

Publications of Professor Thierry Fichefet

Articles published in refereed journals or books

- [1] Fichefet, T., and P. Gaspar, 1988 : A model study of upper ocean-sea ice interactions. *J. Phys. Oceanogr.*, **18**, 181–195.
- [2] Fichefet, T., C. Tricot, A. Berger, H. Gallée, and I. Marsiat, 1989 : Climate studies with a coupled atmosphere–upper-ocean–ice-sheet model. *Phil. Trans. R. Soc. Lond.*, **A 329**, 249–261.
- [3] Berger, A., T. Fichefet, H. Gallée, I. Marsiat, C. Tricot, and J.-P. van Ypersele, 1990 : Ice sheets and sea level change as a response to climatic change at the astronomical time scale. In *Greenhouse Effect, Sea Level and Drought*, R. Paepe et al. (Eds.), Kluwer Academic Pub., Dordrecht, pp. 85–107.
- [4] Berger, A., T. Fichefet, H. Gallée, I. Marsiat, C. Tricot, and J.-P. van Ypersele de Strihou, 1990 : Physical interactions within a coupled climate model over the last glacial–interglacial cycle. *Trans. R. Soc. Edinburgh: Earth Sc.*, **82**, 357–369.
- [5] Berger, A., H. Gallée, T. Fichefet, I. Marsiat, and C. Tricot, 1990 : Testing the astronomical theory with a coupled climate–ice sheet model. *Paleogeography, -climatology, -ecology (Global and Planetary Change Section)*, **89**, 125–141.
- [6] Chervin, R., X. Jiang, J. Cherniawsky, Y.J. Han, H. Le Treut, T. Fichefet, P. Andrich, J. Mitchell, A. Jenkins, and J.-P. van Ypersele, 1990 : Modelling. In *Climate-Ocean Interaction*, M.E. Schlesinger (Ed.), Kluwer Academic Pub., Dordrecht, pp. 361–363.
- [7] Berger, A., T. Fichefet, H. Gallée, C. Tricot, and J.-P. van Ypersele, 1991 : Earth system and astronomical climate modeling. In *Global Environmental Change*, R.W. Corell, and P.A. Anderson (Eds.), *NATO ASI Series*, **I1**, Springer-Verlag, Berlin, pp. 137–153.
- [8] Gallée, H., J.-P. van Ypersele, T. Fichefet, C. Tricot, and A. Berger, 1991 : Simulation of the last glacial cycle by a coupled, sectorially averaged climate–ice sheet model. I. The climate model. *J. Geophys. Res.*, **96**, 13,139–13,161.
- [9] Marsiat, I., A. Berger, T. Fichefet, H. Gallée, and C. Tricot, 1991 : Modelling the transient response of a coupled model to the astronomical forcing over the last glacial to interglacial cycle. In *Klimageschichtliche Probleme der Letzten 130.000 Jahre*, B. Frenzel (Ed.), *Paläoklimaforschung*, **1**, Gustav Fischer Verlag, Stuttgart, pp. 139–152.
- [10] Berger, A., T. Fichefet, H. Gallée, C. Tricot, and J.-P. van Ypersele, 1992 : Entering the glaciation with a 2-D coupled climate model. *Quat. Sc. Rev.*, **11**, 481–493.
- [11] Fichefet, T., and C. Tricot, 1992 : Influence of the starting date of model integration on projections of greenhouse-gas-induced climatic change. *Geophys. Res. Lett.*, **19**, 1771–1774.
- [12] Gallée, H., J.-P. van Ypersele, T. Fichefet, I. Marsiat, C. Tricot, and A. Berger, 1992 : Simulation of the last glacial cycle by a coupled, sectorially averaged climate–ice-sheet model. II. Response to insolation and CO₂ variation. *J. Geophys. Res.*, **97**, 15,713–15,740.
- [13] Fichefet, T., and S. Hovine, 1993 : The glacial ocean: A study with a zonally averaged, three-basin ocean circulation model. In *Ice in the Climate System*, W.R. Peltier (Ed.), *NATO ASI Series*, **I12**, Springer-Verlag, Berlin, pp. 433–458.
- [14] Smits, I., T. Fichefet, C. Tricot, and J.-P. van Ypersele, 1993 : A model study of the time-evolution of climate at the secular time scale. *Atmosfera*, **6**, 255–272.
- [15] Berger, A., C. Tricot, H. Gallée, T. Fichefet, and M.-F. Loutre, 1994 : The last two glacial-interglacial cycles simulated by the LLN model. In *Long Term Climatic Variations - Data and Modelling*, J.-C. Duplessy, and M.-T. Spyridakis (Eds.), *NATO ASI Series*, **I22**, Springer-Verlag, Berlin, pp. 411–452.
- [16] Fichefet, T., S. Hovine, and J.-C. Duplessy, 1994 : Thermohaline circulation of the Atlantic Ocean during the last glacial maximum. *Nature*, **372**, 252–255.

- [17] Hovine, H., and T. Fichefet, 1994 : A model study of the glacial oceanic circulation. In *Long Term Climatic Variations - Data and Modelling*, J.-C. Duplessy, and M.-T. Spyridakis (Eds.), *NATO ASI Series*, **I22**, Springer-Verlag, Berlin, pp. 481–489.
- [18] Hovine, S., and T. Fichefet, 1994 : A zonally averaged, three-basin ocean circulation model for climate studies. *Clim. Dyn.*, **10**, 313–331.
- [19] Fichefet, T., 1995 : Solar radiation and global climate change: Some experiments with a two-dimensional climate model. In *Solar Output and Climate during the Holocene*, B. Frenzel (Ed.), *Paläoklimaforschung*, **16**, Gustav Fischer Verlag, Stuttgart, pp.161–184.
- [20] Deleersnijder, E., J.-M. Beckers, J.-M. Campin, M. El Mohajir, T. Fichefet, and P. Luyten, 1996 : 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*, **I48**, Springer-Verlag, Berlin, pp. 39–86.
- [21] Duplessy, J.-C., L. Labeyrie, M. Paterne, S. Hovine, T. Fichefet, J. Duprat, and M. Labracherie, 1996 : High latitude deep water sources during the last glacial maximum and the intensity of the global oceanic circulation. In *The South Atlantic: Present and Past Circulation*, G. Wefer, W.H. Berger, G. Siedler, and D.J. Webb (Eds.), Springer-Verlag, Berlin, pp. 445–460.
- [22] Fichefet, T., and M.A. Morales Maqueda, 1997 : Sensitivity of a global sea ice model to the treatment of ice thermodynamics and dynamics. *J. Geophys. Res.*, **102**, 12,609–12,646.
- [23] Goosse, H., J.-M. Campin, T. Fichefet, and E. Deleersnijder, 1997 : Sensitivity of a global ice-ocean model to the Bering Strait throughflow. *Clim. Dyn.*, **13**, 349–358.
- [24] Goosse, H., J.-M. Campin, T. Fichefet, and E. Deleersnijder, 1997 : The impact of sea-ice formation on the properties of Antarctic Bottom Water. *Ann. Glaciol.*, **25**, 276–281.
- [25] Goosse, H., T. Fichefet, and J.-M. Campin, 1997 : The effects of the water flow through the Canadian Archipelago in a global ice-ocean model. *Geophys. Res. Lett.*, **24**, 1507–1510.
- [26] Fichefet, T., H. Goosse, and M.A. Morales Maqueda, 1998 : On the large-scale modeling of sea ice–ocean interactions. In *Ocean Modeling and Parameterization*, E.P. Chassignet, and J. Verron (Eds.), *NATO ASI Series*, **C516**, Kluwer Academic Pub., Dordrecht, pp. 399–422.
- [27] Campin, J.-M., T. Fichefet, and J.-C. Duplessy, 1999 : Problems with using radiocarbon to infer ocean ventilation rates for past and present climates. *Earth and Planetary Sci. Lett.*, **165**, 17–24.
- [28] Fichefet, T., and H. Goosse, 1999 : A numerical investigation of the spring Ross Sea polynya. *Geophys. Res. Lett.*, **26**, 1015–1018.
- [29] Fichefet, T., and M.A. Morales Maqueda, 1999 : Modelling the influence of snow accumulation and snow-ice formation on the seasonal cycle of the Antarctic sea-ice cover. *Clim. Dyn.*, **15**, 251–268.
- [30] Goosse, H., E. Deleersnijder, T. Fichefet, and M. England, 1999 : Sensitivity of a global coupled ocean–sea ice model to the parameterization of vertical mixing. *J. Geophys. Res.*, **104**, 13,681–13,695.
- [31] Goosse, H., and T. Fichefet, 1999 : Importance of ice-ocean interactions for the global ocean circulation : A model study. *J. Geophys. Res.*, **104**, 23,337–23,355.
- [32] Fichefet, T., B. Tartinville, and H. Goosse, 2000 : Sensitivity of the Antarctic sea ice to the thermal conductivity of snow, *Geophys. Res. Lett.*, **27**, 401–404.
- [33] Grenier, H., H. Le Treut, and T. Fichefet, 2000 : Ocean-atmosphere interactions and climate drift in a coupled general circulation model. *Clim. Dyn.*, **16**, 701–717.
- [34] Goosse, H., and T. Fichefet, 2001 : Open-ocean convection and polynya formation in a large-scale ice-ocean model. *Tellus*, **53A**, 94–111.
- [35] Renssen, H., H. Goosse, T. Fichefet, and J.-M. Campin, 2001 : The 8.2 kyr BP event simulated by a global atmosphere–sea-ice–ocean model. *Geophys. Res. Lett.*, **28**, 1567–1570.
- [36] Tartinville, B., J.-M. Campin, T. Fichefet, and H. Goosse, 2001 : Realistic representation of the surface freshwater flux in an ice-ocean general circulation model. *Ocean Modell.*, **3**, 95–108.

