the Negev, Israel

Methods for Deterministic Approximation of Circular Densities ........................................... 138
Gerhard Kurz, Karlsruhe Institute of Technology (KIT), Germany
Igor Gilitschenski, Swiss Federal Institute of Technology Zurich, Switzerland
Roland Y. Siegwart, Swiss Federal Institute of Technology Zurich, Switzerland
Uwe D. Hanebeck, Karlsruhe Institute of Technology (KIT), Germany

Multitarget Tracking with the von Mises-Fisher Filter and Probabilistic Data Association ..... 157
Ivan Marković, University of Zagreb, Croatia
Mario Bukal, University of Zagreb, Croatia
Josip Ćesić, University of Zagreb, Croatia
Ivan Petrović, University of Zagreb, Croatia

Density Estimation on the Rotation Group Using Diffusive Wavelets ................................... 173
Nicolas Le Bihan, CNRS/Gipsa-Lab, France
Julien Flamant, Université de Lille, France
Jonathan H. Manton, The University of Melbourne, Australia

Uncertainty Propagation of Correlated Quaternion and Euclidean States
Using the Gauss-Bingham Density ...................................................................................... 186
Jacob E. Darling, Missouri University of Science and Technology, USA
Kyle J. Demars, Missouri University of Science and Technology, USA

Multivariate Angular Filtering Using Fourier Series............................................................. 206
Florian Pfaff, Karlsruhe Institute of Technology (KIT), Germany
Gerhard Kurz, Swiss Federal Institute of Technology Zurich, Switzerland
Uwe D. Hanebeck, Swiss Federal Institute of Technology Zurich, Switzerland

Particle Filtering with Observations in a Manifold: A Proof of Convergence and
Two Worked Examples ......................................................................................................... 227
Salem Said, Université de Bordeaux, France
Jonathan H. Manton, The University of Melbourne, Australia

Direct Position Determination for TDOA-based Single Sensor Localization ....................... 250
Christian Steffes, Fraunhofer Institute for Communication, Germany
Marc Oispuu, Fraunhofer Institute for Communication, Germany

Guest Editorial:

From the Editor-In-Chief

Forword to the Special Issue on Estimation Involving Directional Quantities