

References

- Amelung, F., and Wolf, D. (1994). Viscoelastic perturbations of the Earth: significance of the incremental gravitational force in models of glacial isostasy. *Geophys. J. Int.* **117** (3), 864-879.
- Austin, R. M. (1991). Modelling Holocene tides on the NW European continental shelf. *Terra Nova* **3**, 276-288.
- Bassin, C., Laske, G., and Masters, G. (2000). The current limits of resolution for surface wave tomography in North America. *EOS* **F897**, 81.
- Beets, D. J., and van der Spek, A. J. F. (2000). The Holocene evolution of the barrier and the back-barrier basins of Belgium and the Netherlands as a function of late Weichselian morphology, relative sea-level rise and sediment supply. *Netherlands Journal of Geosciences* **79**(1), 3-16.
- Behre, K.-E. (2003). Eine neue Meeresspiegelkurve für die südliche Nordsee: Transgressionen und Regressionen in den letzten 10.000 Jahren. *Probleme der Küstenforschung im südlichen Nordseegebiet* **28**, 9-63.
- Behre, K.-E., Menke, B., and Streif, H. (1979). The Quaternary geological development of the German part of the North Sea. In: E. Oele, R. T. E. Schüttenhelm, A. J. Wiggers, editors, *The Quaternary history of the North Sea.*, 85-113, Acta Universitatis Upsaliensis, Symposia Universitatis Upsaliensis Annum Quingentesimum Celebrantis 2, Uppsala.
- Bell, M. L., and Nur, A. (1978). Strength changes due to reservoir-induced pore pressure and stresses and application to Lake Oroville. *J. Geophys. Res.* **83**, 4469-4483.
- Bennema, J. (1954). Holocene movements of land and sea-level in the coastal area of the Netherlands. *Geologie en Mijnbouw, Nieuwe Serie* **16**, 254-264.
- Berger, A. L. (1978). Long-term variations of daily insolation and Quaternary climatic changes. *J. Atmos. Sci.* **35**, 2362-2367.
- Calcagnile, G. (1982). The lithosphere-asthenosphere system in Fennoscandia. *Tectonophys.* **90**, 19-35.
- Caston, V.N.D. (1979). A new isopachyte map of the Quaternary of the North Sea. In: E. Oele, R. T. E. Schüttenhelm, A. J. Wiggers, editors, *The Quaternary history of the North Sea.*, 23-28, Acta Universitatis Upsaliensis, Symposia Universitatis Upsaliensis Annum Quingentesimum Celebrantis 2, Uppsala.
- Cathles, L. M. (1975). *The Viscosity of the Earth's Mantle*. Princeton Univ. Press, Princeton.
- Chappell, J., and Shackleton, N. J. (1986). Oxygen isotopes and sealevel. *Nature* **324**, 137-140.
- Denton, G. H., and Hughes, T. J. (1981). *The Last Great Ice Sheets*. John Wiley and Sons, New York.
- Denys, L., and Baeteman, C. (1995). Holocene evolution of relative sea level and local mean high water spring tides in Belgium - a first assessment. *Marine Geology* **124**, 1-19.

- Dèzes, P., and Ziegler, P. A. (2001). European Map of the Mohorovicic discontinuity. 2nd EUCOR-URGENT Workshop (Upper Rhine Graben Evolution and Neotectonics), Mt. St. Odile, France.
- Dziewonski, A. M., and Anderson, D. L. (1981). Preliminary reference Earth model. *Phys. Earth Planet. Inter.* **25**, 297-356.
- Ekman, M. (1991). A concise history of postglacial land uplift research (from its beginning to 1950). *Terra Nova* **3**, 358-365.
- Ekström, G., and Dziewonski, A. M. (1998). The unique anisotropy of the Pacific upper mantle. *Nature* **394**, 168-172.
- Ervynck, A., Baeteman, C., Demiddele, H., Hollevoet, Y., Pieters, M., Schelvis, J., Tys, D., van Strydonck, M., and Verhaeghe, F. (1999). Human occupation because of a regression, or the cause of a transgression? A critical review of the interaction between geological events and human occupation in the Belgian coastal plain during the first millennium AD. *Probleme der Küstenforschung im südlichen Nordseegebiet* **26**, 97-121.
- Fairbanks, R. G. (1989). A 17,000-year glacio-eustatic sea level record; influence of glacial melting rates on the Younger Dryas event and deep-ocean circulation. *Nature* **342**, 637-642.
- Fairbridge, R. W. (1961). Eustatic changes in sea level. *Physics and Chemistry of the Earth* **4**, 100-185.
- Farrell, W. E., and Clark, J. A. (1976). On postglacial sea level. *Geophys. J. R. astr. Soc.* **46**, 647-667.