- [37] Claussen, M., L.A. Mysak, A.J. Weaver, M. Crucifix, T. Fichefet, M.-F. Loutre, S.L. Weber, J. Alcamo, V.A. Alexeev, A. Berger, R. Calov, A. Ganopolski, H. Goosse, G. Lohman, F. Lunkeit, I.I. Mokhov, V. Petoukhov, P. Stone, and Z. Wang, 2002 : Earth system models of intermediate complexity : Closing the gap in the spectrum of climate system models. *Clim. Dyn.*, **18**, 579–586.
- [38] Crucifix, M., M.-F. Loutre, P. Tulkens, T. Fichefet, and A. Berger, 2002 : Climate evolution during the Holocene : A study with an Earth system model of intermediate complexity. *Clim. Dyn.*, **19**, 43–60.
- [39] Huybrechts, P., I. Janssens, C. Poncin, and T. Fichefet, 2002 : The response of the Greenland ice sheet to climate changes in the 21st century by interactive coupling of an AOGCM with a thermomechanical ice-sheet model. *Ann. Glaciol.*, **35**, 409–415.
- [40] Renssen, H., H. Goosse, and T. Fichefet, 2002 : Modeling the effect of freshwater pulses on the early Holocene climate : The influence of high-frequency climate variability. *Paleoceanogr.*, **17(2)**, doi : 10.1029/2001PA000649.
- [41] Fichefet, T., B. Tartinville, and H. Goosse, 2003 : Antarctic sea ice variability during 1958–1999: A simulation with a global ice-ocean model. *J. Geophys. Res.*, **108(C3)**, 3102, doi : 10.1029/2001JC001148.
- [42] Fichefet, T., H. Goosse, and M.A. Morales Maqueda, 2003 : A hindcast simulation of the Arctic and Antarctic sea-ice variability, 1955–2001. *Polar Res.*, **22**, 91–98.
- [43] Fichefet, T., C. Poncin, H. Goosse, P. Huybrechts, I. Janssens, and H. Le Treut, 2003 : Implications of changes in freshwater flux from the Greenland ice sheet for the climate of the 21st century. *Geophys. Res. Lett.*, **30(17)**, 1911, doi : 10.1029/2003GL017826.
- [44] Renssen, H., V. Brovkin, T. Fichefet, and H. Goosse, 2003 : Holocene climate instability during the termination of the African Humid Period. *Geophys. Res. Lett.*, **30(4)**, 1184, doi : 10.1029/2002GL016636.
- [45] Renssen, H., H. Goosse, and T. Fichefet, 2003 : On the non-linear response of the ocean thermohaline circulation to global deforestation. *Geophys. Res. Lett.*, **30(2)**, 1061, doi : 10.1029/2002GL016155.
- [46] Fichefet, T., C. Dick, G. Flato, D. Kane, and J. Moore, 2004 : Making progress in understanding the Arctic climate system. *EOS Trans. Amer. Geophys. Union*, **85**, 159.
- [47] Goosse H., V. Masson-Delmotte, H. Renssen, M. Delmotte, T. Fichefet, V. Morgan, T. van Ommen, B.K. Khim, and B. Stenni, 2004 : A delayed medieval warm period in the Southern Hemisphere ? *Geophys. Res. Lett.*, **31**, L06203, doi : 10.1029/2003GL019140.
- [48] Lefebvre, W., H. Goosse, R. Timmermann, and T. Fichefet, 2004 : Influence of the Southern Annular Mode on the Antarctic sea ice–ocean system. *J. Geophys. Res.*, **109**, C09005, doi : 10.1029/2004JC002403.
- [49] Renssen, H., C.J. Beets, T. Fichefet, H. Goosse, and D. Kroon, 2004 : Modeling the climate response to a massive methane release from gas hydrates. *Paleoceanogr.*, **19**, PA2010, doi : 10.1029/2003PA000968.
- [50] Timmermann, R., A. Worby, H. Goosse, and T. Fichefet, 2004 : Utilizing the ASPeCt sea ice thickness dataset to validate a global coupled sea ice–ocean model. *J. Geophys. Res.*, **109**, C07017, doi : 10.1029/2003JC002242.
- [51] Gregory, J.M., K.W. Dixon, R.J. Stouffer, A.J. Weaver, E. Driesschaert, M. Eby, T. Fichefet, H. Hasumi, A. Hu, J.H. Jungclaus, I.V. Kamenkovich, A. Levermann, M. Montoya, S. Murakami, S. Nawrath, A. Oka, A.P. Sokolov, and R.B. Thorpe, 2005 : A model intercomparison of changes in the Atlantic thermohaline circulation in response to increasing atmospheric CO₂ concentration. *Geophys. Res. Lett.*, **32**, L12703, doi : 10.1029/2005GL023209.
- [52] Mélice, J.-L., R.E. Lutjeharms, H. Goosse, T. Fichefet, and C.J. Reason, 2005 : Evidence for the Antarctic circumpolar wave in the sub-Antarctic during the past 50 years. *Geophys. Res. Lett.*, **32**, L14614, doi : 10.1029/2005GL023361.
- [53] Petoukhov V., M. Claussen, A. Berger, M. Crucifix, M. Eby, A. Eliseev, T. Fichefet, A. Ganopolski, H. Goosse, I. Kamenkovich, I. Mokhov, M. Montoya, L.A. Mysak, A. Sokolov, P. Stone, Z. Wang, and A.J. Weaver, 2005 : EMIC Intercomparison Project (EMIP-CO₂) : Comparative analysis of

