Geoid Computation, Spring 2010

Date	Contents	Pages	*M*-files
2/3	Potential, Laplace Equation, Spherical Harmonics	Kaula: 1–7	`equipot`
4/3	Gravity Field of the Level Ellipsoid, Anomalous Potential, Bruns' Formula, Normal Gravity	NIMA report `wgs84rtp.pdf`	`egm180.nor,` `frgeod,` `gamma_h,` `geo_map,` `leg_pol,` `legen_nm,` `wgs84_ha`
	Poisson's Integral Formula, Stokes' Formula	International School `interpol.pdf,`	`dk97geoi`
	Stokes' Formula in Practice, Terrain Reductions, Computational Aspects	International School `geoid_ex.pdf`	`distance,` `fft_geoi`
	Miniproject: Actual Geoid Computation		`dk.dat,` `egm180.nor,` `geoid.exe,` `nkggeoid.89`

The *M*-files can be downloaded from `gps.aau.dk/~borre/masters/geoid`

Both lectures are given from 10:15 to 12:00. On March 2 in room 2-103 at Fredrik Bajers Vej 3 and on March 4 in room A5-006.

Literature

Borre, Kai (2004) *Geoid Undulations Computed from EGM 96.* Lecture notes

Kaula, William M. (1966) *Theory of Satellite Geodesy*, Blaisdell Publishing Company

National Imagery and Mapping Agency (1997) *Department of Defense, World Geodetic System 1984*, Technical report, third edition, 1997

Strang, Gilbert (1998) *Introduction to Linear Algebra*, Wellesley-Cambridge Press, 2nd edition