- Fischer, K. D. (2002). Sources and transfer mechanism of seismic noise: Preliminary results from FEM models. *Bull. d'Inf. Marees Terr.* **137**, 10881-10886.
- Fjeldskaar, W. (1994). Viscosity and thickness of the asthenosphere detected from the Fennoscandian uplift. *Earth Planet. Sci. Lett.* **126**, 399-410.
- Fjeldskaar, W. (1997). Flexural rigidity of Fennoscandian inferred from the postglacial uplift. *Tectonics* **16(4)**, 596-608.
- Fleming, K., Johnston, P., Zwart, D., Yokoyama, Y., Lambeck, K., and Chappell, J. (1998). Refining the eustatic sea-level curve since the Last Glacial Maximum using far- and intermediate-field sites. *Earth Planet. Sci. Lett.* **163**, 327-342.
- Fleming, K., Martinec, Z., and Wolf, D. (2003). A reinterpretation of the Fennoscandian relaxation-time spectrum for a viscoelastic lithosphere. In: I. N. E. Tziavos, editor, *Gravity and Geoid 2002, 3rd Meeting of the International Gravity and Geoid Commission*, 432-438, Ziti Pub., Thessaloniki.
- Forte, A. M., and Mitrovica, J. X. (1996). New inferences of mantle viscosity from joint inversion of long-wavelength mantle convection and post-glacial rebound data. *Geophys. Res. Lett.* **23 (10)**, 1147-1150.
- Gasperini, P., and Sabadini, R. (1989). Lateral heterogeneities in mantle viscosity and post-glacial rebound. *Geophys. J.* **98**, 413-428.
- Gasperini, P., and Sabadini, R. (1990). Finite element modeling of lateral viscosity heterogeneities and post-glacial rebound. *Tectonophys.* **179**, 141-149.
- Gasperini, P., Sabadini, R., and Yuen, D. A. (1991). Deep continental roots: the effects of lateral variations of viscosity on post-glacial rebound. In: R. Sabadini, K. Lambeck, E. Boschi, editors, *Glacial Isostasy, Sea-Level and Mantle Rheology*, 21-32. Kluwer Acad. Pub., Dordrecht.

- Goes, S., and Govers, R. (2000). Shallow mantle temperatures under Europe from *p* and *s* wave tomography. *J. Geophys. Res.* **105** (B5), 11153-11169.
- Gripp, K. (1964). Erdgeschichte in Schleswig-Holstein. Neumünster.
- Hays, J., Imbrie, J., and Shackleton, N. (1976). Variations in the Earth's Orbit: Pacemaker of the Ice Ages. *Science* **194**, 1121-1132.
- Haskell, N. A. (1935). The motion of a viscous fluid under a surface load. *Physics* **7**, 56-61.
- Hibbitt, D., Karlsson, B., and Sorensen, P. (2005). Getting Started with ABAQUS - Version (6.5-2). Hibbitt, Karlsson & Sorensen, Inc.
- Ivins, E. R., and Sammis, C. G. (1995). On lateral viscosity contrast in the mantle and the rheology of low frequency geodynamics. *Geophys. J. Int.* **123**, 305-322.
- Jahr, Th., Jentzsch, G., and Kröner, C. (2001). The Geodynamic Observatory Moxa/Germany: Instrumentation and Purposes. *J. Geod. Soc. Japan* **47**(1), 34-39.
- Jelgersma, S. (1961). Holocene Sea Level changes in the Netherlands. Van Aelst, Maastricht, 101 pp.
- Jelgersma, S., Oele, E., and Wiggers, A. J. (1979). Depositional history and coastal development in The Netherlands and the adjacent North Sea since the Eemian. In: E. Oele, R. T. E. Schüttenhelm, A. J. Wiggers, editors, *The Quaternary history of the North Sea.*, 115-142, Acta Universitatis Upsaliensis, Symposia Universitatis Upsaliensis Annum Quingentesimum Celebrantis 2, Uppsala.
- Johansson, J. M., Davis, J. L., Scherneck, H.-G., Milne, G. A., Vermeer, M., Mitrovica, J. X., Bennett, R. A., Jonsson, B., Elgered, G., Elósegui, P., Koivula, H., Poutanen, M., Rönnäng, B. O., and Shapiro, I. I. (2002). Continuous GPS measurements of postglacial adjustment in Fennoscandia 1. Geodetic results. *J. Geophys. Res.* **107**, doi: 10.1029/2001JB000400.
- Johnston, P., and Lambeck, K. (1999). Postglacial rebound and sea level contributions to changes in the geoid and the Earth's rotation axis. *Geophys. J. Int.* **136** (3), 537-558.
