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## Curriculum Vitae of Dr Ir Eric Deleersnijder

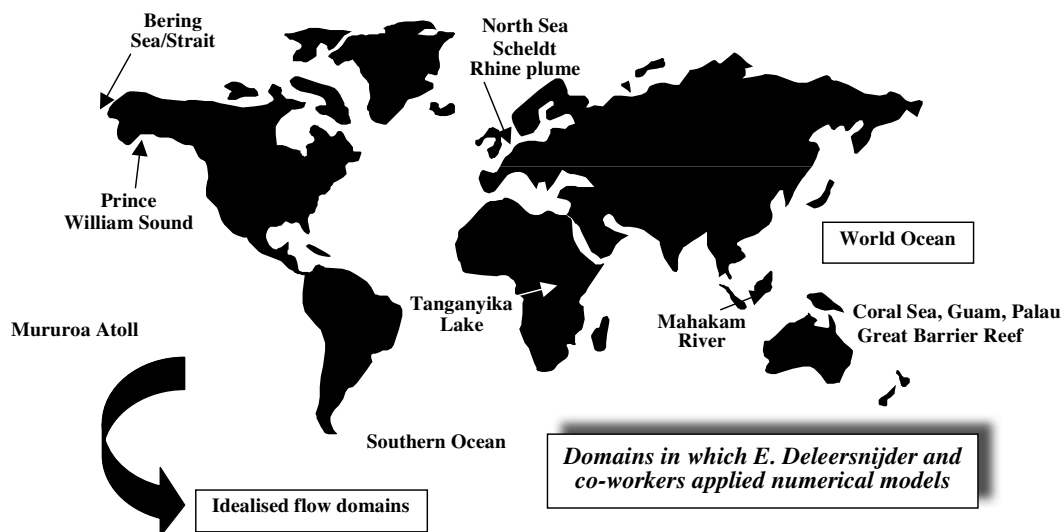


Institute of Mechanics, Materials and Civil Engineering (iMMC)  
& Earth and Life Institute (ELI) - Université catholique de Louvain (UCL)  
Bte L4.05.02, 4 Avenue G. Lemaître, B-1348 Louvain-la-Neuve, Belgium  
Telephone: +32-(0)10.47.23.63 or +32-(0)10.47.23.50  
Fax: +32-(0)10.47.21.80 - Mobile phone: +32-(0)493.248.829  
E-mail: eric.deleersnijder@uclouvain.be  
Web: www.ericd.be

### Biographical data

Born on 25 April 1961, in Liège, Belgium  
Belgian citizen, married, two children

**Interests** Geophysical and environmental fluid mechanics  
Unstructured-mesh modelling of lakes, estuaries, seas and oceans<sup>1</sup>  
Tracer methods in fluid flows<sup>2</sup>



### Education

1984 Degree (5-year cursus) in electromechanical engineering (*Ingénieur civil*),  
University of Liège, Belgium  
1992 Doctorate in applied sciences (mechanics), UCL (Supervisor: Prof. Jacques C.J.  
Nihoul)

<sup>1</sup> See <http://www.climate.be/slim> and <http://www.climate.be/timothy>

<sup>2</sup> See <http://www.climate.be/cart>

## Employment

### *Past positions:*

- October 1984 - September 1985: Pisart Fund fellow, University of Liège, Belgium  
October 1985 - September 1990: FNRS<sup>3</sup> Research fellow (*Aspirant*), University of Liège, Belgium  
October 1990 - March 1991: Research assistant, Management Unit of the North Sea Mathematical Model, Brussels, Belgium  
May 1991 - September 1992: Research assistant, UCL  
October 1992 - September 1994: Senior research assistant (*Chargé de recherche*), UCL  
1994 - 2011: FNRS Research associate (*Chercheur qualifié*), UCL  
1995 - 1998: Invited lecturer (*Chargé de cours invité*), UCL  
1998 - 2004: Part-time lecturer (*Chargé de cours à temps partiel*), UCL  
March 2001 - May 2001: *Chargé de recherche associé du CNRS*<sup>4</sup>, Institut de Recherche Mathématique de Rennes, Rennes, France  
2001 - 2002: Part-time invited professor at the University of Ghent, Belgium  
May 2003 - October 2003: *Gastdocent*, Environmental Fluid Mechanics Section, Faculty of Civil Engineering and Geosciences, Delft University of Technology, Delft, The Netherlands  
2004 - 2011: Part-time reader (*Professeur à temps partiel*), UCL

### *Present positions:*

- 2011 - now: reader (*Professeur*), UCL

## Teaching experience

*I taught courses related to mechanics (introductory level), fluid mechanics, physical oceanography, numerical methods and ecological modelling*

### *Courses presently taught at UCL:*

- Hydraulique (with Sandra Soares Frazao and Yves Zech) (LAUCE1152)  
Modélisation géographique (with Sophie Vanwambeke) (LGEO2130)  
Modélisation de systèmes écologiques et environnementaux - Ecologie mathématique (with Denis Dochain) (MAPR2510)  
Physique des fluides (with Vincent Legat) (LPHY1352)  
Physique générale I (with Pierre Defrance, Thierry Fichet and Philippe Antoine) (LPHY1113)  
Simulation numérique en physique (with Bernard Piraux) (LPHY2371)  
Turbulence (with Grégoire Winckelmans) (MECA2853)

### *Doctoral students and research scientists (co-)supervised:*

- Tartinville Benoît, doctoral student, 1994 - 1997  
Mathieu Pierre-Philippe, doctoral student, 1994 - 1998

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<sup>3</sup> Fonds National de la Recherche Scientifique, Belgium

<sup>4</sup> Centre National de la Recherche Scientifique, France

Legrand Sébastien, doctoral student, 1999 - 2006  
Hanert Emmanuel, doctoral (then postdoctoral) student, 2000 - 2005  
Goosse Hugues, research scientist, 2001 - 2003  
Menvielle Sylvaine, postdoctoral fellow, 2001 - 2002  
Naithani Jaya, research scientist, 2001 - 2007, 2010 - now  
Bernard Paul-Emile, doctoral student, 2004 - 2008  
Ponsar Stéphanie, doctoral student, 2004 - now  
White Laurent, doctoral student, 2004 - 2007  
Blaise Sébastien, doctoral student, 2005 - 2009, FNRS postdoctoral researcher, 2011 - now  
Gourgue Olivier, doctoral student, 2005 - 2011  
Lambrechts Jonathan, doctoral student, 2005 - 2011  
Comblen Richard, doctoral student, 2006 - 2010  
de Brye Benjamin, doctoral student, 2007 - 2011  
Debrauwere Anouk<sup>5</sup>, FWO then FNRS postdoctoral researcher, 2007 - now  
Shah S.H.A.M., doctoral student (at T.U. Delft<sup>6</sup>), 2009 - now  
Kärnä Tuomas, doctoral student, 2008 - now  
Laguerre Raphaël, postdoctoral researcher, 2010 - 2011  
Thomas Christopher, doctoral student, 2010 - now  
Pestiaux Alice, doctoral student, 2010 - now  
Chien Van Pham, doctoral student, 2010 - now  
Delandmeter Philippe, doctoral student, 2011 - now

## **Research experience**

### *Principal investigator in research programmes:*

MODELLING OF THE HYDRODYNAMICS OF THE MURUROA ATOLL LAGOON, funded by France's Commissariat à l'Energie Atomique / Ministère de la Défense, from 1 Dec. 1993 until 30 Nov. 1997 [1,000,000 FF]  
WORLD OCEAN MODELLING ON A "SMALL" PARALLEL COMPUTER, funded by Digital Equipment Corporation N.V./S.A., from 1 Aug. 1994 until 31 July 1996 [1,044,054 BEF]  
NORTH SEA MODEL ADVECTION DISPERSION STUDY (NOMADS) (Coordinator: R. Proctor), funded by the European Union under MAST, from 1 Feb. 1995 until 31 Jan 1997 [11,210 ECU]  
ACTIONS DE RECHERCHE CONCERTÉES "MODELISER LES VARIATIONS DU CLIMAT TERRESTRE" (with A. Berger, main promoter), funded by the Communauté Française de Belgique (CFWB), from 1 Oct 1997 until 30 Sep. 2002 [20,000,000 BEF]  
AN INTEGRATED APPROACH TO ASSESS CARBON DYNAMICS IN THE SOUTHERN OCEAN (coordinator: F. Dehairs): One-dimensional modelling of sea-ice and the water column, funded by the Belgian Federal Office for Scientific, Technical and Cultural Affairs (OSTC), from 1 Dec 1996 until 30 Nov 2000 [4,370,000 BEF]