- EMIC simulations of current climate and equilibrium and transient responses to atmospheric CO₂ doubling. *Clim. Dyn.*, **25**, 363–385, doi : 10.1007/s00382-005-0042-3.
- [54] Renssen H., H. Goosse, and T. Fichefet, 2005 : Contrasting trends in North Atlantic deep-water formation in the Labrador and Nordic Seas during the Holocene. *Geophys. Res. Lett.*, **32**, L08711, doi : 10.1029/2005GL022462.
- [55] Renssen, H., H. Goosse, T. Fichefet, V. Masson-Delmotte, and N. Koç, 2005 : Holocene climate evolution in the high-latitude Southern Hemisphere simulated by a coupled atmosphere–sea ice–ocean–vegetation model. *The Holocene*, **15**, 951–964.
- [56] Renssen, H., H. Goosse, T. Fichefet, V. Brovkin, E. Driesschaert, and F. Wolk, 2005 : Simulating the Holocene climate evolution at northern high latitudes using a coupled atmosphere–sea ice–ocean–vegetation model. *Clim. Dyn.*, **24**, 23–43, doi : 10.1007/s00382-004-0485-y.
- [57] Timmermann, R., H. Goosse, G. Madec, T. Fichefet, C. Ethé, and V. Dulière, 2005 : On the representation of high latitude processes in the ORCALIM global coupled sea ice–ocean model. *Ocean Modell.*, **8**, 175–201.
- [58] Vancoppenolle, M., T. Fichefet, and C. Bitz, 2005 : On the sensitivity of undeformed Arctic sea ice to its vertical salinity profile. *Geophys. Res. Lett.*, **32**, L16502, doi : 10.1029/2005GL023427.
- [59] Arzel, O., T. Fichefet, and H. Goosse, 2006 : Sea ice evolution over the 20th and 21st centuries as simulated by current AOGCMs. *Ocean Modell.*, **12**, 401–415.
- [60] Brovkin, V., M. Claussen, E. Driesschaert, T. Fichefet, D. Kicklighter, M.-F. Loutre, D. Matthews, D. Ramankutty, M. Schaeffer, and A. Sokolov, 2006 : Biogeophysical effects of historical land cover changes simulated by six Earth system models of intermediate complexity. *Clim. Dyn.*, **26**, 587–600, doi : 10.1007/s00382-005-0092-6.
- [61] Dufresne, J.-L., D. Salas y Mélia, S. Denvil, S. Tyteca, O. Arzel, S. Bony, P. Braconnot, P. Brockmann, P. Cadule, A. Caudel, F. Chauvin, M. Déqué, H. Douville, L. Fairhead, T. Fichefet, M.-A. Foujols, P. Friedlingstein, J.-F. Guérémy, F. Hourdin, A. Idelkadi, C. Levy, G. Madec, P. Marquet, O. Marti, I. Musat, S. Planton, J.-F. Royer, D. Swingedouw, et A. Voldoire, 2006 : Simulation du climat récent et futur par les modèles du CNRM et de l'IPSL. *La Météorologie*, **55**, 45–59.
- [62] Renssen, H., V. Brovkin, T. Fichefet, and H. Goosse, 2006 : Simulation of the Holocene climate evolution in Northern Africa : The termination of the African Humid Period. *Quat. Int.*, **150**, 95–102.
- [63] Renssen, H., E. Driesschaert, M.-F. Loutre, and T. Fichefet, 2006 : On the importance of initial conditions for simulations of the Mid-Holocene climate. *Climate of the Past*, **2**, 91–97.
- [64] Vancoppenolle, M., T. Fichefet, and C. Bitz, 2006 : Modeling the salinity profile of undeformed Arctic sea ice. *Geophys. Res. Lett.*, **33**, L21501, doi : 10.1029/2006GL028342.
- [65] Wiersma, A.P., H. Renssen, H. Goosse, and T. Fichefet, 2006 : Evaluation of different freshwater forcing scenarios for the 8.2 ka BP event in a coupled climate model. *Clim. Dyn.*, **27**, 831–849, doi : 10.1007/s00382-006-0166-0.
- [66] Braconnot, P., B. Otto-Bliesner, S. Harrison, S. Joussaume, J.-Y. Peterschmitt, A. Abe-Ouchi, M. Crucifix, E. Driesschaert, T. Fichefet, C.D. Hewitt, M. Kageyama, A. Kitoh, M.-F. Loutre, O. Marti, U. Merkel, G. Ramstein, P. Valdes, S.L. Weber, Y. Yu, and Y. Zhao, 2007 : Results of PMIP2 coupled simulations of the mid-Holocene and Last Glacial Maximum. Part 1 : Experiments and large-scale features. *Climate of the Past*, **3**, 261–277.
- [67] Braconnot, P., B. Otto-Bliesner, S. Harrison, S. Joussaume, J.-Y. Peterschmitt, A. Abe-Ouchi, M. Crucifix, E. Driesschaert, T. Fichefet, C.D. Hewitt, M. Kageyama, A. Kitoh, M.-F. Loutre, O. Marti, U. Merkel, G. Ramstein, P. Valdes, S.L. Weber, Y. Yu, and Y. Zhao, 2007 : Results of PMIP2 coupled simulations of the mid-Holocene and Last Glacial Maximum. Part 2 : Feedbacks with emphasis on the location of the ITCZ and mi- and high latitudes heat budget. *Climate of the Past*, **3**, 279–296.
- [68] Driesschaert, E., T. Fichefet, H. Goosse, P. Huybrechts, I. Janssens, A. Mouchet, G. Munhoven, V. Brovkin, and S.L. Weber, 2007 : Modeling the influence of Greenland ice sheet melting on the Atlantic meridional overturning circulation. *Geophys. Res. Lett.*, **34**, L10707, doi : 10.1029/2007GL029516.