- Karato, S. (1993). Importance of anelasticity in the interpretation of seismic tomography. *Geophys. Res. Lett.* **20** (15), 1623-1626.
- Karato, S., and Wu, P. (1993). Rheology of the upper mantle: a synthesis. *Science* **260**, 771-778.
- Kaufmann, G. (2004). Program package ICEAGE, Version 2004. Manuscript, Institut für Geophysik der Universität Göttingen, 40 pp.
- Kaufmann, G., and Wolf, D. (1996). Deglacial land emergence and lateral upper-mantle heterogeneity in the Svalbard Archipelago – II. Extended results for high-resolution load models. *Geophys. J. Int.* **127** (1), 125-140.
- Kaufmann, G., and Wu, P. (1998a). Upper mantle lateral viscosity variations and postglacial rebound: application to the Barents Sea. In: P. Wu, editor, *Dynamics of the Ice Age Earth: A Modern Perspective*, 583-602, Trans Tech Pub., Zürich, Switzerland.
- Kaufmann, G., and Wu, P. (1998b). Lateral asthenospheric viscosity variations and postglacial rebound: a case study for the Barents Sea. *Geophys. Res. Lett.* **25** (11), 1963-1966.
- Kaufmann, G., and Amelung, F. (2000). Reservoir-induced deformation and continental rheology in vicinity of Lake Mead, Nevada. *J. Geophys. Res.* **105**(B7), 16341-16358.
- Kaufmann, G., and Lambeck, K. (2000). Mantle dynamics, postglacial rebound and the radial viscosity profile. *Phys. Earth Planet. Int.* **121** (3-4), 303-327.

- Kaufmann, G., and Lambeck, K. (2002). Glacial isostatic adjustment and the radial viscosity profile from inverse modeling. *J. Geophys. Res.* **107** (B11), ETG5-1-ETG5-15.
- Kaufmann, G., and Wu, P. (2002). Glacial isostatic adjustment in Fennoscandia with a three-dimensional viscosity structure as an inverse problem. *Earth Planet. Sci. Lett.* **197** (1-2), 1-10.
- Kaufmann, G., Wu, P., and Wolf, D. (1997). Some effects of lateral heterogeneities in the upper mantle on postglacial land uplift close to continental margins. *Geophys. J. Int.* **128**, 175-187.
- Kaufmann, G., Wu, P., and Li, G. (2000). Glacial isostatic adjustment in Fennoscandia for a laterally heterogeneous Earth. *Geophys. J. Int.* **143** (1), 262-273.
- Kaufmann, G., Wu, P., and Ivins, E. R. (2005). Lateral viscosity variations beneath Antarctica and their implications on regional rebound motions and seismotectonics. *J. Geodyn.* **39** (2), 165-181.
- Kiden, P. (1995). Holocene relative sea-level change and crustal movement in the southwestern Netherlands. *Marine Geology* **124**, 21-41.
- Kiden, P., Denys, L., and Johnston, P. (2002). Late Quaternary sea-level change and isostatic and tectonic land movements along the Belgian-Dutch North Sea coast: geological data and model results. *J. Quat. Sci.* **17**, 535-546.
- Klemann, V., and Wolf, D. (2005). The eustatic reduction of shoreline diagrams: implications for the inference of relaxation-rate spectra and the viscosity stratification below Fennoscandia. *Geophys. J. Int.* **162** (1), 249-256.
- Kooi, H., Johnston, P., Lambeck, K., Smither, C., and Molendijk, R. (1998). Geological causes of recent (100 yr) vertical land movement in the Netherlands. *Tectonophysics* **299**, 297-316.
- Kroner, C., Jahr, T., Kuhlmann, S., and Fischer, K. D. (2005). Pressure-induced noise on horizontal seismometer and strainmeter records evaluated by finite element modeling. *Geophys. J. Int.* **161**, 167 - 179, doi:10.1111/j.1365-246X.2005.02576.x.
- Kudraß, H.-R., and cruise participants (2004). Cruise Report: North Sea BGR04-AUR / Leg 2. Internal report, 93 pp.
- Lambeck, K. (1993a). Glacial rebound of the British Isles – I. Preliminary model results. *Geophys. J. Int.* **115**, 941-959.
- Lambeck, K. (1993b). Glacial rebound of the British Isles – II. A high-resolution, high-precision model. *Geophys. J. Int.* **115**, 960-990.
- Lambeck, K. (1995). Late Devensian and Holocene shorelines of the British Isles and North Sea from models of glacio-hydroisostatic rebound. *Jour. Geol. Soc. London* **152**, 437-448.
- Lambeck, K., Johnston, P., Smither, C., and Nakada, M. (1996). Glacial rebound of the British Isles: III. Constraints on mantle viscosity. *Geophys. J. Int.* **125**, 340-354.