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<sup>5</sup> Intercommunity Post-doc collaborator of the Francqui Foundation (at UCL from Oct 2008 until March 2009)

<sup>6</sup> Main supervisor: Prof Arnold W. Heemink

GLOBAL OCEAN STORAGE OF ANTHROPOGENIC CARBON (GOSAC) (Coordinator: J. Orr), sub-contractor to the Laboratory for Planetary and Atmospheric Physics of the University of Liège, funded by the European Union, from 1 Dec 1997 until 30 Nov 2000 [39,500 ECU]

SIMULATION NUMERIQUE ET TRAITEMENT DE DONNEES (with X. Gonze and B. Piraux, main promoter), funded by the Fonds Spéciaux de Recherche de l'Université catholique de Louvain, from 1 October 1998 until 30 September 2000 [5,000,000 BEF]

SIMULATION NUMERIQUE ET TRAITEMENT DE DONNEES (with X. Gonze, main promoter, and B. Piraux), funded by the Fonds pour la Recherche Fondamentale Collective de Belgique (FRFC), from 1 February 1999 until 31 January 2002 [24,000,000 BEF]

DEVELOPPEMENT D'UN MODELE DE CIRCULATION GENERALE OCEANIQUE DE SECONDE GENERATION POUR L'ETUDE DU CLIMAT TERRESTRE (with V. Legat), funded by the Fonds Spéciaux de Recherche de l'Université catholique de Louvain, from 1 October 2000 until 30 September 2002 [1,325,000 BEF]

CLIMATE VARIABILITY AS RECORDED IN LAKE TANGANYIKA (CLIMLAKE) (Coordinator: J.-P. Descy), funded by the Belgian Federal Office for Scientific, Technical and Cultural Affairs (OSTC), from 1 Dec 2000 until 28 February 2005 [217,402.62 EURO]

ASSESSING THE SENSITIVITY OF THE SOUTHERN OCEAN'S BIOLOGICAL PUMP TO CLIMATE CHANGE (Coordinator: F. Dehairs), funded by the Belgian Federal Office for Scientific, Technical and Cultural Affairs (OSTC), from 1 Dec 2000 until 28 February 2005 [264,105.76 EURO]

NORTHERN OCEAN-ATMOSPHERE CARBON EXCHANGE STUDY (NOCES) (Coordinator: J. Orr), sub-contractor to the Laboratory for Planetary and Atmospheric Physics of the University of Liège, funded by the European Union, from 1 April 2002 until 31 March 2005 [30,557 EURO]

IMPLEMENTATION IN EARTH TECH'S CALMET OF A NEW DIVERGENCE MINIMIZATION ALGORITHM (subcontract), funded by Earth Tech, Inc., from 1 May 2002 until 31 August 2002 [10,000 USD]

DEVELOPPEMENT D'UN MODELE DE CIRCULATION GENERALE OCEANIQUE DE SECONDE GENERATION POUR L'ETUDE DU CLIMAT TERRESTRE (SUITE) (with V. Legat), funded by the Fonds Spéciaux de Recherche de l'Université catholique de Louvain, from 1 October 2002 until 30 September 2004 [15,000 EURO]

APPORT DE L'ASSIMILATION DES DONNEES SATELLITAIRES A LA MODELISATION DE LA GLACE DE MER (with T. Fichefet, main promoter), funded by the Fonds Spéciaux de Recherche de l'Université catholique de Louvain, from 1 October 2002 until 30 September 2004 [44,750 EURO]

IMPACT DES CHANGEMENTS CLIMATIQUES SUR L'UTILISATION DURABLE DES PECHERIES DU LAC TANGANYIKA (CLIMFISH), funded by the Belgian Science Policy, from 1 July 2004 until 31 December 2006 [74,550 EURO]

ACTIONS DE RECHERCHE CONCERTÉES "A SECOND-GENERATION MODEL OF THE OCEAN SYSTEM"<sup>7</sup> (with Thierry Fichefet, Vincent Legat and Jean-François Remacle), funded by

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<sup>7</sup> Main promoter: E. Deleersnijder; see <http://www.climate.be/SLIM>

the Communauté Française de Belgique, from 15 September 2004 until 15 September 2009 [725,000 EURO]

CREDIT AUX CHERCHEURS "NUMERICAL MODELLING OF GEOPHYSICAL FLOWS: IDEALIZATIONS, STABILITY OF SOLUTIONS AND INTERPRETATIONS OF THE RESULTS", funded by the FNRS, from 1 October 2004 until 30 September 2007 [6,000 EURO]

NUMERICAL SIMULATION: APPLICATION IN SOLID STATE PHYSICS, PHYSICAL OCEANOGRAPHY AND FLUID DYNAMICS (with Xavier Gonze, main promoter, and Grégoire Winckelmans), funded by the Fonds pour la Recherche Fondamentale Collective de Belgique (FRFC), from 1 February 2005 until 31 January 2009 [450,000 EURO]

INTERUNIVERSITY ATTRACTION POLE (IAP) "TRACING AND INTEGRATED MODELLING OF NATURAL AND ANTHROPOGENIC EFFECTS ON HYDROSYSTEMS: THE SCHELDT RIVER BASIN AND ADJACENT COASTAL NORTH SEA"<sup>8</sup> (TIMOTHY) (Coordinator: C. Lancelot), funded by the Belgian Science Policy (BELSPO), from 1 January 2007 until 31 December 2011 [400,000 EURO]

ACTIONS DE RECHERCHE CONCERTÉES "TAKING UP THE CHALLENGES OF MULTI-SCALE MARINE MODELLING"<sup>9</sup> (with Thierry Fichefet, Emmanuel Hanert, Vincent Legat, Jean-François Remacle and Sandra Soares Frazao), funded by the Communauté Française de Belgique, from 1 October 2010 until 30 September 2015 [485,000 EURO]

CHOLERA OUTBREAKS AT LAKE TANGANYIKA INDUCED BY CLIMATE CHANGE? (CHOLTIC) (Coordinator: Pierre-Denis Plisnier), funded by the Belgian Science Policy (BELSPO), from 15 December 2010 until 31 March 2015 [121,125 EURO]

#### *Stays abroad:*

Laboratoire de Météorologie Dynamique du CNRS, Ecole Normale Supérieure, Paris, France, from September 1993 until April 1994, as a visiting scientist

Institut de Recherche Mathématique de Rennes, Rennes, France, from March until May 2001, as a *chargé de recherche associé du CNRS*

Environmental Fluid Mechanics Section, Faculty of Civil Engineering and Geosciences, Delft University of Technology, Delft, The Netherlands, from May until October 2003, as a *gastdocent*

#### *Miscellaneous:*

Associate editor of *Ocean Dynamics* (since 2007)

Member of the editorial board of *Ocean Modelling* (since 1999), *Estuarine, Coastal and Shelf Science* (since 2001), *Environmental Fluid Mechanics* (since 2001), *International Journal of Oceans & Oceanography* (since 2005), *ISRN Oceanography* (since 2012)

Reviewer of manuscripts submitted to *Advances in Water Resources*, *Annals of Geophysics*; *Coastal Engineering*; *Computers and Geosciences*; *Continental Shelf Research*; *Coral Reefs*; *Dynamics of Atmospheres and Oceans*; *Estuarine, Coastal and Shelf Science*; *Deep-Sea Research*; *Ecological Modelling*; *Environmental Fluid Mechanics*; *Geophysical Research Letters*; *International Journal for Numerical*

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<sup>8</sup> See <http://www.climate.be/TIMOTHY>

