

(Latest update: May 2017)

## Curriculum Vitae of Dr Ir Eric Deleersnijder

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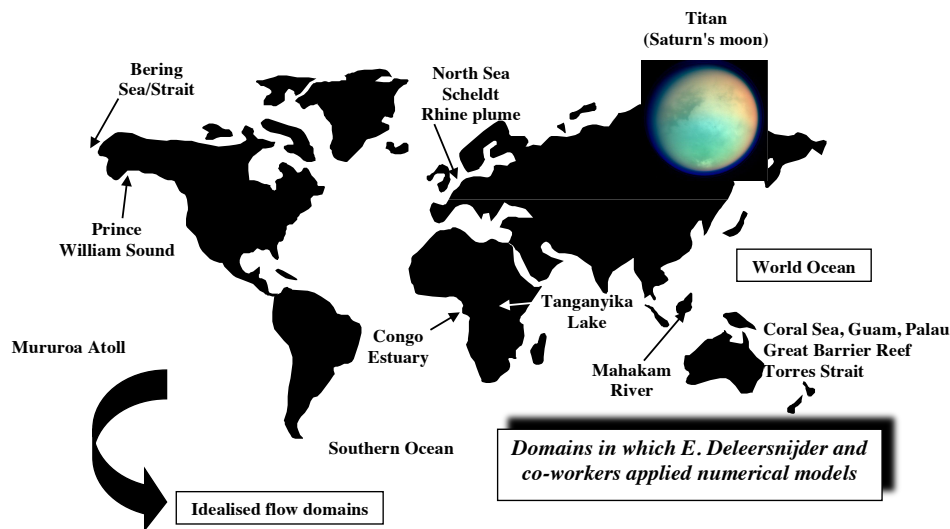
Also at Delft University of Technology, Delft Institute of Applied Mathematics,  
Faculty of Electrical Engineering, Mathematics and Computer Science, Delft, The Netherlands

### Biographical data

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

### Research 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\\_flyer](http://www.climate.be/slim_flyer)

<sup>2</sup> See [http://www.climate.be/cart\\_flyer](http://www.climate.be/cart_flyer)

## 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  
2014 - 2019: part-time professor (*Hoogleraar*), Delft University of Technology (Delft, The Netherlands)

## Teaching experience

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

### *Courses presently taught at UCL:*

- Mathematical ecology (with Emmanuel Hanert and Thierry van Effelterre) (LMAPR2510)  
Coastal and maritime hydraulics (with Benoît Spinewine) (LGCIV2056)  
Geographic modelling (with Sophie Vanwambeke) (LGEO2130)  
Physique des fluides (with Vincent Legat) (LPHY1352)  
Physique générale I (LBIR1121)  
Turbulence (with Grégoire Winckelmans) (LMECA2853)

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

- Tartinville Benoît, doctoral student, 1994 - 1997  
Mathieu Pierre-Philippe, doctoral student, 1994 - 1998  
Legrand Sébastien, doctoral student, 1999 - 2006

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

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

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 - 2015  
Bernard Paul-Emile, doctoral student, 2004 - 2008  
Ponsar Stéphanie, doctoral student, 2004 - 2012  
White Laurent, doctoral student, 2004 - 2007  
Blaise Sébastien, doctoral student, 2005 - 2009, FNRS postdoc. researcher, 2011 - 2015  
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 - 2014  
Shah S.H.A.M., doctoral student (at T.U. Delft<sup>6</sup>), 2009 - 2015  
Kärnä Tuomas, doctoral student, 2008 - 2012  
Laguerre Raphaël, postdoctoral researcher, 2010 - 2011  
Thomas Christopher, doctoral student, 2010 - 2015  
Pestiaux Alice, doctoral student, 2010 - 2015  
Pham Van Chien, doctoral (then postdoctoral) student, 2010 - 2015  
Delandmeter Philippe, doctoral student, 2011 - now  
Vallaeyts Valentin, doctoral student, 2012 - now  
Le Bars Yoann, post-doctoral researcher, 2013 - 2015  
de la Vallée Poussin Paloma, doctoral student, 2015  
David Vincent, doctoral student, 2014 - 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]

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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

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]

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. Fichet, 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 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" (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>8</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]

MODELISATION DU SYSTEME FLEUVE CONGO/GOLFE DE GUINEE (with Emmanuel Hanert), funded by CLS ([www.cls.fr](http://www.cls.fr)), from 1 June 2013 until 31 May 2015 [189,750 EURO]

OCEANS OF ICY SATELLITES, with Véronique Dehant (main promoter), funded by the Fonds Spéciaux de Recherche de l'Université catholique de Louvain, 2014-2015 (15 months) [52,000 EURO, 1st phase)

*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)

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

<sup>8</sup> Main promoter: E. Deleersnijder; see <http://www.climate.be/slim>

Member of the editorial board of *Ocean Modelling* (since 1999), *Estuarine, Coastal and Shelf Science* (2001-2012), *Environmental Fluid Mechanics* (2001-2014)

Reviewer of manuscripts submitted to *Advances in Water Resources*, *Annals of Geophysics*; *Climate Dynamics*; *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*; *Estuaries and Coasts*; *Geophysical Research Letters*; *Hydrological Sciences Journal*; *International Journal for Numerical 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 Hydrology*; *Journal of Marine Systems*; *Journal of Physical Oceanography*; *Limnology and Oceanography*; *Marine Geology*; *Marine Technology Society Journal*; *Oceanologica Acta*; *Ocean Dynamics*; *Ocean Modelling*; *Ocean Science*; *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 research proposals submitted to the *Australian Research Council*, *Belgian Fund for Scientific Research (F.R.S.-FNRS)*, *Centre National de la Recherche Scientifique (CNRS, France)*, *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*

Reviewer of book proposals submitted to *Elsevier*, *Cambridge University Press*

Contribution to nomination/promotion committees at the *Aarhus University (Denmark)*, *Bangor University (UK)*, *Delft University of Technology (Delft, The Netherlands)*, *Massachusetts University of Technology (USA)*, *Royal Belgian Institute of Natural Sciences*, *University of Miami (USA)*, *University of Dundee (UK)*, *University of New South Wales (Sydney, Australia)*, *University of Reading (UK)*, *University of Wageningen (Netherlands)*

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>9</sup> (August 16-19, 2011, Louvain-la-Neuve, Belgium)

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<sup>9</sup> <http://www.uclouvain.be/ttm2011>

Co-organiser (with Julie Pietrzak and Jens Schroeter) of the “1st<sup>10</sup>, 2nd<sup>11</sup> and 8th<sup>12</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, from October 2009 until August 2012

Vice-president for research of UCL's Institute of Mechanics, Materials and Civil Engineering (IMMC), from January 2013 until April 2015

## 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

### *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

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<sup>10</sup> 4-5 November 2002, Louvain-la-Neuve, Belgium

<sup>11</sup> 23-25 September 2003, Delft, The Netherlands

<sup>12</sup> 16-18 September 2009, Louvain-la-Neuve, Belgium (<http://www.uclouvain.be/umm2009>)

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. Maroihi 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
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