- Lambeck, K., Smither, C., and Johnston, P. (1998a). Sea-level change, glacial rebound and mantle viscosity for northern Europe. *Geophys. J. Int.* **134**, 102-144.
- Lambeck, K., Smither, C., and Ekman, M. (1998b). Tests of glacial rebound models for Fennoscandia based on instrumented sea- and lake-level records. *Geophys. J. Int.* **135**, 375-387.
- Lambert, A., Liard, J. O., and Mainville, A. (1986). Vertical movement and gravity change near the La Grande-2 reservoirs, Quebec. *J. Geophys. Res.* vol. **91** (B9), 9150-9160.

- Lange, W., and Menke, B. (1967). Beiträge zur frühpostglazialen erd- und vegetationsgeschichtlichen Entwicklung im Eidergebiet, insbesondere zur Flußgeschichte und zur Genese des sogenannten Bästorfes. *Meyniana* **17**, 29-44.
- Latychev, K., Mitrovica, J. X., Tamisiea, M. E., Tromp, J., and Moucha, R. (2005a). Influence of lithospheric thickness variations on 3-D velocities due to glacial isostatic adjustment. *Geophys. Res. Lett.* **32**, doi: 10.1029/2004GL21454.
- Latychev, K., Mitrovica, J. X., Tromp, J., Tamisiea, M. E., Komatsch, D., and Christara, C. C. (2005b). Glacial isostatic adjustment on 3-D Earth models: a finite-volume formulation. *Geophys. J. Int.* **161**, 421-444, doi: 10.1111/j.1365-246X.2005.02536.x.
- Leitch, A. M., and Yuen, D. A. (1989). Internal heating and thermal constraints on the mantle. *Geophys. Res. Lett.* **16**, 1407-1410.
- Li, A. R., and Han, X. G. (1987). Composite factors for reservoir-induced earthquakes in the Three Gorges area. In: *Impacts of the Three Gorges Project on Ecosystem and Environments and Possible Countermeasures* (in Chinese), 553-563, Science Press, Beijing.
- Li, X. D., and Romanowicz, B. (1996). Global mantle shear velocity model developed using nonlinear asymptotic coupling theory. *J. Geophys. Res.* **101 (B10)**, 22245-22272.
- Louwe Kooijmans, L. P. (1974). The Rhine/Meuse delta; four studies on its prehistoric occupation and Holocene geology. PhD thesis, University of Leiden, 421 pp.
- Ludwig, G., Müller, H., and Streif, H. (1979). Neuere Daten zum holozänen Meeresspiegelanstieg im Bereich der Deutschen Bucht. *Geologisches Jahrbuch D32* Hannover, 3-22.
- Makaske, B., van Smeerdijk, D. G., Peeters, H., Mulder, J. R., and Spek, T. (2003). Relative water-level rise in the Flevo lagoon (The Netherlands), 5300-2300 cal. yr BC: an evaluation of new and existing basal peat time-depth data. *Netherlands J. Geosci.* **82**, 115-131.
- Martinec, Z. (2005). Spectral-finite element approach to three-dimensional viscoelastic relaxation in a spherical earth. *Geophys. J. Int.* **142**, 117-142.
- Martinec, Z., and Wolf, D. (2005). Inverting the Fennoscandian relaxation-time spectrum in terms of an axisymmetric viscosity distribution with a lithospheric root. *J. Geodyn.* **39**, 143-163.
- McConnell, R. K. (1968). Viscosity of the mantle from relaxation time spectra of isostatic adjustment. *J. Geophys. Res.* **73 (22)**, 7089-7105.
- Menke, B. (1996). Palynologische Untersuchung des Vibrokerns "Gauss 1987/5" aus der südlichen Nordsee. In: H. Streif, editor, *Deutsche Beiträge zur Quartärforschung in der südlichen Nordsee. Geologisches Jahrbuch A146*, 177-182, Hannover.
- Milne, G. A., and Mitrovica, J. X. (1998). Postglacial sea-level change on a rotating Earth. *Geophys. J. Int.* **133**, 1-19.
- Milne, G. A., Davies, J. L., Mitrovica, J. X., Scherneck, H.-G., Johansson, J. M., Vermeer, M., and Koivula, H. (2001). Space-geodetic constraints on glacial isostatic adjustment in Fennoscandia. *Science* **291**, 2381-2385.
- Milne, G. A., Mitrovica, J. X., Scherneck, H.-G., Davis, J. L., Johansson, J. M., Koivula, H., and Vermeer, M. (2004). Continuous GPS measurements of postglacial adjustment in Fennoscandia: 2. Modeling results. *J. Geophys. Res.* **109 (B2)**, doi: 10.1029/2003JB002619.