<sup>9</sup> Main promoter: E. Deleersnijder; see <http://www.climate.be/SLIM>

*Methods in Fluids; International Journal for Numerical Methods in Engineering; Journal of Climate; Journal of Coastal Research; Journal of Geophysical Research (Oceans); Journal of Hydraulic Engineering; Journal of Marine Systems; Journal of Physical Oceanography; Marine Geology; Marine Technology Society Journal; Oceanologica Acta; Ocean Dynamics; Ocean Modelling; Proceedings of the Royal Society of London: Mathematical, Physical and Engineering Sciences; Quarterly Journal of the Royal Meteorological Society; Tellus; The International Journal of Computational Fluid Dynamics; Water Resources Research*

Reviewer of proposals submitted to the *Australian Research Council, Belgian National Fund for Scientific Research (FNRS), Fonds Wetenschappelijk Onderzoek Vlaanderen (Belgium), Israel Science Foundation, Netherlands Organization for Scientific Research, Networks of Centres of Excellence (Canada), Nuffield Foundation (UK), Research Council of Norway, UK Natural Environment Research Council, US National Science Foundation*

Convener of the session “Numerical methods in ocean and atmosphere modelling” at the General Assembly of the European Geophysical Society in 2000 and 2001

Convener of the session “Model development for large- and small-scale processes in the ocean” at the General Assembly of the European Geosciences Union in 2007 and 2008

Co-convener of the session “Tracer and timescale methods for understanding complex fluid flows” at the American Geophysical Union Fall Meeting in 2008

Co-organiser of the workshop/school “Tracer and Timescale Methods for Understanding Complex Geophysical and Environmental Processes”<sup>10</sup> (August 16-19, 2011, Louvain-la-Neuve, Belgium)

Co-organiser (with Julie Pietrzak and Jens Schroeter) of the “1st<sup>11</sup>, 2nd<sup>12</sup> and 8th<sup>13</sup> International Workshops on Unstructured Mesh Numerical Modelling of Coastal, Shelf and Ocean Flows”

Co-organiser (with Eric J.M. Delhez and Michel Rixen) of the 34th International Liège Colloquium on Ocean Dynamics “Tracer Methods in Geophysical Fluid Dynamics” (May 6-10, 2002, Liège, Belgium)

Member of the working group “Ocean modelling” for the study of the radiological situation at the Mururoa and Fangataufa atolls under the auspices of the International Atomic Energy Agency, from 1996 until 1998

President of the “High performance computing committee” (*Comité du calcul intensif*) of the Université catholique de Louvain, from November 2000 until November 2003

Head of the applied mechanics and mathematics unit/pole (MEMA) at UCL since October 2009

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<sup>10</sup> <http://www.uclouvain.be/ttm2011>

<sup>11</sup> 4-5 November 2002, Louvain-la-Neuve, Belgium

<sup>12</sup> 23-25 September 2003, Delft, The Netherlands

<sup>13</sup> 16-18 September 2009, Louvain-la-Neuve, Belgium (<http://www.uclouvain.be/umm2009>)

## Publications

### Collective works:

1. Delhez E.J.M., E. Deleersnijder and M. Rixen (Editors), 2004, TRACER METHODS IN GEOPHYSICAL FLUID DYNAMICS, 34th International Liège Colloquium on Ocean Dynamics (Liège, Belgium, May 6-10, 2002), *Journal of Marine Systems* (special issue), 48, 1-193 (Preface pp. 1-2)
2. Pietrzak J., E. Deleersnijder and J. Schroeter (Editors), 2005, THE SECOND INTERNATIONAL WORKSHOP ON UNSTRUCTURED MESH NUMERICAL MODELLING OF COASTAL, SHELF AND OCEAN FLOWS (Delft, The Netherlands, September 23-25, 2003), *Ocean Modelling* (special issue), 10, 1-252 (Preface pp. 1-3)
3. Deleersnijder E. and E.J.M. Delhez (Editors), 2007, TIMESCALE- AND TRACER-BASED METHODS FOR UNDERSTANDING THE RESULTS OF COMPLEX MARINE MODELS, *Estuarine, Coastal and Shelf Science* (special issue), 74, 585-776 (Editorial pp. v-vii)
4. Deleersnijder E. and P.F.J. Lermusiaux (Editors), 2008, MULTI-SCALE MODELING: NESTED-GRID AND UNSTRUCTURED-MESH APPROACHES, *Ocean Dynamics* (special issue), 58, 335-498
5. Deleersnijder E., F. Cornaton, T.W.N. Haine, M. Vanclooster and D.W. Waugh (Editors), 2010, TRACER AND TIMESCALE METHODS FOR UNDERSTANDING COMPLEX GEOPHYSICAL AND ENVIRONMENTAL FLUID FLOWS, *Environmental Fluid Mechanics* (special issue), 10, 1-295
6. Deleersnijder E., V. Legat and P.F.J. Lermusiaux (Editors), 2010, MULTI-SCALE MODELLING OF COASTAL, SHELF AND GLOBAL OCEAN DYNAMICS, *Ocean Dynamics* (special issue), 60, 1357-1637
7. Lancelot C., E. Deleersnijder and N. Gypens (Editors), TRACING AND INTEGRATED MODELING OF NATURAL AND ANTHROPOGENIC EFFECTS ON HYDROSYSTEMS: THE SCHELDT RIVER BASIN AND ADJACENT COASTAL NORTH SEA, *Journal of Marine Systems* (special issue, in preparation)

### Refereed articles and book chapters:

1. Deleersnijder E. and J.C.J. Nihoul, 1988, Turbulent fields associated with the general circulation in the northern Bering Sea, in: *Small-scale Turbulence and Mixing in the Ocean*, J.C.J. Nihoul and B.M. Jamart (eds.), Elsevier, pp 77-93
2. Deleersnijder E., E. Wolanski and A. Norro, 1989, Numerical simulation of the three-dimensional tidal circulation in an island's wake, in: *Computers and Experiments in Fluid Flow*, G.M. Carlomagno and C.A. Brebbia (eds.), Computational Mechanics Publications and Springer-Verlag, pp 355-381
3. Nihoul J.C.J., E. Deleersnijder and S. Djenidi, 1989, Modelling the general circulation of shelf seas by 3D k-epsilon models, *Earth-Science Reviews*, 26, 163-189
4. Walsh J.J., C.P. McRoy, L.K. Coachman, J.J. Goering, J.C.J. Nihoul, T.E. Whitledge, T.H. Blackburn, P.L. Parker, C.D. Wirick, P.G. Shuert, J.M. Grebmeier, A.M. Springer, R.D. Tripp, D.A. Hansell, S. Djenidi, E. Deleersnijder, K. Henriksen, B.A. Lund, P. Andersen, F.E. Mueller-Karger and K. Dean, 1989, Carbon and nitrogen cycling within the Bering/Chukchi Seas: source regions for organic matter affecting AOU demands of the Arctic Ocean, *Progress in Oceanography*, 22, 277-359
5. Deleersnijder E., 1989, Upwelling and upsloping in three-dimensional marine models, *Applied Mathematical Modelling*, 13, 462-467
6. Maroishi K., E. Deleersnijder and A. Loffet, 1992, Simulation mathématique des nappes d'hydrocarbures et comparaison avec les observations par télédétection, *Hydroécologie Appliquée*, 4, 23-31