- [69] Dulière, V., and T. Fichefet, 2007 : On the assimilation of ice velocity and concentration data into large-scale sea ice models. *Ocean Science*, **3**, 321–335.
- [70] Goosse, H., E. Driesschaert, T. Fichefet, and M.-F. Loutre, 2007 : Information on the early Holocene climate constrains the summer sea ice projections for the 21st century. *Climate of the Past*, **3**, 683–692.
- [71] Randall, D.A., R.A. Wood, S. Bony, R. Colman, T. Fichefet, J. Fyfe, V. Kattsov, A. Pitman, J. Shukla, J. Srinivasan, R.J. Stouffer, A. Sumi, and K.E. Taylor, 2007 : Climate models and their evaluation. In *Climate Change 2007 : The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (Eds.), Cambridge Univ. Press, Cambridge, United Kingdom and New York, NY., U.S.A., pp. 589–662.
- [72] Renssen, H., H. Goosse, and T. Fichefet, 2007 : Simulation of Holocene cooling events in a coupled climate model. *Quat. Sc. Rev.*, **26**, 2019–2029.
- [73] Vancoppenolle, M., C. Bitz, and T. Fichefet, 2007 : Summer land fast sea ice desalination at Point Barrow, Alaska : Model and observations. *J. Geophys. Res.*, **112**, C04022, doi : 10.1029/2006JC003493.
- [74] Arzel, O., T. Fichefet, H. Goosse, and J.-L. Dufresne, 2008 : Causes and impacts of changes in the Arctic freshwater budget in the 20th and 21st centuries in an AOGCM. *Clim. Dyn.*, **30**, 37–58, doi : 10.1007/s00382-007-0258-5.
- [75] Lietaer, O., T. Fichefet, and V. Legat, 2008 : The effects of resolving the Canadian Arctic Archipelago in a finite element sea ice model. *Ocean Modell.*, **24**, 140–152.
- [76] Plattner, G.-K., R. Knutti, F. Joos, T.F. Stocker, V. Brovkin, E. Driesschaert, S. Dutkiewicz, M. Eby, N.R. Edwards, T. Fichefet, C. Jones, M.-F. Loutre, H.D. Matthews, A. Mouchet, S.A. Müller, S. Nawrath, A. Sokolov, K. Strassmann, and A. Weaver, 2008 : Long-term projections of climate change commitment. *J. Clim.*, **21**, 2721–2751.
- [77] Swingedouw, D., T. Fichefet, P. Huybrechts, E. Driesschaert, H. Goosse, and M.-F. Loutre, 2008 : Antarctic ice-sheet melting provides negative feedbacks on future global warming. *Geophys. Res. Lett.*, **35**, L17705, doi : 10.1029/2008GL034410.
- [78] Bouillon, S., M.A. Morales Maqueda, T. Fichefet, and V. Legat, 2009 : An elastic-viscous-plastic sea ice model formulated on Arakawa B and C grids. *Ocean Modell.*, **27**, 174–184.
- [79] Crespin, E., H. Goosse, T. Fichefet, and M.E. Mann, 2009 : Causes of the 15th century Arctic warm event in a coupled climate model including data assimilation. *Climate of the Past*, **5**, 389–401.
- [80] Jongma, J.I., E. Driesschaert, T. Fichefet, H. Goosse, and H. Renssen, 2009 : The effect of dynamic-thermodynamic icebergs on the Southern Ocean climate in a three-dimensional model. *Ocean Modell.*, **26**, 104–113.
- [81] Renssen, H. H. Sëppa, O. Heiri, D.M. Roche, H. Goosse, and T. Fichefet, 2009 : The spatial and temporal complexity of the Holocene thermal maximum. *Nature Geoscience*, **2**, 411–414 doi : 10.1038/NGEOS513.
- [82] Swingedouw, D., T. Fichefet, H. Goosse, and M.-F. Loutre, 2009 : Impact of transient freshwater releases in the Southern Ocean on the AMOC and climate. *Clim. Dyn.*, **33**, 365–381, doi : 10.1007/s00382-008-0496-1.
- [83] Vancoppenolle, M., T. Fichefet, H. Goosse, S. Bouillon, G. Madec, and M.A. Morales Maqueda, 2009 : Simulating the mass balance and salinity of Arctic and Antarctic sea ice : I. Model description and validation. *Ocean Modell.*, **27**, 33–53.
- [84] Vancoppenolle, M., T. Fichefet, and H. Goosse, 2009 : Simulating the mass balance and salinity of Arctic and Antarctic sea ice : II. Sensitivity to salinity processes. *Ocean Modell.*, **27**, 54–69.
- [85] 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. *Geosci. Model Dev.*, **3**, 603–633, doi : 10.5194/gmd-3-603-2010.
- [86] Marti O., P. Braconnot, J.-L. Dufresne, J. Bellier, R. Benshila, S. Bony, P. Brockmann, P. Cadule, A. Caubel, F. Codron, N. de Noblet, S. Denvil, L. Fairhead, T. Fichefet, M.-A. Foujols, P. Friedlingstein, H. Goosse, J.-Y. Grandpeix, E. Guilyardi, F. Hourdin, G. Krinner, C. Lévy, G. Madec, J. Mignot, I. Musat, D. Swingedouw, and C. Talandier, 2010 : Key features of the IPSL ocean atmosphere model and its sensitivity to atmospheric resolution. *Clim. Dyn.*, **34**, 1–26, doi : 10.1007/s00382-009-0640-6.
- [87] Vancoppenolle, M., H. Goosse, A. de Montety, T. Fichefet, B. Tremblay, and J.-L. Tison, 2010 : Modeling brine and nutrient dynamics in Antarctic sea ice : The case of dissolved silica. *J. Geophys. Res.*, **115**, C02005, doi : 10.1029/2009JC005369.
- [88] Girard, L., S. Bouillon, J. Weiss, D. Amtrano, T. Fichefet, and V. Legat, 2011 : A new modelling framework for sea-ice mechanics based on elasto-brittle rheology. *Ann. Glaciol.*, **52**, 123–132.
- [89] Goelzer, H., P. Huybrechts, M.-F. Loutre, H. Goosse, T. Fichefet, and A. Mouchet, 2011 : Impact of Greenland and Antarctic ice sheet interactions on climate sensitivity. *Clim. Dyn.*, **37**, 1005–1018, doi : 1007/s00382-010-0885-0.
- [90] Huybrechts, P., H. Goelzer, I. Janssens, E. Driesschaert, T. Fichefet, H. Goosse, and M.-F. Loutre, 2011 : Response of the Greenland and Antarctic ice sheets to multi-millennial greenhouse warming in the Earth system model of intermediate complexity LOVECLIM. *Survey Geophys.*, **32**, 397–416, doi : 10.1007/s10712-011-09131-5.
- [91] Lecomte, O., T. Fichefet, M. Vancoppenolle, and M. Nicolaus, 2011 : A new snow thermodynamic scheme for large-scale sea-ice models. *Annals Glaciol.*, **52**, 337–346.
- [92] Lietaer, O., E. Deleersnijder, T. Fichefet, M. Vancoppenolle, R. Comblen, S. Bouillon, and V. Legat, 2011 : The vertical age profile in sea ice : Theory and numerical results. *Ocean Modell.*, **40**, 211–226, doi : 10.1016/j.ocemod.2011.09.002.
- [93] Loutre, M.-F., A. Mouchet, T. Fichefet, H. Goosse, H. Goelzer, and P. Huybrechts, 2011 : Evaluating climate model performance with various parameter sets using observations over the last centuries. *Climate of the Past*, **7**, 511–526, doi : 10.5194/cp-7-511-2011.
- [94] Massonnet, F., T. Fichefet, H. Goosse, M. Vancoppenolle, P. Mathiot, and C. König Beatty, 2011 : On the influence of model physics on simulations of Arctic and Antarctic sea ice. *The Cryosphere*, **5**, 687–699, doi : 10.5194/tc-5-687-2011.
- [95] Mathiot, P., H. Goosse, T. Fichefet, B. Barnier, and H. Gallée, 2011 : Modelling the variability of the Antarctic Slope Current. *Ocean Science*, **7**, 455–470, doi : 10.5194/os-7-455-2011.
- [96] Vancoppenolle, M., R. Timmermann, S.F. Ackley, T. Fichefet, H. Goosse, P. Heil, K.C. Leonard, J. Lieser, M. Nicolaus, T. Papakyriakou, and J.-L. Tison, 2011 : Assessment of radiation forcing data sets for large-scale sea ice models in the Southern Ocean. *Deep-Sea Res. II*, **58**, 1237–1249, doi : 10.1016/j.dsr2.2010.10.039.
- [97] Barthélemy, A., H. Goosse, P. Mathiot, and T. Fichefet, 2012 : Inclusion of a katabatic wind parameterization in a coarse-resolution global climate model. *Ocean Modell.*, **48**, 45–54, doi : 10.1016/j.ocemod.2012.03.002.
- [98] Goelzer, H., P. Huybrechts, S.C.B. Raper, M.-F. Loutre, H. Goosse, and T. Fichefet, 2012 : Millennial total sea level commitments projected with the Earth system model of intermediate complexity LOVECLIM. *Env. Res. Lett.*, **7**, doi : 10.1088/1748-9326/7/4/045401.
- [99] Massonnet, F., T. Fichefet, H. Goosse, C. Bitz, G. Philippon-Berthier, M. Holland, and P.-Y. Barriat, 2012 : Constraining projections of summer Arctic sea ice. *The Cryosphere*, **6**, 1383–1394, doi : 10.5194/tc-6-1383-2012.
- [100] Mathiot, P., C. König Beatty, T. Fichefet, H. Goosse, F. Massonnet, and M. Vancoppenolle, 2012 : Better constraints on the sea-ice state using global sea-ice data assimilation. *Geosci. Model Dev.*, **5**, 1501–1515, doi : 10.5194/gmd-5-1501-2012.
- [101] Weaver, A.J., J. Sedláček, M. Eby, K. Alexander, E. Cressin, T. Fichefet, G. Philippon-Berthier, F. Joos, M. Kawamiya, K. Matsumoto, M. Steinacher, K. Tachiiri, K. Tokos, M. Yoshimori, and K.