- Mitrovica, J. X. (1996). Haskell [1935] revisited. *J. Geophys. Res.* **101** (B1), 555-569.
- Mitrovica, J. X., and Forte, A. M. (1997). Radial profile of mantle viscosity: results from a joint inversion of convection and postglacial rebound observables. *J. Geophys. Res.* **102** (B2), 2751-2769.
- Mitrovica, J. X., and Milne, G. A. (1998). Glaciation-induced perturbations in the Earth's rotation: a new appraisal. *J. Geophys. Res.* **103**, 985-1005.
- Mitrovica, J. X., and Peltier, W. R. (1991). A complete formalism for the inversion of post glacial rebound data: Resolving power analysis. *Geophys. J. Int.* **104**, 267-288.
- Mitrovica, J. X., and Peltier, W. R. (1993). The inference of mantle viscosity from an inversion of the fennoscandian relaxation spectrum. *Geophys. J. Int.* **114**, 45-62.
- Mitrovica, J. X., and Peltier, W. R. (1995). Constraints on mantle viscosity based upon the inversion of post-glacial uplift data from the Hudson Bay region. *Geophys. J. Int.* **122**, 353-376.
- Mitrovica, J. X., Davis, J. L., and Shapiro, I. I. (1994). A spectral formalism for computing three-dimensional deformations due to surface loads 1. Theory. *J. Geophys. Res.* **99** (B4), 7057-7073.
- Mörner, N.-A. (1984). Planetary, solar, atmospheric, hydrospheric and endogene processes as origin of climatic changes on the Earth. In: N.-A. Mörner, W. Karlén, editors, *Climatic Changes on a yearly to millennial Basis*, 637-651, Reidel Publ. Co.
- Mostaert, F., and De Moor, G. (1989). Eemian and Holocene sedimentary sequences on the Belgian coast and their meaning for sea level reconstruction. In: J.P. Henriet, G. De Moor, editors, *The Quaternary and Tertiary Geology of the Southern Bight, North Sea*, 137-148, Ministry of Economic Affairs, Belgian Geological Survey, Brussels.
- Munk, W. H., and MacDonald, G. J. F. (1960). *The Rotation of the Earth: A Geophysical Discussion*. Cambridge Univ. Press, London.
- Nakada, M., and Lambeck, K. (1988). The melting history of the late Pleistocene Antarctic ice sheet. *Nature* **333**, 36-40.
- Panza, G. F., Mueller, S., and Calcagnile, G. (1980). The gross features of the lithosphere-asthenosphere system in Europe from seismic surface waves and body waves. *Pure appl. Geophys.* **118**, 1209-1213.
- Peltier, W. R. (1974). The impulse response of a Maxwell Earth. *Rev. Geophys. Space Sci.* **12** (4), 649-669.
- Peltier, W. R. (1976). Glacial isostatic adjustment – II. The inverse problem. *Geophys. J. R. astr. Soc.* **46**, 669-706.
- Peltier, W. R. (1998). The inverse problem for mantle viscosity. *Inverse Problems* **14** (3), 441-478.
- Peltier, W. R., and Andrews, J. T. (1976). Glacial-isostatic adjustment – I. The forward problem. *Geophys. J. R. astr. Soc.* **46**, 605-646.
- Peltier, W. R., and Jiang, X. (1996a). Glacial isostatic adjustment and earth rotation: refined constraints on the viscosity of the deepest mantle. *J. Geophys. Res.* **101**, 3269-3290.
- Peltier, W. R., and Jiang, X. (1996b). Mantle viscosity from the simultaneous inversion of multiple data sets pertaining to postglacial rebound. *Geophys. Res. Lett.* **23**, 503-506.
- Ritsema, J., van Heijst, H., and Woodhouse, J. (1999). Complex shear wave velocity structure imaged beneath Africa and Iceland. *Science* **286**, 1925-1928.

- Roeleveld, W. (1974). The Holocene evolution of the Groningen Marine-Clay District. *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* **24** (supplement), S'Gravenhage.
- Roeleveld, W., and Gotjé, W. (1993). Holocene waterspiegelontwikkeling in de Noordoostpolder in relatie tot zeespiegelbeweging en kustontwikkeling. In: *De Holocene laagveenontwikkeling in de randzone van de Nederlandse kustvlakte (Noordoostpolder)*, 76-86, PhD thesis, Vrije Universiteit Amsterdam.
- Roep, T. B., and Beets, D. J. (1988). Sea-level rise and paleotidal levels from sedimentary structures in the coastal barrier in the western Netherlands since 5600 B.P. *Geologie en Mijnbouw* **67**, 53-60.