7. Deleersnijder E., 1992, A note on the stability functions of the Mellor-Yamada level 2 1/2 turbulence closure, *Bulletin de la Société Royale des Sciences de Liège*, 61, 397-404
8. Deleersnijder E. and K.G. Ruddick, 1992, A generalized vertical coordinate for 3D marine models, *Bulletin de la Société Royale des Sciences de Liège*, 61, 489-502
9. Deleersnijder E., A. Norro and E. Wolanski, 1992, A three-dimensional model of the water circulation around an island in shallow water, *Continental Shelf Research*, 12, 891-906
10. Deleersnijder E., 1992, Comment on "A variational inverse method for the reconstruction of general circulation fields in the Northern Bering Sea" by Pierre P. Brasseur, *Journal of Geophysical Research*, 97, 9755-9757
11. Deleersnijder E. and J.-M. Beckers, 1992, On the use of the sigma-coordinate system in regions of large bathymetric variations, *Journal of Marine Systems*, 3, 381-390
12. Deleersnijder E., 1992, Revisiting Nihoul's model for oil slicks transport and spreading on the sea, *Ecological Modelling*, 64, 71-75
13. Nihoul J.C.J., P. Adam, P. Brasseur, E. Deleersnijder, S. Djenidi and J. Haus, 1993, Three-dimensional general circulation model of the northern Bering sea's summer ecohydrodynamics, *Continental Shelf Research*, 13, 509-542
14. Deleersnijder E. and M. Roland, 1993, Preliminary tests of a hybrid numerical-asymptotic method for solving nonlinear advection-diffusion equations in a domain limited by a self-adjusting boundary, *Mathematical and Computer Modelling*, 17, 35-47
15. Beckers J.-M. and E. Deleersnijder, 1993, Stability of a FBTCs scheme applied to the propagation of shallow-water inertia-gravity waves on various space grids, *Journal of Computational Physics*, 108, 95-104
16. Deleersnijder E., 1993, Numerical mass conservation in a free-surface sigma coordinate marine model with mode splitting, *Journal of Marine Systems*, 4, 365-370 (+ Erratum: 1994, 5, 185)
17. Deleersnijder E., 1994, An analysis of the vertical velocity field computed by a three-dimensional model in the region of the Bering Strait, *Tellus A*, 46, 134-148
18. Ruddick K.G., E. Deleersnijder, T. De Mulder and P.J. Luyten, 1994, A model study of the Rhine discharge front and downwelling circulation, *Tellus A*, 46, 149-159
19. Deleersnijder E. and P.J. Luyten, 1994, On the practical advantages of the quasi-equilibrium version of the Mellor and Yamada level 2.5 turbulence closure applied to marine modelling, *Applied Mathematical Modelling*, 18, 281-287
20. Deleersnijder E., 1994, An ill-designed algorithm for solving a multi-dimensional nonlinear diffusion equation in a domain limited by a moving boundary, *Mathematical and Computer Modelling*, 19, 75-82
21. Deleersnijder E., 1994, The assimilation of altimetric data into the barotropic mode of a rigid lid ocean model, *Mathematical and Computer Modelling*, 20, 85-94
22. Davies A.M., P.J. Luyten and E. Deleersnijder, 1995, Turbulence energy models in shallow sea oceanography, in: *Quantitative Skill Assessment for Coastal Ocean Models*, D.R. Lynch and A.M. Davies (eds.), Coastal and Estuarine Studies Volume 47, American Geophysical Union, pp. 97-123
23. Deleersnijder E., 1995, Comments on "The sea surface pressure formulation of rigid lid models. Implications for altimetric data assimilation studies" by N. Pinardi, A. Rosati and R. Pacanowski, *Journal of Marine Systems*, 6, 121-123
24. Deleersnijder E. and J.-M. Campin, 1995, On the computation of the barotropic mode of a free-surface World Ocean model, *Annales Geophysicae*, 13, 675-688.

25. Ruddick K.G., E. Deleersnijder, P.J. Luyten and J. Ozer, 1995, Haline stratification in the Rhine-Meuse freshwater plume: a three-dimensional model sensitivity analysis, *Continental Shelf Research*, 15, 1597-1630.
26. EUROMODEL GROUP, 1995, Progress from 1989 to 1992 in understanding the circulation in the Western Mediterranean Sea, *Oceanologica Acta*, 18(2), 255-271
27. Luyten P.J., E. Deleersnijder, J. Ozer and K.G. Ruddick, 1996, Presentation of a family of turbulence closure models for stratified shallow water flows and preliminary application to the Rhine outflow region, *Continental Shelf Research*, 16, 101-130.
28. Wolanski E., T. Asaeda, A. Tanaka and E. Deleersnijder, 1996, Three-dimensional island wakes in the field, laboratory experiments and numerical models, *Continental Shelf Research*, 16, 1437-1452
29. Deleersnijder E., 1996, On the numerical treatment of a lateral boundary layer in a shallow sea model, *Journal of Marine Systems*, 8, 107-117.
30. Deleersnijder E., J.-M. Beckers, J.-M. Campin, M. El Mohajir, T. Fichefet and P. Luyten, 1997, Some mathematical problems associated with the development and use of marine models, in: *The Mathematics of Models for Climatology and Environment*, J.I. Diaz (ed.), NATO ASI Series, Vol. I 48, Springer-Verlag, pp.39-86
31. Goosse H., J.-M. Campin, T. Fichefet and E. Deleersnijder, 1997, Sensitivity of a global ice-ocean model to the Bering Strait throughflow, *Climate Dynamics*, 13, 349-358
32. Tartinville B., E. Deleersnijder and J. Rancher, 1997, The water residence time in the Mururoa atoll lagoon: a three-dimensional model sensitivity analysis, *Coral Reefs*, 16, 193-203
33. Deleersnijder E., B. Tartinville and J. Rancher, 1997, A simple model of the tracer flux from the Mururoa lagoon to the Pacific, *Applied Mathematics Letters*, 10 (5), 13-17
34. Goosse H., J.-M. Campin, T. Fichefet and E. Deleersnijder, 1997, The impact of sea-ice formation on the properties of Antarctic Bottom Water, *Annals of Glaciology*, 25, 276-281
35. Deleersnijder E., J. Wang and C.N.K. Mooers, 1998, A two-compartment model for understanding the simulated three-dimensional circulation in Prince William Sound, Alaska, *Continental Shelf Research*, 18, 279-287
36. Deleersnijder E., 1998, Echelles de temps déterminant, ou déterminées par, les écoulements des fluides géophysiques, *Bulletin de la Société Royale des Sciences de Liège*, 67 (1-2), 43-68
37. Tartinville B., E. Deleersnijder, P. Lazure, R. Proctor, K.G. Ruddick, R.E. Uittenbogaard, 1998, A costal ocean model intercomparison study for a three-dimensional idealised test case, *Applied Mathematical Modelling*, 22, 165-182
38. Mathieu P.-P. and E. Deleersnijder, 1998, What is wrong with isopycnal diffusion in world ocean models?, *Applied Mathematical Modelling*, 22, 367-378
39. Beckers J.-M., H. Burchard, J.-M. Campin, E. Deleersnijder and P.-P. Mathieu, 1998, Another reason why simple discretisations of rotated diffusion operators cause problems in ocean models: comments on "Isoneutral diffusion in a z-coordinate ocean model", *Journal of Physical Oceanography*, 28, 1552-1559
40. Deleersnijder E., 1998, Some mathematical problems in marine modelling, in: *Nonlinear Partial Differential Equations and their Applications*, D. Cioranescu and J.-L. Lions (eds.), Collège de France Seminar (Volume XIII), Longman, pp. 101-116
41. Wolanski E. and E. Deleersnijder, 1998, Island-generated internal waves at Scott Reef, Western Australia, *Continental Shelf Research*, 18, 1649-1666
42. Mathieu P.-P., E. Deleersnijder and J.-M. Beckers, 1999, Accuracy and stability of the discretised isopycnal-mixing equation, *Applied Mathematics Letters*, 12, 81-88