- Zickfeld, 2012 : Stability of the Atlantic meridional overturning circulation : A model intercomparison. *Geophys. Res. Lett.*, **39**, L20709, doi : 10.1029/2012GL053763.
- [102] Bouillon, S., T. Fichefet, V. Legat, and G. Madec, 2013 : The elastic-viscous-plastic method revisited. *Ocean Modell.*, **71**, 2–12, doi : 10.1016/j.ocemod.2013.05.013.
- [103] Collins, M., R. Knutti, J.M. Arblaster, J.-L. Dufresne, T. Fichefet, P. Friedlingstein, X. Gao, W.J. Gutowski, T. Johns, G. Krinner, M. Shongwe, C. Tebaldi, A.J. Weaver, and M. Wehner, 2013 : Long-term Climate Change: Projections, Commitments and Irreversibility. In *Climate Change 2013 : The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. T.F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P.M. Midgley (Eds.), Cambridge Univ. Press, Cambridge, United Kingdom and New York, U.S.A., pp. 1029–1136.
- [104] Crespin, E., H. Goosse, T. Fichefet, A. Mairesse, and Y. Sallaz-Damaz, 2013 : Arctic climate over the past millennium : Annual and seasonal response to external forcings. *The Holocene*, **23**, 321–329, doi : 10.1177/0959683612463095.
- [105] Dufresne, J.-L., M.-A. Foujols, S. Denvil, A. Caubel, O. Marti, O. Aumont, Y. Balkanski, S. Bekki, H. Bellenger, R. Benshila, S. Bony, L. Bopp, P. Braconnot, P. Brockmann, P. Cadule, F. Cheruy, F. Codron, A. Cozic, D. Cugnet, N. de Noblet, J.-P. Duvel, C. Ethé, L. Fairhead, T. Fichefet, S. Flavoni, P. Friedlingstein, J.-Y. Granpeix, L. Guez, E. Guilyardi, D. Hauglustaine, D. Hourdin, A. Idekaldi, J. Ghattas, S. Joussaume, M. Kageyama, G. Krinner, S. Labetoulle, A. Lahellec, M.-P. Lefebvre, F. Lefevre, C. Levy, Z.X. Li, J. Lloyd, F. Lott, G. Madec, M. Mancip, M. Marchand, S. Masson, Y. Meurdesoif, J. Mignot, I. Musat, S. Parouty, J. Polcher, C. Rio, M. Schulz, S. Swingedouw, S. Szopa, C. Talandier, P. Terray, and N. Viovy, 2013 : Climate change projections using the IPSL-CM5 Earth System Model : From CMIP3 to CMIP5. *Clim. Dyn.*, **40**, 2123–2165, doi : 10.1007/s00382-012-1636-1.
- [106] Eby, M., A.J. Weaver, K. Alexander, K. Zickfeld, A. Abe-Ouchi, A.A. Cimadoribus, E. Crespin, S.S. Drijfhout, N.R. Edwards, A.V. Eliseev, G. Feulner, T. Fichefet, C.E. Forest, H. Goosse, P.B. Holden, F. Joos, M. Kawamiya, D. Kicklighter, H. Kienert, K. Matsumoto, I.I. Mokhov, E. Monier, S.M. Olsen, J.O.P. Pedersen, M. Perrette, G. Philippon-Berthier, A. Ridgwell, A. Schlosser, T. Schneider von Deimling, G. Shaffer, R. Smith, R. Spahni, A.P. Sokolov, M. Steinacher, K. Tachiiri, K. Tokos, M. Yoshimori, N. Zeng, and F. Zhao, 2013 : Historical and idealized climate model experiments : An EMIC intercomparison. *Climate of the Past*, **9**, 1111–1140, doi : 10.5194/cp-9-1111-2013.
- [107] Lecomte, O., T. Fichefet, M. Vancoppenolle, F. Domine, F. Massonnet, P. Mathiot, S. Morin, and P.-Y. Barriat, 2013 : On the formulation of snow thermal conductivity in large-scale sea ice models. *J. Adv. Mod. Earth Syst.*, **5**, 542–557, doi : 10.1002/jame.20039.
- [108] Massonnet, F., P. Mathiot, T. Fichefet, H. Goosse, C. König Beatty, M. Vancoppenolle, and T. Lavergne, 2013 : A model reconstruction of the Antarctic sea ice thickness and volume changes over 1980–2008 using data assimilation. *Ocean Modell.*, **64**, 67–75, doi : 10.1016/j.ocemod.2013.01.003.
- [109] Zickfeld, K., M. Eby, A.J. Weaver, K. Alexander, E. Crespin, N.R. Edwards, A.V. Eliseev, G. Feulner, T. Fichefet, C.E. Forest, P. Friedlingstein, H. Goosse, P.B. Holden, F. Joos, M. Kawamiya, D. Kicklighter, H. Kienert, K. Matsumoto, I.I. Mokhov, E. Monier, S.M. Olsen, J.O.P. Pedersen, M. Perrette, G. Philippon-Berthier, A. Ridgwell, A. Schlosser, T. Schneider Von Deimling, G. Shaffer, A. Sokolov, R. Spahni, M. Steinacher, K. Tachiiri, K.S. Tokos, M. Yoshimori, and F. Zhao, 2013 : Long-term climate change commitment and reversibility : An EMIC intercomparison. *J. Clim.*, **26**, 5782–5809, doi : 10.1175/JCLI-D-12-00584.1.
- [110] Hezel, P.J., T. Fichefet, and F. Massonnet, 2014 : Modeled Arctic sea ice evolution through 2300 in CMIP5 extended RCPs. *The Cryosphere*, **8**, 1195–1204, doi : 10.5194/tc-8-1195-2014.
- [111] Loutre, M.-F., T. Fichefet, H. Goosse, P. Huybrechts, H. Goelzer, and E. Capron, 2014 : Factors controlling the last interglacial climate as simulated by LOVECLIM1.3. *Climate of the Past*, **10**, 1541–1565, doi : 10.5194/cp-10-1541-2014.
- [112] Massonnet, F., H. Goosse, T. Fichefet, and F. Counillon, 2014 : Calibration of sea ice dynamic parameters in an ocean–sea ice model using an ensemble Kalman filter. *J. Geophys. Res.*, **119**, 4168–4184, doi : 10.1002/2013JC009705.

- [113] Pestiaux, A., S.A. Melchior, J.-F. Remacle, T. Kärnä, T. Fichefet, and J. Lambrechts, 2014 : Discontinuous Galerkin finite element discretization of a strongly anisotropic diffusion operator. *Int. J. Num. Methods in Fluids*, **75**, 365–384, doi : 10.1002/flid.3900.
- [114] Barthélemy, A., T. Fichefet, H. Goosse, and G. Madec, 2015 : Modelling the interplay between sea ice formation and the oceanic mixed layer : Limitations of simple brine rejection parameterizations. *Ocean Modell.*, **86**, 141–152, doi : 10.1016/j.ocemod.2014.12.009.
- [115] Lecomte, O., T. Fichefet, D. Flocco, D. Schroeder, and M. Vancoppenolle, 2015 : Interactions between wind-blown snow redistribution on melt ponds in a coupled ocean–sea ice model. *Ocean Modell.*, **87**, 67–80, doi : 10.1016/j.ocemod.2014.12.003.
- [116] Lecomte, O., T. Fichefet, F. Massonnet, and M. Vancoppenolle, 2015 : Benefits from representing snow properties and related processes in coupled ocean–sea ice models. *Ocean Modell.*, **87**, 81–85, doi : 10.1016/j.ocemod.2014.11.005.
- [117] Massonnet, F., T. Fichefet, and H. Goosse, 2015 : Prospects for improved seasonal Arctic sea ice predictions from multivariate data assimilation. *Ocean Modell.*, **88**, 16–25, doi : 10.1016/j.ocemod.2014.12.013.
- [118] Rousset, C., M. Vancoppenolle, G. Madec, T. Fichefet, S. Flavoni, A. Barthélemy, R. Benshila, J. Chanut, S. Masson, and F. Vivier, 2015 : The Louvain-la-Neuve sea ice model LIM3.6 : Global and regional capabilities. *Geosci. Model Dev.*, **8**, 2991–3005, doi : 10.5194/gmd-8-2991-2015.
- [119] Barthélemy, A., T. Fichefet, and H. Goosse, 2016 : Spatial heterogeneity of ocean surface boundary conditions under sea ice. *Ocean Modell.*, **102**, 82–98, doi : 10.1016/j.ocemod.2016.05.003.
- [120] Barthélemy, A., T. Fichefet, H. Goosse, and G. Madec, 2016 : A multi-column vertical mixing scheme to parameterize the heterogeneity of oceanic conditions under sea ice. *Ocean Modell.*, **104**, 28–44, doi : 10.1016/j.ocemod.2016.05.005.
- [121] Goelzer, H., P. Huybrechts, M.-F. Loutre, and T. Fichefet, 2016 : Impact of ice sheet meltwater fluxes on the climate evolution at the onset of the Last Interglacial. *Climate of the Past*, **12**, 1721–1737, doi : 10.5194/cp-12-1721/2016.
- [122] Goelzer, H., P. Huybrechts, M.-F. Loutre, and T. Fichefet, 2016 : Last Interglacial climate and sea-level evolution from a coupled ice sheet–climate model. *Climate of the Past*, **12**, 2195–2213, doi : 10.5194/cp-12-2195-2016.
- [123] Lecomte, O., H. Goosse, T. Fichefet, P.R. Holland, P. Uotila, V. Zunz, and N. Kimura., 2016 : Impact of surface wind biases on the Antarctic sea ice concentration budget in climate models. *Ocean Modell.*, **105**, 60–70, doi : 10.1016/j.ocemod.2016.08.001.
- [124] Lecomte, O., H. Goosse, T. Fichefet, C. de Lavergne, A. Barthélemy, and V. Zunz, 2017 : Vertical ocean heat redistribution sustaining sea-ice concentration trends in the Ross Sea. *Nature Comm.*, submitted.