- Romanowicz, B. (1998). Attenuation tomography of the Earth's mantle: A review of current status. *Pure appl. Geophys.* **153**, 257-272.
- Rothe, J. R. (1968). Fill a lake, start an earthquake. *New scientist* **39**, 75-78.
- Sabadini, R., and Gasperini, P. (1989). Glacial isostasy and the interplay between upper and lower mantle lateral viscosity heterogeneities. *Geophys. Res. Lett.* **16** (5), 429-432.
- Sabadini, R., Yuen, D. A., and Portney, M. (1986). The effects of upper mantle lateral heterogeneities on postglacial rebound. *Geophys. Res. Lett.* **13** (4), 337-340.
- Sambridge, M. (1998). Exploring multidimensional landscapes without a map. *Inverse Problems* **14** (3), 427-440.
- Sambridge, M. (1999a). Geophysical inversion with a neighbourhood algorithm I: Searching the parameter space. *Geophys. J. Int.* **138**, 479-494.
- Sambridge, M. (1999b). Geophysical inversion with a neighbourhood algorithm II: Appraising the ensemble. *Geophys. J. Int.* **138**, 727-746.
- Sambridge, M. (2001). Finding acceptable models in nonlinear inverse problems using a neighbourhood algorithm. *Inverse Problems* **17**, 387-403.
- Santos, M. C., Gamael, C., Blake, B., Faggion, P., Krueger, C. P., Ferreira, L. D. D., Soares, M., and Szostak-Chrzanowski, A. (2001). Stage 1 of subsidence monitoring of the area surrounding Salto Caxias power dam, in Brazil. *Proc. 10th FIG Int. Symp. on Deformation Measurements*, Orange, California, USA, 19.-22.03.01, 89-97.
- Schellmann, G., and Radtke, U. (2004). The Marine Quaternary of Barbados. *Kölner Geographische Arbeiten* **81**, 137 pp.
- Schmeling, H., Marquart, G., and Ruedas, T. (2003). Pressure- and temperature-dependent thermal expansivity and the effect on mantle convection and surface observables. *Geophys. J. Int.* **154** (1), 224-229.
- Shennan, I., Lambeck, K., Horton, B., Innes, J., Lloyd, J., McArthur, J., and Rutherford, M. (2000a). Holocene isostasy and relative sea-level changes on the east coast of England. In: I. Shennan, J. Andrews, editors, *Holocene Land-Ocean Interaction and Environmental Change around the North Sea.*, 275-298, Geological Society, London, Special Publications 166.
- Shennan, I., Lambeck, K., Flather, R., Horton, B., McArthur, J., Innes, J., Lloyd, J., Rutherford, M., and Wingfield, R. (2000b). Modelling western North Sea palaeogeographies and tidal ranges during the Holocene. In: I. Shennan, J. Andrews, editors, *Holocene Land-Ocean Interaction and Environmental Change around the North Sea.*, 299-319, Geological Society, London, Special Publications 166.

- Simpson, D. W. (1976). Seismicity changes associated with reservoir loading. *Engineering Geology* **10**, 123-150.
- Spada, G., Antonioli, A., Cianetti, S., and Giunchi, C. (2006). Glacial isostatic adjustment and relative sea-level changes: the role of lithospheric and upper-mantle heterogeneities in a 3-D spherical Earth. *Geophys. J. Int.* **165**, 692-792.
- Steffen, H., and Kaufmann, G. (2005). Glacial isostatic adjustment of Scandinavia and northwestern Europe and the radial viscosity structure of the Earth's mantle. *Geophys. J. Int.* **163/2**, 801-812.
- Steffen, H., and Kaufmann, G. (2006a). Numerical modelling of deformation changes induced by lake-level fluctuations of the Hohenwarte reservoir, Thuringia, Germany. *J. Geodyn.* **41(4)**, 411-421.
- Steffen, H., and Kaufmann, G. (2006b). Influence of the Hohenwarte reservoir on tilt and strain observations at Moxa. *Bull. d'Inf. Mareas Terr.* **142**, 11399-11406.
- Steffen, H., Kaufmann, G., and Wu, P. (2006a). Three-dimensional finite-element modelling of the glacial isostatic adjustment in Fennoscandia. *Earth Planet. Sci. Lett.* **250**, 358-375, doi: 10.1016/j.epsl.2006.08.003.
- Steffen, H., Wu, P., and Kaufmann, G. (2006b). Sensitivity of crustal velocities in Fennoscandia to radial and lateral viscosity variations in the mantle. *Earth Planet. Sci. Lett.*, submitted.