43. Goosse H., E. Deleersnijder, T. Fichefet and M.H. England, 1999, Sensitivity of a global coupled ocean-sea ice model to the parameterization of vertical mixing, *Journal of Geophysical Research (Oceans)*, 104 (C6), 13681-13695
44. Delhez E.J.M., J.-M. Campin, A.C. Hirst and E. Deleersnijder, 1999, Toward a general theory of the age in ocean modelling, *Ocean Modelling*, 1, 17-27
45. Beckers J.-M., H. Burchard, E. Deleersnijder and P.-P. Mathieu, 2000, Numerical discretization of rotated diffusion operators in ocean models, *Monthly Weather Review*, 128, 2711-2733
46. Legrand S., V. Legat and E. Deleersnijder, 2000, Delaunay mesh generation for an unstructured-grid ocean general circulation model, *Ocean Modelling*, 2, 17-28
47. Spagnol S., E. Wolanski and E. Deleersnijder, 2001, Steering by coral reef assemblages, in: *Oceanographic Processes of Coral Reefs - Physical and Biological Links in the Great Barrier Reef*, E. Wolanski (ed.), CRC Press, pp. 231-236 (+ computer animations)
48. Beckers J.-M., E.J.M. Delhez and E. Deleersnijder, 2001, Some properties of generalised age-distribution equations in fluid dynamics, *SIAM Journal on Applied Mathematics*, 61, 1526-1544
49. Deleersnijder E., 2001, Enforcing the continuity equation in numerical models of geophysical fluid flows, *Applied Mathematics Letters*, 14(7), 867-873
50. Burchard H. and E. Deleersnijder, 2001, Stability of algebraic non-equilibrium second-order closure models, *Ocean Modelling*, 3, 33-50
51. Deleersnijder E., J.-M. Campin and E.J.M. Delhez, 2001, The concept of age in marine modelling: I. Theory and preliminary model results, *Journal of Marine Systems*, 28, 229-267
52. Deleersnijder E., E.J.M. Delhez, M. Crucifix and J.-M. Beckers, 2001, On the symmetry of the age field of a passive tracer released into a one-dimensional fluid flow by a point-source, *Bulletin de la Société Royale des Sciences de Liège*, 70, 5-21
53. Delhez E.J.M. and E. Deleersnijder, 2002, The concept of age in marine modelling: II. Concentration distribution function in the English Channel and the North Sea, *Journal of Marine Systems*, 31, 279-297
54. Wolanski E., R. Brinkman, S. Spagnol, F. McAllister, K. Marshall, L. McCook, T. Done, J. Lough and E. Deleersnijder, 2002, An ecohydrological model of the Great Barrier Reef, in: *Proceedings 4th Queensland Environmental Conference (30-31 May 2002, Brisbane)* Institution of Engineers (Australia), pp. 145-150
55. Spagnol S., E. Wolanski, E. Deleersnijder, R. Brinkman, F. McAllister, B. Cushman-Roisin and E. Hanert, 2002, An error frequently made in the evaluation of advective transport in two-dimensional Lagrangian models of advection-diffusion in coral reef waters, *Marine Ecology Progress Series*, 235, 299-302
56. Brinkman R., E. Wolanski, E. Deleersnijder, F. McAllister and W. Skirving, 2002, Oceanic inflow from the Coral Sea into the Great Barrier Reef, *Estuarine, Coastal and Shelf Science*, 54, 655-668
57. Mathieu P.-P., E. Deleersnijder, B. Cushman-Roisin, J.-M. Beckers and K. Bolding, 2002, The role of topography in small well-mixed bays, with applications to the lagoon of Mururoa, *Continental Shelf Research*, 22, 1379-1395
58. Hanert E., V. Legat and E. Deleersnijder, 2002, A comparison of three finite elements to solve the linear shallow water equations, *Ocean Modelling*, 5, 17-35
59. Deleersnijder E., A. Mouchet, E.J.M. Delhez and J.-M. Beckers, 2002, Transient behaviour of water ages in the World Ocean, *Mathematical and Computer Modelling*, 36, 121-127
60. Deleersnijder E. and J. Naithani, 2002, Simplistic physical and economic aspects of contaminant release into coastal waters, *Bulletin de la Société Royale des Sciences de Liège*, 71, 189-192

61. Naithani J., E. Deleersnijder and P.-D. Plisnier, 2002, Origin of intraseasonal variability in Lake Tanganyika, *Geophysical Research Letters*, 29, doi: 10.1029/2002GL015843
62. Delhez E.J.M., E. Deleersnijder, A. Mouchet and J.-M. Beckers, 2003, A note on the age of radioactive tracers, *Journal of Marine Systems*, 38, 277-286
63. Naithani J., E. Deleersnijder and P.-D. Plisnier, 2003, Analysis of wind-induced thermocline oscillations of Lake Tanganyika, *Environmental Fluid Mechanics*, 3, 23-39
64. Deleersnijder E. and H. Burchard, 2003, Reply to Mellor's comments on "Stability of algebraic non-equilibrium second-order closure models" [Ocean Modelling 3 (2001) 33-50], *Ocean Modelling*, 5, 291-293
65. Wolanski E., R.H. Richmond, G. Davis, E. Deleersnijder and R.R. Leben, 2003, Eddies around Guam, an island in the Mariana Islands group, *Continental Shelf Research*, 23, 991-1003
66. Burchard H., E. Deleersnijder and A. Meister, 2003, A high-order conservative Patankar type discretisation for stiff systems of production-destruction equations, *Applied Numerical Mathematics*, 47, 1-30
67. Wolanski E., R. Brinkman, S. Spagnol, F. McAllister, C. Steinberg, W. Skirving and E. Deleersnijder, 2003, Merging scales in models of water circulation: perspectives from the Great Barrier Reef, in: *Advances in Coastal Modeling*, V.C. Lakhan (Ed.), Elsevier, pp. 411-429
68. Deleersnijder E., 2003, Comments on "Water renewal time for classification of atoll lagoons in the Tuamotu Archipelago (French Polynesia)" by Andréfouët et al. [Coral Reefs (2001) 20:399-408], *Coral Reefs*, 22, 307-308
69. Hanert E., D.Y. Le Roux, V. Legat and E. Deleersnijder, 2004, Advection schemes for unstructured grid ocean modelling, *Ocean Modelling*, 7, 39-58
70. Naithani J. and E. Deleersnijder, 2004, Are there internal Kelvin waves in Lake Tanganyika?, *Geophysical Research Letters*, 31, doi: 10.1029/2003GL019156
71. Delhez E.J.M., G. Lacroix and E. Deleersnijder, 2004, The age as a diagnostic of the dynamics of marine ecosystem models, *Ocean Dynamics*, 54, 221-231
72. Deleersnijder E. and E.J.M. Delhez, 2004, Symmetry and asymmetry of water ages in a one-dimensional flow, *Journal of Marine Systems*, 48, 61-66
73. Wolanski E., P. Colin, J. Naithani, E. Deleersnijder and Y. Golbuu, 2004, Large amplitude, leaky, island-generated, internal waves around Palau, Micronesia, *Estuarine, Coastal and Shelf Science*, 60, 705-716
74. Delhez E.J.M., A.W. Heemink and E. Deleersnijder, 2004, Residence time in a semi-enclosed domain from the solution of an adjoint problem, *Estuarine, Coastal and Shelf Science*, 61, 691-702
75. Hanert E., D.Y. Le Roux, V. Legat and E. Deleersnijder, 2005, An efficient Eulerian finite element method for the shallow water equations, *Ocean Modelling*, 10, 115-136
76. Burchard H., E. Deleersnijder and G. Stoyan, 2005, Some numerical aspects of turbulence-closure models, in: *Marine Turbulence: Theories, Observations, and Models - Results of the CARTUM Project*, H.Z. Baumert, J. Simpson and J. Sündermann (eds.), Cambridge University Press, pp. 197-206
77. Burchard H., E. Deleersnijder and A. Meister, 2005, Application of modified Patankar schemes to stiff biogeochemical models for the water column, *Ocean Dynamics*, 55, 326-337
78. Hanert E., E. Deleersnijder and V. Legat, 2006, An adaptive finite element water column model using the Mellor-Yamada level 2.5 turbulence closure scheme, *Ocean Modelling*, 12, 205-223
79. Deleersnijder E., J.-M. Beckers and E.J.M. Delhez, 2006, The residence time of settling particles in the surface mixed layer, *Environmental Fluid Mechanics*, 6, 25-42