Articles published in non-refereed journals or books

- [1] Berger, A., H. Gallée, C. Tricot, T. Fichefet, and I. Marsiat, 1988 : Transient response of the climate system to the astronomical forcing. In *Belgian Research on Global Change IGBP*, A.H. Cottenie, and A. Teller (Eds.), SCOPE Belgium 4, Académie royale des sciences, des lettres et des beaux-arts de Belgique, Brussels, pp. 10–24.
- [2] Demuth, C., J.-P. van Ypersele de Strihou, et T. Fichefet, 1988 : Evolution spatio-temporelle de la glace marine en mer de Weddell. In *Atelier de modélisation de l'atmosphère 1988*, Ministère des transports et de la mer, Direction de la météorologie nationale, Toulouse, pp. 85–98.
- [3] Fichefet, T., 1988 : Etude numérique des interactions océan–glace marine. In *Atelier de modélisation de l'atmosphère 1988*, Ministère des transports et de la mer, Direction de la météorologie nationale, Toulouse, pp. 47–58.
- [4] Fichefet, T., 1988 : Requirements for modelling paleo-data. *Global Change IGBP Report*, **4**, pp. 98–100.

- [5] Tricot, C., T. Fichefet, and A. Berger, 1988 : Man's impact on climate: The transient response of the surface air temperature to progressive changes in trace gas concentration. In *Belgian Research on Global Change IGBP*, A.H. Cottenie, and A. Teller (Eds.), SCOPE Belgium 4, Académie royale des sciences, des lettres et des beaux-arts de Belgique, Brussels, pp. 40-49.
- [6] Berger, A., T. Fichefet, H. Gallée, C. Tricot, I. Marsiat, and J.-P. van Ypersele, 1989 : Astronomical forcing of the last glacial-interglacial cycle. In *Our Changing Atmosphere, Proceedings of the 28th Liège International Astrophysical Colloquium*, P.J. Crutzen, J.-C. Gérard, and R. Zander (Eds.), Université de Liège, Institut d'Astrophysique, Cointe-Ougrée, pp. 353–382.
- [7] Berger, A., C. Tricot, and T. Fichefet, 1989 : The transient response of the surface air temperature to progressive changes in greenhouse gases in the 21st Century. In *The Silent Shout, Proceedings of the Third Pugash Workshop on Science, the Media and World Affairs*, Belgian Pugash Group (Ed.), Brussels, pp. 51–74.
- [8] Gallée, H., A. Berger, G. Schayes, T. Fichefet, I. Marsiat, C. Tricot, and J.-P. van Ypersele, 1989 : Numerical study of the air-sea interactions in the Antarctic coastal zone and their implications on deep sea formation in the case of katabatic winds. In *Antarctica, Belgian Scientific Research Programme Phase One, Vol. III Glaciology and Climatology*, Prime Minister's Service, Science Policy Office, Brussels, III: pp. 1–40 and A: pp. 1–20.
- [9] Tricot, C., H. Gallée, T. Fichefet, I. Marsiat, and A. Berger, 1989 : A simulation of the long-term variations of the global ice volume over the past 122,000 years: A test of the astronomical theory. In *IRS88: Current Problems in Atmospheric Radiation, Proceedings of the International Radiation Symposium*, J. Lenoble, and J.-F. Geleyn (Eds.), A. Deepak Pub., Hampton, pp. 338–341.
- [10] Berger, A., T. Fichefet, H. Gallée, C. Tricot, et J.-P. van Ypersele, 1990 : Le forçage à l'échelle astronomique. In *Réactions des êtres vivants aux changements de l'environnement*, Centre national de la recherche scientifique, Paris, pp. 13–32.
- [11] Berger, A., C. Tricot, and T. Fichefet, 1990 : The transient response of the surface air temperature to progressive changes in greenhouse gases in the 21st century. In *Induced Critical Conditions in the Atmosphere*, A. Tartaglia, and M. Vadalchino (Eds.), World Scientific, Singapour, pp. 236–245.
- [12] Deville, M., T. Fichefet, R. Keunings, and J.-P. van Ypersele de Strihou (Eds.), 1990 : Collection of Abstracts for the International Workshop on Supercomputers in Climatology-Meteorology and Fluid Dynamics. UCL, Louvain-la-Neuve, 22 pp.
- [13] Gallée, H., A. Berger, T. Fichefet, I. Marsiat, C. Tricot, and J.-P. van Ypersele, 1991 : Simulation du dernier cycle glacial–interglacial avec un modèle climatique bidimensionnel. In *Atelier de modélisation de l'atmosphère 1991: climat et atmosphère à grande échelle*, Ministère de l'équipement, du logement, des transports et de l'espace, Direction de la météorologie nationale, Toulouse, pp. 217–226.
- [14] Jouzel, J., S. Joussaume, J. Hansen, J. Kutzbach, and T. Fichefet (Eds.), 1991 : Abstracts of the NATO Advanced Research Workshop on Paleoclimate Modeling. Centre d'Etudes Atomiques, Saclay, 45 pp.
- [15] Marsiat, I., T. Fichefet, H. Gallée, C. Tricot, and A. Berger, 1991 : Modelling the Eurasian ice sheet over the last 122,000 years. In *Climatic Changes and Impacts: A General Introduction*, R. Fantechi, G. Maracchi, and M.E. Almeida-Teixeira (Eds.), Report EUR 11943EN, Commission of the European Communities, Brussels, pp. 431–434.
- [16] Tricot, C., et T. Fichefet, 1991: Le climat du 21^{ème} siècle (1^{ère} partie). *L'Echo des Savants, Bulletin des Jeunesses Scientifiques de Belgique*, **240**, 5–6 et 27.
- [17] Tricot, C., et T. Fichefet, 1991: Le climat du 21^{ème} siècle (2^{ème} partie). *L'Echo des Savants, Bulletin des Jeunesses Scientifiques de Belgique*, **241**, 5–6 et 27.
- [18] Berger, A., J.-M. Campin, E. Deleersnijder, M. El Mohajir, T. Fichefet, J.-F. Focroulle, H. Grenier, M.A. Morales Maqueda, P. Tulkens, and J.-P. van Ypersele, 1993 : Modelling of the climate system and its response to human activities. In *Proceedings of the Belgian Impulse Global Change Symposium*, Vol. II, pp. 7–29.
- [19] Fichefet, T., M.A. Morales Maqueda, S. Planton, and C. Bellevaux, 1994 : A global sea-ice–upper-ocean model: Some preliminary results. In *Sea Ice: Observation and Modelling, Proceedings of*

