

Navigation systems

Introduction, historical review
Celestial positioning, basic of navigation, chronograph systems
Earth based radio navigation systems (GEE, LORAN, DECCA, OMEGA etc.)
Doppler and NNSS – from the beginnings
LEO systems (Oscar, Transit, Tsikada, Parus etc.)
MEO, HEO systems, inter planetary navigation systems
NAVSTAR/GLONASS
GALILEO/COMPASS
Augmentation systems (EGNOS, WAAS, MTSAS, GZSS, GAGAN etc.)
GNSS permanent stations and systems, NTRIP
High precision positioning and navigation
Mobile solutions
Measurements error solutions
Field measurement

Literature:

Hofmann-Wellenhof, Bernhard, **Lichtenegger**, Herbert, **Wasle**, Elmar, 2008. GNSS – Global Navigation Satellite Systems, Springer-Verlag Wien, ISBN: 978-3-211-73012-6
Esmat Bekir: Introduction to Modern Navigation Systems
World Scientific Publishing Company, 2007
Mohinder S. Grewal, Lawrence R. Weill, Angus P. Andrews: Global Positioning Systems, Inertial Navigation, and Integration, Wiley, 2007, ISBN: 978-0-470-09971-1

Suggested literature:

Laurie Tetley et al: Electronic Navigation Systems, Taylor & Francis, 2012, ISBN: 978-0-7506-5138-7