- Steffen, H., Kuhlmann, S., Jahr, T., and Kroner, C. (2006c). Numerical Modelling of the Barometric Pressure-Induced Noise in Horizontal Components for the Observatories Moxa and Schiltach. *J. Geodyn.* **41(1-3)**, 242-252.
- Streif, H. (1972). The results of stratigraphical and facial investigations in the coastal Holocene of Woltzeten/Ostfriesland, Germany. *Geologiska Föringen i Stockholm Förhandlingar* **94**, 281-299.
- Streif, H., Uffenorde, H., and Vinken, R. (1983). Untersuchungen zum pleistozänen und holozänen Transgressionsgeschehen im Bereich der südlichen Nordsee. Unpublished Internal Report, Niedersächsisches Landesamt für Bodenforschung, Hannover, 102 pp.
- Stuiver, M., and Reimer, P. (1993). Extended ^{14}C database and revised CALIB radiocarbon calibration program. *Radiocarbon* **35**, 15-230.
- Stuiver, M., Reimer, P., and Braziunas, T. F. (1998). High-precision radiocarbon age calibration for terrestrial and marine samples. *Radiocarbon* **40**, 1127-1151.
- Su, W., and Dziewonski, A. M. (1991). Predominance of long-wavelength heterogeneity in the mantle. *Nature* **352**, 121-126.
- Tarantola, A., and Valette, B. (1982). Generalized nonlinear inverse problems solved using the least squares criterion. *Rev. Geophys. Space Phys.* **20(2)**, 219-232.
- Teupser, Ch. (1975). The seismological station of Moxa. *Veröff. Zentralinst. Physik d. Erde* **31**, 577-584.
- Töpke, A. (1992). Zur Analyse des Meeresspiegelanstiegs aus langjährigen Wasserstandaufzeichnungen an der deutschen Nordseeküste. *Mitt. Leichtweiß-Institut f. Wasserbau der TU Braunschweig* **120**, 1-132.
- Töpke, A. (1995). Beschleunigter Meeresspiegelanstieg an der deutschen Nordseeküste? *Jahrbuch Hafenbautechnische Gesellschaft* **49**, 200-209.

- Tushingham, A. M., and Peltier, W. R. (1991). Ice-3G: a new global model of late Pleistocene deglaciation based upon geophysical predictions of post-glacial relative sea level change. *J. Geophys. Res.* **96**, 4497-4523.
- Tushingham, A. M., and Peltier, W. R. (1992). Validation of the Ice-3G model of Würm-Wisconsin deglaciation using a global data base of relative sea level histories. *J. Geophys. Res.* **97**, 3285-3304.
- van Bemmelen, R. W., and Berlage, H. P. (1935). Versuch einer mathematischen Behandlung geotektonischer Bewegungen unter besonderer Berücksichtigung der Undationstheorie. *Gerlands Beitr. Geophys.* **42**, 19-55.
- van de Plassche, O. (1982). Sea-level change and water-level movements in the Netherlands during the Holocene. *Mededelingen rijks geologische dienst* **36-1**, 93 pp.
- van de Plassche, O., Bohncke, S. J. P., Makaske, B., and van der Plicht, J. (2005). Water-level changes in the Flevoland area, central Netherlands (5300-1500 BC): implications for relative mean sea-level rise in the Western Netherlands. *Quat. Int.* **133-134**, 77-93.
- Vink, A., Steffen, H., Reinhardt, L., and Kaufmann, G. (2006). Holocene relative sea-level change, isostatic subsidence and the radial viscosity structure of the mantle of north-western Europe (Belgium, the Netherlands, Germany, southern North Sea). *Quat. Sci. Rev.*, submitted.
- Wang, H. S. (2000). Surface vertical displacements and level plane changes in the front reservoir area caused by filling the Three Gorges Reservoir. *J. Geophys. Res.* vol. **105(B6)**, 13211-13220.
- Wang, H. S., and Wu, P. (2006a). Effects of lateral variations in lithospheric thickness and mantle viscosity on glacially induced surface motion on a spherical self-gravitating Maxwell earth. *Earth Planet. Sci. Lett.* **244** (3-4), 576-589.
- Wang, H. S., and Wu, P. (2006b). Effects of lateral variations in lithospheric thickness and mantle viscosity on glacially induced relative sea levels and long wavelength gravity field in a spherical, self-gravitating Maxwell Earth. *Earth Planet. Sci. Lett.* **249**, 368-383.
- Wang, H. S., and Wu, P. (2006c). Role of background viscosity in the investigation of postglacial induced crustal motion in a laterally heterogeneous mantle. *J. Geodyn.* **42**, 85-94.
- Wessel, P., and Smith, W. H. F. (1991). Free software helps map and display data. *EOS* **72**, 441-446.