80. White L., J.-M. Beckers, E. Deleersnijder and V. Legat, 2006, Comparison of free-surface and rigid-lid finite element models of barotropic instabilities, *Ocean Dynamics*, 56, 86-103
81. Legrand S., E. Deleersnijder, E. Hanert, V. Legat and E. Wolanski, 2006, High-resolution, unstructured meshes for hydrodynamic models of the Great Barrier Reef, Australia, *Estuarine, Coastal and Shelf Science*, 68, 36-46
82. Delhez E.J.M. and E. Deleersnijder, 2006, The boundary layer of the residence time field, *Ocean Dynamics*, 56, 139-150
83. White L., V. Legat, E. Deleersnijder and D. Le Roux, 2006, A one-dimensional benchmark for the propagation of Poincaré waves, *Ocean Modelling*, 15, 101-123
84. Andréfouët S., S. Ouillon, R. Brinkman, J. Falter, P. Douillet, F. Wolk, R. Smith, P. Garen, E. Martinez, V. Laurent, C. Lo, G. Remoissenet, B. Scourzic, A. Gilbert, E. Deleersnijder, C. Steinberg, S. Choukroun and D. Buestel, 2006, Review of solutions for 3D hydrodynamic modeling applied to aquaculture in South Pacific atoll lagoons, *Marine Pollution Bulletin*, 52, 1138-1155
85. Deleersnijder E., J.-M. Beckers and E.J.M. Delhez, 2006, On the behaviour of the residence time at the bottom of the mixed layer, *Environmental Fluid Mechanics*, 6, 541-547
86. Naithani J., F. Darchambeau, E. Deleersnijder, J.-P. Descy and E. Wolanski, 2007, Study of the nutrient and plankton dynamics in Lake Tanganyika using a reduced-gravity model, *Ecological Modelling*, 200, 225-233
87. Bernard P.-E., N. Chevaugéon, V. Legat, E. Deleersnijder and J.-F. Remacle, 2007, High-order h-adaptive discontinuous Galerkin methods for ocean modelling, *Ocean Dynamics*, 57, 109-121 (+ Erratum, 2007, 57, 579-580)
88. Hanert E., E. Deleersnijder, S. Blaise and J.-F. Remacle, 2007, Capturing the bottom boundary layer in finite element ocean models, *Ocean Modelling*, 17, 153-162
89. Delhez E.J.M. and E. Deleersnijder, 2007, Overshootings and spurious oscillations caused by biharmonic diffusion, *Ocean Modelling*, 17, 183-198
90. Legrand S., E. Deleersnijder, E.J.M. Delhez and V. Legat, 2007, Unstructured, anisotropic mesh generation for the Northwestern European continental shelf, the continental slope and the neighbouring ocean, *Continental Shelf Research*, 27, 1344-1356
91. Spivakovskaya D., A.W. Heemink and E. Deleersnijder, 2007, Lagrangian modelling of multi-dimensional advection-diffusion with space-varying diffusivities: theory and idealized test cases, *Ocean Dynamics*, 57, 189-203
92. Gourgue O., E. Deleersnijder and L. White, 2007, Toward a generic method for studying water renewal, with application to the epilimnion of Lake Tanganyika, *Estuarine, Coastal and Shelf Science*, 74, 628-640
93. White L. and E. Deleersnijder, 2007, Diagnoses of vertical transport in a three-dimensional finite-element model of the tidal circulation around an island, *Estuarine, Coastal and Shelf Science*, 74, 655-669
94. Naithani J., P.-D. Plisnier and E. Deleersnijder, 2007, A simple model of the eco-hydrodynamics of the epilimnion of Lake Tanganyika, *Freshwater Biology*, 52, 2087-2100
95. Blaise S., E. Deleersnijder, L. White and J.-F. Remacle, 2007, Influence of the turbulence closure scheme on the finite-element simulation of the upwelling in the wake of a shallow-water island, *Continental Shelf Research*, 27, 2329-2345
96. Spivakovskaya D., A.W. Heemink and E. Deleersnijder, 2007, The backward Ito method for the Lagrangian simulation of transport processes with large space variations of the diffusivity, *Ocean Science*, 3, 525-535

97. Bernard P.-E., E. Deleersnijder, V. Legat and J.-F. Remacle, 2008, Dispersion analysis of discontinuous Galerkin schemes applied to Poincaré, Kelvin and Rossby waves, *Journal of Scientific Computing*, 34, 26-47
98. White L., V. Legat and E. Deleersnijder, 2008, Tracer conservation for three-dimensional, finite-element, free-surface, ocean modeling on moving prismatic meshes, *Monthly Weather Review*, 136, 420-442
99. White L., E. Deleersnijder and V. Legat, 2008, A three-dimensional unstructured mesh finite element shallow-water model, with application to the flows around an island and in a wind-driven, elongated basin, *Ocean Modelling*, 22, 26-47
100. Delhez E.J.M. and E. Deleersnijder, 2008, Age and the time lag method, *Continental Shelf Research*, 28, 1057-1067
101. Lambrechts J., E. Hanert, E. Deleersnijder, P.-E. Bernard, V. Legat, J.-F. Remacle and E. Wolanski, 2008, A multi-scale model of the hydrodynamics of the whole Great Barrier Reef, *Estuarine, Coastal and Shelf Science*, 79, 143-151
102. Mouchet A. and E. Deleersnijder, 2008, The leaky funnel model, a metaphor of the ventilation of the World Ocean as simulated in an OGCM, *Tellus*, 60A, 761-774
103. Orre S., Y. Gao, H. Drange and E. Deleersnijder, 2008, Diagnosing ocean tracer transport from Sellafield and Dounreay by equivalent diffusion and age, *Advances in Atmospheric Sciences*, 25, 805-814
104. Deleersnijder E., E. Hanert, H. Burchard and H.A. Dijkstra, 2008, On the mathematical stability of stratified flow models with local turbulence closure schemes, *Ocean Dynamics*, 58, 237-246
105. Blaise S. and E. Deleersnijder, 2008, Improving the parameterisation of horizontal density gradient in one-dimensional water column models for estuarine circulation, *Ocean Science*, 4, 239-246
106. Primeau F. and E. Deleersnijder, 2009, On the time to tracer equilibrium in the global ocean, *Ocean Science*, 5, 13-28
107. Plisnier P.-D., H. Mgana, I. Kimirei, A. Chande, L. Makasa, J. Chimanga, F. Zulu, C. Cocquyt, S. Horion, N. Bergamino, J. Naithani, E. Deleersnijder, L. André, J.-P. Descy and Y. Cornet, 2009, Limnological variability and pelagic fish abundance (*Stolothrissa tanganyicae* and *Lates stappersii*) in Lake Tanganyika, *Hydrobiologia*, 625, 117-134
108. Comblen R., S. Legrand, E. Deleersnijder and V. Legat, 2009, A finite element method for solving the shallow water equations on the sphere, *Ocean Modelling*, 28, 12-23
109. de Brauwere A., F. De Ridder, O. Gourgue, J. Lambrechts, R. Comblen, R. Pintelon, J. Passerat, P. Servais, M. Elskens, W. Baeyens, T. Kärnä, B. de Brye and E. Deleersnijder, 2009, Design of a sampling strategy to optimally calibrate a reactive transport model: exploring the potential for *Escherichia coli* in the Scheldt Estuary, *Environmental Modelling & Software*, 24, 969-981
110. Gourgue O., R. Comblen, J. Lambrechts, T. Kärnä, V. Legat and E. Deleersnijder, 2009, A flux-limiting wetting-drying method for finite-element shallow-water models, with application to the Scheldt Estuary, *Advances in Water Resources*, 32, 1726-1739
111. Griffies S.M., A.J. Adcroft, H. Banks, C.W. Böning, E.P. Chassignet, G. Danabasoglu, S. Danilov, E. Deleersnijder, H. Drange, M.H. England, B. Fox-Kemper, R. Gerdes, A. Gnanadesikan, R.J. Greatbatch, R.W. Hallberg, E. Hanert, M.J. Harrison, S.A. Legg, C.M. Little, G. Madec, S. Marsland, M. Nikurashin, A. Pirani, H.L. Simmons, J. Schröter, B.L. Samuels, A.-M. Treguier, J.R. Toggweiler, H. Tsujino, G.K. Vallis and L. White, 2009, Problems and prospects in large-scale ocean circulation models, in: J. Hall, D.E. Harrison and D. Stammer (Eds.), *Proceedings of the OceanObs'09 Conference: Sustained Ocean Observations and Information for Society* (Venice, Italy, 21-25 September 2009), ESA Publication WPP-306