- the Beijing 93's International Symposium on Sea Ice*, Yu Zhouwen (Ed.), China Ocean Press, Beijing, pp. 64-77.
- [20] Fichefet, T., and M.A. Morales Maqueda, 1995 : On modelling the sea-ice–ocean system. In *Ecoles CEA-EDF-INRIA, Problèmes non linéaires appliqués 1994–1995, Modélisations couplées en climatologie, Support de cours*, CEA-EDF-INRIA, pp. 343–420.
- [21] Morales Maqueda, M.A., et T. Fichefet, 1995 : Le rôle de l'inertie thermique de la glace marine In le cycle saisonnier du système glace marine–océan superficiel. In *Atelier de modélisation de l'atmosphère 1995, Tome II*, Centre national de recherches météorologiques, Météo-France, Toulouse, pp. 187–193.
- [22] El Mohajir, M., H. Goosse, H. Grenier, T. Fichefet, J.-M. Campin, and E. Deleersnijder, 1996 : Response of a global ocean–sea-ice model to the climatic and the LMD wind stress forcing. *Bull. Soc. Roy. Sc. Liège*, **65**, 71–74.
- [23] Fichefet, T., and M. A. Morales Maqueda, 1996 : Sensitivity of a large-scale sea-ice–upper-ocean model to uncertainties in the atmospheric forcing. In *Proceedings of the ACSYS Conference on the Dynamics of the Arctic Climate System, Göteborg, Sweden, 7–10 November 1994*, P. Lemke, L. Anderson, R. Barry, and V. Vuglinsky (Eds.), *WMO/TD-No. 760*, World Meteorological Organization, Geneva, pp. 272–277.
- [24] Goosse, H., T. Fichefet, M.A. Morales Maqueda, J.-M. Campin, and E. Deleersnijder, 1996 : On the dynamical coupling of large-scale ocean and sea-ice models. *Bull. Soc. Roy. Sc. Liège*, **65**, 87–90.
- [25] Morales Maqueda, M.A., and T. Fichefet, 1997 : A case for including more complete representation of sea ice processes in numerical climate models. In *Workshop on Polar Processes in Global Climate, Cancun, Mexico, 13–15 November 1996*, Amer. Meteor. Soc., Boston, pp. 77–80.
- [26] Anderson, D., L. Bengtsson, P. Delecluse, J.-C. Duplessy, T. Fichefet, S. Joussaume, J. Jouzel, G. Komen, M. Latif, L. Laursen, H. Le Treut, J. Mitchell, A. Navarra, T. Palmer, S. Planton, A. Ruiz de Elvira, F. Schott, J. Slingo, and J. Willebrand, 1998 : Climate Variability and Predictability Research in Europe, 1999–2004 : Euroclivar Recommendations. KNMI, De Bilt, xxiv + 120 pp.
- [27] Goosse, H., T. Fichefet, and B. Tartinville, 1998 : Simulation de la polynie de la mer de Ross In un modèle à grande échelle. In *Atelier de modélisation de l'atmosphère 1998, Convection–cryosphère*, Centre national de recherches météorologiques, Météo-France, Toulouse, pp. 174–177.
- [28] Fichefet, T., E. Deleersnijder, A. de Montety, H. Goosse, P.-P. Mathieu, C. Poncin, P. Huybrechts, J.-P. van Ypersele, H. Gallée, F. Lefebvre, P. Marbaix, C. Tricot, J.-Y. Doulliez, and R. Smets, 1999 : Modelling the climate system and its evolution at the global and regional scales (CLIMOD). In *Global Change and Sustainable Development, Part 1 : Reducing Uncertainties, Integrated Scientific Reports 1, 1 December 1996 – 31 December 1997*, Federal Office for Scientific, Technical and Cultural Affairs, Brussels, pp. IW 1–17.
- [29] Fichefet, T., E. Deleersnijder, J.-M. Campin, A. Cheymol, A. de Montety, H. Goosse, C. Poncin, B. Tartinville, P. Huybrechts, I. Janssens, J.-P. van Ypersele, H. Gallée, F. Lefebvre, P. Marbaix, C. Tricot, M. Vandiepenbeeck, and R. Smets, 1999 : Modelling the climate system and its evolution at the global and regional scales (CLIMOD). In *Global Change and Sustainable Development, Part 1 : Reducing Uncertainties, Integrated Scientific Reports 2, 1 December 1997 – 31 December 1998*, Federal Office for Scientific, Technical and Cultural Affairs, Brussels, pp. IW 1–19.
- [30] Berger, A., C. Bertrand, O. Brasseur, J.-M. Campin, E. Deleersnijder, T. Fichefet, H. Goosse, M.-F. Loutre, C. Poncin, G. Schayes, P. Tulkens, et J.-P. van Ypersele, 2000: Planète modèle. In *Une aventure universitaire*, Université catholique de Louvain, Editions Racine, Bruxelles, pp. 152–158.
- [31] Duplessy, J.-C., T. Fichefet, E. Jansen, L. Labeyrie, S. Joussaume, J.O. Grimalt, M. Sarnthein, N.J. Shackleton, J.-T. Turon, and T.C.E. van Weering, 2000 : Variability of the glacial and interglacial climates and abrupt climate changes. In *European Climate Science Conference, Vienna, City Hall, 19–23 October 1998*, Austrian Federal Ministry of Science and Transport, Vienna, CD-Rom.

- [32] Fichefet, T., E. Deleersnijder, J.-M. Campin, A. de Montety, H. Goosse, C. Poncin, B. Tartinville, P. Huybrechts, I. Janssens, J.-P. van Ypersele, H. Gallée, F. Lefebvre, P. Marbaix, O. Brasseur, C. Tricot, F. Fontaine, P. Mormal, and M. Vandiepenbeeck, 2000 : Modelling the climate system and its evolution at the global and regional scales (CLIMOD). In *Global Change and Sustainable Development, Part 1 : Reducing Uncertainties, Integrated Scientific Reports 3, 1 December 1998 – 31 December 1999*, Federal Office for Scientific, Technical and Cultural Affairs, Brussels.
- [33] Fichefet, T., H. Goosse, and M.A. Morales Maqueda, 2000 : A numerical investigation of large-scale sea-ice processes and sea-ice–ocean interactions. In *Report of the First Session of the ACSYS Numerical Experimentation Group (Kiel, Germany, 16–19 November 1998)*, WCRP Informal Report No. 11/2000, World Meteorological Organization, Geneva, pp. C3 1–5.
- [34] Goosse, H., and T. Fichefet, T., 2000 : Open-ocean convection and polynya formation in a large-scale ice–ocean model. In *Summary Report of an ACSYS Meeting on Data and Data Management in Support of Sea-Ice/Ocean Modelling (Koblenz, Germany, 28 June – 1 July 1999)*, WCRP Informal Report No. 6/2000, World Meteorological Organization, Geneva, pp. 47–50.
- [35] Fichefet, T., J.-M. Campin, E. Deleersnijder, A. de Montety, H. Goosse, C. Poncin, B. Tartinville, P. Huybrechts, I. Janssens, J.-P. van Ypersele, H. Gallée, O. Brasseur, F. Lefebvre, P. Marbaix, C. Tricot, F. Fontaine, P. Mormal, and M. Vandiepenbeeck, 2001 : Modelling the climate system and its evolution at the global and regional scales (CLIMOD), Final report. Global Change and Sustainable Development, Subprogramme 1 : To Reduce Uncertainty, Federal Office for Scientific, Technical and Cultural Affairs, Brussels, 120 pp.
- [36] Fichefet, T., J.-M. Campin, E. Deleersnijder, A. de Montety, H. Goosse, C. Poncin, B. Tartinville, P. Huybrechts, I. Janssens, J.-P. van Ypersele, H. Gallée, O. Brasseur, F. Lefebvre, P. Marbaix, C. Tricot, F. Fontaine, P. Mormal, and M. Vandiepenbeeck, 2002 : Modelling the climate system and its evolution at the global and regional scales (CLIMOD). In *Final Reports Summaries, Global Change and Sustainable Development, Scientific Support Plan for a Sustainable Development Policy SPSD 1*, Federal Science Policy Office, Brussels, pp. 43–57.
- [37] Fichefet, T., B. Tartinville, and H. Goosse, 2002 : Antarctic sea ice variability : 1958–1999. *Ice and Climate News, The Arctic Climate System Study / Climate and Cryosphere Project Newsletter*, 2, pp. 4.
- [38] Fichefet, T., B. Tartinville, and H. Goosse, 2002 : Modeling the Antarctic sea ice variability during 1958–1999. In *Summary Report of a Joint Meeting of the ACSYS/CliC Numerical Experimentation Group, Observation Products Panel and Data Management and Information Panel (Cambridge, United Kingdom, 17–20 September 2001)*, WCRP Informal Report No. 13/2002, World Meteorological Organization, Geneva.
- [39] Guilyardi, E., R. Budich, G. Brasseur, G. Komen, M. Carter, G. DeMartino, R. Döscher, H. Drange, T. Fichefet, M.-A. Foujols, R. Hatcher, L. Kornblueh, C. Larson, S. Legutke, C. LeQueré, A. Mageli, S. Planton, J. Polcher, R. Redler, M. Rummukainen, M. Stendel, H. Thiemann, S. Valcke, and N. Wedi, 2003 : PRISM System Specification Handbook, Version 1.0. 239 pp.
- [40] Dick, C., and T. Fichefet, 2004 : The ACSYS decade and beyond. *Ice and Climate News, The WCRP Climate and Cryosphere Newsletter*, 5, pp. 1.
- [41] Dick, C., T. Fichefet, B. Miville, and T. Villinger, 2004 : Foreword. In *Report of the ACSYS Final Science Conference, Progress in Understanding the Arctic Climate System: The ACSYS Decade and Beyond (St. Petersburg, Russia, 11–14 November 2003)*, WCRP-120, WMO-TD No 1249, World Meteorological Organization, Geneva, pp. 1.
- [42] Fichefet, T., J.-M. Campin, E. Deleersnijder, A. de Montety, H. Goosse, C. Poncin, B. Tartinville, J.-P. van Ypersele, H. Gallée, O. Brasseur, F. Lefebvre, P. Marbaix, C. Tricot, F. Fontaine, P. Mormal, M. Vandiepenbeeck, P. Huybrechts, and I. Janssens, 2004 : Modelling the climate system and its evolution at the global and regional scales (CLIMOD). In *Volume II: The Climate System, Final Reports, Scientific Support Plan for a Sustainable Development Policy SPSD 1*, Federal Science Policy Office, Brussels.
- [43] Fichefet, T., C. Dick, G. Flato, D. Kane, and J. Moore, 2004 : Progress in understanding the Arctic climate system. In *Report of the ACSYS Final Science Conference, Progress in Understanding the Arctic Climate System: The ACSYS Decade and Beyond (St. Petersburg, Russia, 11–14 November 2003)*, WCRP-120, WMO-TD No 1249, World Meteorological Organization, Geneva, pp. 2–5.