- Wessel, P., and Smith, W. H. F. (1998). New, improved version of generic mapping tools released. *EOS* **79**, 579.
- Wieczkowski, K., Mitrovica, J. X., and Wolf, D. (1999). A revised relaxation-time spectrum for Fennoscandia. *Geophys. J. Int.* **139**, 69-86.
- Williams, M., Dunkerley, D., DeDekker, P., Kershaw, P. & Chappell, J. (1998). Quaternary Environments. Arnold, 329 pp.
- Withers, R. J. (1977). Seismicity and stress determination at man-made lakes. Ph.D. thesis, Univ. of Alberta, Edmonton.
- Wolf, D. (1984). The relaxation of spherical and flat Maxwell Earth models and effects due to the presence of the lithosphere. *J. Geophys.* **56**, 24-33.
- Wolf, D. (1987). An upper bound on lithosphere thickness from glacio-isostatic adjustment in Fennoscandia. *J. Geophys.* **61**, 141-149.

- Wu, P. (1992a). Deformation of an incompressible viscoelastic flat Earth with power-law creep: a finite element approach. *Geophys. J. Int.* **108**, 35-51.
- Wu, P. (1992b). Viscoelastic versus viscous deformation and the advection of pre-stress. *Geophys. J. Int.* **108**, 136-142.
- Wu, P. (2002). Mode coupling in a viscoelastic self-gravitating spherical earth induced by axisymmetric loads and lateral viscosity variations. *Earth Planet. Sci. Lett.* **202**, 49-60.
- Wu, P. (2004). Using commercial Finite element packages for the study of earth deformations, sea levels and the state of stress. *Geophys. J. Int.* **158/2**, 401-408.
- Wu, P. (2005). Effects of lateral variations in lithospheric thickness and mantle viscosity on glacially induced surface motion in Laurentia. *Earth Planet. Sci. Lett.* **235**, 549-563.
- Wu, P. (2006). Sensitivity of relative sea levels and crustal velocities in Laurentide to radial and lateral viscosity variations in the mantle. *Geophys. J. Int.* **165**, 401-413.
- Wu, P., and Johnston, P. (1998). Validity of using flat-earth finite element models in the study of postglacial rebound. In: P. Wu, editor, *Dynamics of the Ice Age Earth: A Modern Perspective*, 191-202, Trans Tech Pub., Zürich, Switzerland.
- Wu, P., and van der Wal, W. (2003). Postglacial sealevels on a spherical, self-gravitating viscoelastic earth: Effects of lateral viscosity variations in the upper mantle on the inference of viscosity contrasts in the lower mantle. *Earth Planet. Sci. Lett.* **211**, 57-68.
- Wu, P., Ni, Z., and Kaufmann, G. (1998). Postglacial rebound with lateral heterogeneities: from 2D to 3D modeling. In: P. Wu, editor, *Dynamics of the Ice Age Earth: A Modern Perspective*, 557-582, Trans Tech Pub., Zürich, Switzerland.
- Wu, P., Wang, H. S., and Schotman, H. (2005). Postglacial induced surface motions, sea levels and geoid rates on a spherical, self-gravitating laterally heterogeneous earth. *J. Geodyn.* **39** (2), 127-142.
- Yamazaki, D., and Karato, S.-i. (2001). Some mineral physics constraints on the rheology and geothermal structure of the Earth's lower mantle. *Am. Miner.* **86**, 385-391.
- Yan, F., Xinbin, T., and Li, G. (2004). The uplift mechanism of the rock masses around the Jiangya dam after reservoir inundation, China. *Engineering Geology* **76**, 141-154.
- Yokoyama, Y., Lambeck, K., De Dekker, P., Johnston, P. & Keith Fifield, L. (2000) Timing of the Last Glacial Maximum from observed sea-level minima. *Nature* **406**, 713-716.
- Zagwijn, W. H. (1983). Sea-level changes in The Netherlands during the Eemian. *Geologie en Mijnbouw* **62**, 437-450.
- Zhao, D. (2001). Seismic structure and origin of hotspots and mantle plumes. *Earth Planet. Sci. Lett.* **192**, 251-265.
- Zhong, S., Paulson, A., and Wahr, J. (2003). Three-dimensional finite-element modelling of Earth's viscoelastic response: effects of lateral variations in lithospheric thickness. *Geophys. J. Int.* **155**, 679-695.
- Zhou, Y., Nolet, G., Dahlen, F. A., and Laske, G. (2006). Global upper-mantle structure from finite-frequency surface-wave tomography. *J. Geophys. Res. – Solid Earth* **111**(B4), B04304.
- Zonneveld, I. S. (1960). De Brabantse Biesbosch. PhD thesis, University of Wageningen, 210 pp.