112. Delhez E.J.M. and E. Deleersnijder, 2010, Residence time and exposure time of sinking phytoplankton in the euphotic layer, *Journal of Theoretical Biology*, 262, 505-516
113. Sorjamaa A., A. Lendasse, Y. Cornet and E. Deleersnijder, 2010, An improved methodology for filling missing values in spatio-temporal climate dataset - Application to Tanganyika Lake dataset, *Computational Geosciences*, 14, 55-64
114. de Brauwere A. and E. Deleersnijder, 2010, Assessing the parameterisation of the settling flux in a depth-integrated model of the fate of decaying and sinking particles, with application to fecal bacteria in the Scheldt Estuary, *Environmental Fluid Mechanics*, 10, 157-175
115. Modave A., E. Deleersnijder and E.J.M. Delhez, 2010, On the parameters of absorbing layers for shallow water models, *Ocean Dynamics*, 60, 65-79
116. Kärnä T., E. Deleersnijder and A. de Brauwere, 2010, Simple test cases for validating a finite element unstructured grid fecal bacteria transport model, *Applied Mathematical Modelling*, 34, 3055-3070
117. de Brye B., A. de Brauwere, O. Gourgue, T. Kärnä, J. Lambrechts, R. Comblen and E. Deleersnijder, 2010, A finite-element, multi-scale model of the Scheldt tributaries, river, estuary and ROFI, *Coastal Engineering*, 57, 850-863
118. Blaise S., B. de Brye, A. de Brauwere, E. Deleersnijder, E.J.M. Delhez and R. Comblen, 2010, Capturing the residence time boundary layer - Application to the Scheldt Estuary, *Ocean Dynamics*, 60, 535-554
119. Goosse H., V. Brovkin, T. Fichefet, R. Haarsma, P. Huybrechts, J. Jongma, A. Mouchet, F. Selten, P.-Y. Barriat, J.-M. Campin, E. Deleersnijder, E. Driesschaert, H. Goelzer, I. Janssens, M.-F. Loutre, M.A. Morales Maqueda, T. Opsteegh, P.-P. Mathieu, G. Munhoven, E.J. Pettersson, H. Renssen, D.M. Roche, M. Schaeffer, B. Tartinville, A. Timmermann and S.L. Weber, 2010, Description of the Earth system model of intermediate complexity LOVECLIM version 1.2, *Geoscientific Model Development*, 3, 603-633
120. Blaise S., R. Comblen, V. Legat, J.-F. Remacle, E. Deleersnijder and J. Lambrechts, 2010, A discontinuous finite element baroclinic marine model on unstructured prismatic meshes. Part I: space discretization, *Ocean Dynamics*, 60, 1371-1393
121. Comblen R., S. Blaise, V. Legat, J.-F. Remacle, E. Deleersnijder and J. Lambrechts, 2010, A discontinuous finite element baroclinic marine model on unstructured prismatic meshes. Part II: implicit/explicit time discretization, *Ocean Dynamics*, 60, 1395-1414
122. de Brauwere A., B. de Brye, S. Blaise and E. Deleersnijder, 2011, Residence time, exposure time and connectivity in the Scheldt Estuary, *Journal of Marine Systems*, 84, 85-95
123. Kärnä T., B. de Brye, O. Gourgue, J. Lambrechts, R. Comblen, V. Legat and E. Deleersnijder, 2011, A fully implicit wetting-drying method for DG-FEM shallow water models, with an application to the Scheldt Estuary, *Computer Methods in Applied Mechanics and Engineering*, 200, 509-524
124. Gourgue O., E. Deleersnijder, V. Legat, E. Marchal and L. White, 2011, Free and forced thermocline oscillations in Lake Tanganyika, in: *Factor Separation in the Atmosphere: Applications and Future Prospects*, P. Alpert and T. Sholokhman (Eds.), Cambridge University Press, pp. 146-162
125. Hanert E., E. Schumacher and E. Deleersnijder, 2011, Front dynamics in fractional-order epidemic models, *Journal of Theoretical Biology*, 279, 9-16
126. de Brauwere A., B. de Brye, P. Servais, J. Passerat and E. Deleersnijder, 2011, Modelling *Escherichia coli* concentrations in the tidal Scheldt river and estuary, *Water Research*, 45, 2724-2738

127. Naithani J., P.-D. Plisnier and E. Deleersnijder, 2011, Possible effects of global climate change on the ecosystem of Lake Tanganyika, *Hydrobiologia*, 671, 147-163
128. de Brye B., S. Schellen, M. Sassi, B. Vermeulen, T. Kärnä, E. Deleersnijder and T. Hoitink, 2011, Preliminary results of a finite-element, multi-scale model of the Mahakam Delta (Indonesia), *Ocean Dynamics*, 61, 1107-1120
129. Shah S.H.A.M., A.W. Heemink and E. Deleersnijder, 2011, Assessing Lagrangian schemes for simulating diffusion on non-flat isopycnal surfaces, *Ocean Modelling*, 39, 351-361
130. Lietaer O., E. Deleersnijder, T. Fichet, M. Vancoppenolle, R. Comblen, S. Bouillon and V. Legat, 2011, The vertical age profile in sea ice: theory and numerical results, *Ocean Modelling*, 40, 211-226
131. Cornaton F.J., Y.-J. Park and E. Deleersnijder, 2011, On the relationship between radiometric age, velocity, and mean age of groundwater, *Journal of Hydrology*, 410, 217-225
132. Sassi M.G., A.J.F. Hoitink, B. de Brye, B. Vermeulen and E. Deleersnijder, 2011, Tidal impact on the division of river discharge over distributary channels in the Mahakam Delta, *Ocean Dynamics*, 61, 2211-2228
133. de Brye B., A. de Brauwere, O. Gourgue, E.J.M. Delhez and E. Deleersnijder, 2012, Water renewal timescales in the Scheldt Estuary, *Journal of Marine Systems*, 94, 74-86
134. Gräwe U., E. Deleersnijder, S.H.A.M. Shah and A.W. Heemink, Why the Euler-scheme in particle-tracking is not enough: the shallow-sea pycnocline test case, *Ocean Dynamics* (accepted for publication)
135. Kärnä T., V. Legat, E. Deleersnijder and H. Burchard, Coupling of a discontinuous Galerkin finite element marine model with a finite difference turbulence closure model, *Ocean Modelling* (accepted for publication)
136. Mouchet A., E. Deleersnijder and F. Primeau, The leaky funnel model revisited, *Tellus* (submitted)
137. Gourgue O., W. Baeyens, M.S. Chen, A. de Brauwere, B. de Brye, E. Deleersnijder, M. Elskens and V. Legat, A depth-averaged two-dimensional sediment transport model for environmental studies in the Scheldt Estuary and tidal river network, *Journal of Marine Systems* (submitted)
138. de Brauwere A., O. Gourgue, B. de Brye, P. Servais, N.K. Ouattara and E. Deleersnijder, Modelling *Escherichia coli* dynamics in the Scheldt land-sea continuum. Part II: The tidal Scheldt River and Estuary, *Journal of Marine Systems* (submitted)

*Other publications:*

1. Deleersnijder E. and A. Loffet, 1985, Mathematical modelling and remote sensing of the transport and spreading of oil spills on the sea, in: *Progress in Belgian Oceanographic Research*, R. Van Grieken and R. Wollast (eds.), The University of Antwerp (UIA), pp 92-101
2. Deleersnijder E. and J.C.J. Nihoul, 1988, *General Circulation in the Northern Bering Sea*, ISHTAR Annual Progress Report, 392 pp
3. Nihoul J.C.J., S. Djenidi and E. Deleersnijder, 1989, Mathematical visualization of the general circulation, in: *Progress in Belgian Oceanographic Research*, G. Pichot (ed.), Management Unit of the Mathematical Model of the North Sea and Scheldt Estuary, pp 1-15
4. Deleersnijder E. and E. Wolanski, 1990, Du rôle de la dispersion horizontale de quantité de mouvement dans les modèles marins tridimensionnels, in: Proceedings of the "Journées Numériques de Besançon — Courants Océaniques", J.M. Crolet and P. Lesaint (eds.), *Publications Mathématiques de Besançon*, pp 39-50
5. Deleersnijder E., 1992, *Modélisation Hydrodynamique Tridimensionnelle de la Circulation Générale Estivale de la Région du Déroit de Bering*, Thèse de Doctorat, Faculté des Sciences Appliquées, Université Catholique de Louvain, 189 pp.

6. Deleersnijder E. and J.-M. Campin, 1992, Résultats préliminaires d'un modèle de circulation générale océanique à surface libre, in: *Atelier de Modélisation de l'Atmosphère*, Météo-France, pp. 103-108
7. Nihoul J.C.J., P. Adam, S. Djenidi and E. Deleersnijder, 1993, Modelling the coastal ocean's complex ecohydrodynamics - A case study: the Northern Bering Sea, in: *Progress in Belgian Oceanographic Research*, ICSU-SCOR / Royal Academy of Belgium, pp. 203-216
8. Berger A., J.-M. Campin, E. Deleersnijder, M. El Mohajir, T. Fichet, J.-F. Focroulle, H. Grenier, M. Morales Maqueda, P. Tulkens and J.-P. van Ypersele, 1993, Modelling of the climatic system and its response to human activities, in: *Proceedings of the Colloquium Global Change (Volume II)*, Belgian Science Policy Office, pp. 7-29
9. Deleersnijder E., 1993, Vertical modes in level models, *Ocean Modelling*, 96, 4-5
10. Deleersnijder E. and J.-M. Campin, 1993, On a peculiarity of the B-grid, *Ocean Modelling*, 97, 2 (+ figures)
11. Deleersnijder E., J.-P. van Ypersele and J.-M. Campin, 1993, An orthogonal curvilinear coordinate system for a World Ocean model, *Ocean Modelling*, 100, 7-10 (+figures)
12. Deleersnijder E. and J.-M. Beckers, 1993, Applying the "meridional streamfunction" visualization technique to open ocean domains, *Ocean Modelling*, 101, 6-8 (+ figures)
13. Deleersnijder E., J. Ozer and B. Tartinville, 1995, A methodology for model intercomparison: preliminary results, *Ocean Modelling*, 107, 6-9 (+ figures)
14. Deleersnijder E., 1996, On model validation, sensitivity, and intercomparison, in: *Progress in Belgian Oceanographic Research*, National Committee of Oceanology, Royal Academy of Belgium, pp. 43-46
15. Deleersnijder E., B. Tartinville and J. Rancher, 1996, Preliminary results of a three-dimensional model of the long-term water transport in the Mururoa atoll lagoon, in: *Progress in Belgian Oceanographic Research*, National Committee of Oceanology, Royal Academy of Belgium, pp. 47-50
16. Deleersnijder E., 1999, L'équation de la chaleur et l'enseignement des méthodes de simulation numérique de la physique, *Physicalia Magazine*, 21 (1), 31-56
17. Deleersnijder E. et H. Goosse, 1999, Un modèle simple pour comprendre pourquoi la couche de glace à la surface d'un plan d'eau tend à rester relativement mince, *Physicalia Magazine*, 21, 141-156
18. Legrand S., V. Legat and E. Deleersnijder, 2000, Delaunay mesh generation for oceanic computations, in: *Proceedings of the 5th National Congress on Theoretical and Applied Mechanics* (Louvain-la-Neuve, Belgium, 23-24 May 2000), Belgian National Committee for Theoretical and Applied Mechanics, pp. 131-134
19. Deleersnijder E., J.-M. Beckers, J.-M. Campin, M. Crucifix, E.J.M. Delhez, R. Lewandowski and A. Mouchet, 2000, The age, a tool for understanding complex fluid flows, in: *Proceedings of the 5th National Congress on Theoretical and Applied Mechanics* (Louvain-la-Neuve, Belgium, 23-24 May 2000), Belgian National Committee for Theoretical and Applied Mechanics, pp. 167-170
20. Deleersnijder E., J.-M. Campin, J.-M. Beckers, R. Lewandowski and E.J.M. Delhez, 2001, Some theoretical and modelling aspects of the age as a tool for understanding marine flows, in: *Actas de las II Jornadas de Analisis de Variables y Simulacion Numerica del Intercambio de Masas de Agua a Traves del Estrecho de Gibraltar*, J.J. Alonso del Rosario and F. Ortegón Gallego (eds.), Universidad de Cadiz, pp. 111-126
21. Naithani J., E. Deleersnijder and P.-D. Plisnier, 2002, Thermocline oscillations in Lake Tanganyika, *Bulletin of the International Decade for the East African Lakes (Summer 2002)*, pp. 3-6

22. Descy J.-P., P.-D. Plisnier, L. André, L. Alleman, D. Chitamwebwa, C. Cocquyt, E. Deleersnijder, I. Kimirei, J. Naithani, H. Phiri, D. Sinyenza and W. Vyverman, 2002, Climate Variability as recorded in Lake Tanganyika (CLIMLAKE), *Bulletin of the International Decade for the East African Lakes (Summer 2002)*, pp. 7-8
23. Hanert E., D.Y. Le Roux, V. Legat and E. Deleersnijder, 2003, A comparison of 4 advection schemes for use in unstructured grid ocean modelling, in: *Proceedings of the 6th National Congress on Theoretical and Applied Mechanics* (Ghent, Belgium, 26-27 May, 2003), NCTAM-2003-089, 8 pp.
24. Legrand S., V. Legat and E. Deleersnijder, 2003, Mass conservation on global ocean model on unstructured meshes, in: *Proceedings of the 6th National Congress on Theoretical and Applied Mechanics* (Ghent, Belgium, 26-27 May, 2003), NCTAM-2003-090, 4 pp.
25. Deleersnijder E., H. Burchard and H.A. Dijkstra, 2003, On the stability of turbulence closure schemes for stratified flows, in: *Proceedings of the 6th National Congress on Theoretical and Applied Mechanics* (Ghent, Belgium, 26-27 May, 2003), NCTAM-2003-093, 5 pp.
26. Naithani J., E. Deleersnijder, P.-D. Plisnier and S. Legrand, 2004, Preliminary results of a reduced-gravity model of the wind-induced oscillations of the thermocline in Lake Tanganyika, in: *Proceedings of the Second International Conference on Tropical Climatology, Meteorology and Hydrology*, G. Demarée, M. De Dapper and J. Alexandre (Eds.), Royal Meteorological Institute of Belgium and Royal Academy of Overseas Sciences of Belgium, pp. 27-40
27. Bernard P.-E., N. Chevaugéon, V. Legat, E. Deleersnijder and J.-F. Remacle, 2005, High-order h-adaptive discontinuous Galerkin methods for ocean modeling, in: *International Conference on Adaptive Modeling and Simulation (ADMOS 2005)*, P. Diez and N.-E. Wiberg (Eds.), pp. 50-61
28. Spivakovskaya D., E. Deleersnijder and A.W. Heemink, 2006, Random walk in case of iso- and diapycnal diffusion, in: *European Conference on Computational Fluid Dynamics (ECCOMAS CFD 2006)*, P. Wesseling, E. Onate and J. Périaux (Eds.), Delft University of Technology, The Netherlands, 19 pp.
29. Sassi M.G., A.J.F. Hoitink, B. de Brye and E. Deleersnijder, 2011, Towards an extension of the hydraulic geometry concept to include tidally influenced delta channel networks, *River, Coastal and Estuarine Morphodynamics (RCEMS2011, Beijing, China, 6-8 September 2011)*, Tsinghua University Press, pp. 483-492
30. Pham Van C., B. Spinewine, B. de Brye, S. Soares-Frazaó, E. Deleersnijder, M. Sassi, H. Hidayat and T. Hoitink, 2011, Multiscale modeling of a tidal estuary with a finite-element shallow-water model: application to salinity intrusion into the Mahakam delta (Indonesia), *River, Coastal and Estuarine Morphodynamics (RCEMS2011, Beijing, China, 6-8 September 2011)*, Tsinghua University Press, pp. 1068-1081

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