- [44] Fichefet, T., H. Goosse, and M.A. Morales Maqueda, 2004 : Arctic and Antarctic sea ice variability during 1955–2001 : A model study. In *Arctic Climate System Study (ACSYS), Progress in Understanding the Arctic Climate System: The ACSYS Decade and Beyond, Proceedings of the ACSYS Final Science Conference, St. Petersburg, Russia, 11–14 November 2003, WCRP-118 (CD), WMO/TD No. 1232*, World Meteorological Organization, Geneva.
- [45] Fichefet, T., C. Poncin, H. Goosse, P. Huybrechts, I. Janssens, and H. Le Treut, 2004 : Modeling the interactions between the Greenland ice sheet and the climate of the 21st century. In *Arctic Climate System Study (ACSYS), Progress in Understanding the Arctic Climate System: The ACSYS Decade and Beyond, Proceedings of the ACSYS Final Science Conference, St. Petersburg, Russia, 11–14 November 2003, WCRP-118 (CD), WMO/TD No. 1232*, World Meteorological Organization, Geneva.
- [46] Renssen, H., V. Brovkin, T. Fichefet, and H. Goosse, 2004 : Climate instability during the termination of the African Humid Period : A model study. In *Environmental Catastrophes in Mauretania, the Desert and the Coast, First Joint meeting of ICSU Dark Nature and IGCP 490, Mauritania, 4–18 January 2004, Abstract Volume and Field Guide*, S. Leroy, and P. Costa (Eds.), pp. 113–117.
- [47] Vancoppenolle, M., and T. Fichefet, 2004 : An empirical one-dimensional parameterization of the sea ice salinity evolution. In *Arctic Climate System Study (ACSYS), Progress in Understanding the Arctic Climate System: The ACSYS Decade and Beyond, Proceedings of the ACSYS Final Science Conference, St. Petersburg, Russia, 11–14 November 2003, WCRP-118 (CD), WMO/TD No. 1232*, World Meteorological Organization, Geneva.
- [48] Marti O., P. Braconnot, J. Bellier, R. Benshila, S. Bony, P. Brockmann, P. Cadule, A. Caubel, S. Denvil, J.-L. Dufresne, L. Fairhead, M.-A. Filiberti, M.-A. Foujols, T. Fichefet, P. Friedlingstein, H. Goosse, J.-Y. Grandpeix, F. Hourdin, G. Krinner, C. Lévy, G. Madec, I. Musat, N. de Noblet, J. Polcher, and C. Talandier, 2005 : The New IPSL Climate System Model : IPSL-CM4. *Note du Pôle de Modélisation N°26*, Institut Pierre Simon Laplace des Sciences de l'Environnement Global, IPSL Global Climate Modeling Group, Paris, 84 pp.
- [49] van Ypersele, J.-P., P. Van Haver, S. Vanhomwegen, E. Vanvyve, V. Coulon, P. Marbaix, A. Berger, F. Charlet, C. Cocquyt, M. Crucifix, M. De Batist, H. Decler, N. Fagel, T. Fichefet, H. Goosse, P. Huybrechts, R. Lorrain, E. Mahieu, F. Pattyn, P.-D. Plisnier, J. Smits, J.-L. Tison, C. Tricot, W. Vyverman, P. Willenz, and R. Zander, 2005: Climate change. In *Belgian Global Change Research 1990–2002, Assessment and Integration Report*, G. den Ouden, M. Vanderstraeten, R. Ceulemans, M. De Mazière, I. Nijs, J.-P. Vanderborght, J.-P. van Ypersele, R. Wollast, and R. Zander (Eds.), Belgian Science Policy, Brussels, pp. 65–109.
- [50] Fichefet, T., E. Driesschaert, H. Goosse, P. Huybrechts, I. Janssens, A. Mouchet, and G. Munhoven, 2007: Modelling the evolution of climate and sea level during the next millennium (MILMO). Scientific Support Plan for a Sustainable Development Policy, SPSP II, Part 2: Global Change, Ecosystems and Biodiversity, Atmosphere and Climate, Belgian Science Policy, Brussels, 131 pp.
- [51] Dulière, and T. Fichefet, 2008 : Sea ice concentration and drift data assimilation in Belgium. *Mercator Ocean Quaterly Newsletter*, **28**, 49–51.
- [52] Fichefet, T., O. Arzel, and H. Goosse, 2008 : On the ability of current atmosphere–ocean general circulation models to predict the evolution of sea ice. *Ice and Climate News, The WCRP Climate and Cryosphere Newsletter*, **10**, 5–6.
- [53] Vancoppenolle, M., T. Fichefet, H. Goosse, S. Bouillon, C. König Beatty, and M.A. Morales Maqueda, 2008 : LIM3, and advanced sea-ice model for climate simulation and operational oceanography. *Mercator Ocean Quaterly Newsletter*, **28**, 16–21.
- [54] Dufresne, J.-L., D. Salas y Méliá, S. Denvil, S. Tyteca, O. Arzel, S. Bony, P. Braconnot, P. Brockmann, P. Cadule, A. Caudel, F. Chauvin, M. Déqué, H. Douville, L. Fairhead, T. Fichefet, M.-A. Foujols, P. Friedlingstein, J.-F. Gueremy, F. Hourdin, A. Idelkadi, C. Levy, G. Madec, P. Marquet, O. Marti, I. Musat, S. Planton, J.-F. Royer, D. Swingedouw, et A. Voldoire, 2009 : Simulation du climat récent et futur par les modèles du CNRM et de l'IPSL. In *Analyse et Modélisation du Changement Climatique, 2^{ème} Edition du Livre Blanc Escrime*, P. Braconnot, J.-L. Dufresne, D. Salas y Méliá, et L. Terray (Eds.), Société Météorologique de France et Météo-France, Imprim'vert, Trappes, pp. 15–30.

- [55] Fichefet, T., M.-F. Loutre, H. Goosse, P. Huybrechts, I. Janssens, and A. Mouchet, 2009 : Assessment of modelling uncertainties in long-term climate and sea level change projections "ASTER" (SD/CS/01A). Research Programme Science for a Sustainable Development : Final Report Phase 1, Belgian Science Policy, Brussels, 58 pp.
- [56] Bouillon, S., O. Lietaer, T. Fichefet, and V. Legat, 2010 : Three applications of the finite element Louvain-la-Neuve sea ice model (FELIM) : On the sphere, in the Canadian Arctic Archipelago and with a moving grid. In *Belgian IPY Symposium. The Contribution of Belgian Research to the Achievements of the International Polar Year 2007–2009*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussels, Belgium, pp. 16–18.
- [57] Goelzer, H., P. Huybrechts, M.-F. Loutre, H. Goosse, T. Fichefet, and A. Mouchet, 2010 : Ice and sea level change projections with the Earth system model of intermediate complexity LOVECLIM. In *Belgian IPY Symposium. The Contribution of Belgian Research to the Achievements of the International Polar Year 2007–2009*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussels, Belgium, pp. 52–54.
- [58] König Beatty, C., P. Mathiot, F. Massonnet, T. Fichefet, and H. Goosse, 2010 : Sea-ice data assimilation in NEMO-LIM2 and -LIM3 using the Ensemble Kalman Filter. In *Belgian IPY Symposium. The Contribution of Belgian Research to the Achievements of the International Polar Year 2007–2009*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussels, Belgium, pp. 27–29.
- [59] Lecomte, O., T. Fichefet, M. Vancoppenolle, and M. Nicolaus, 2010 : A new snow thermodynamic scheme for the Louvain-la-Neuve sea-ice model (LIM). In *Belgian IPY Symposium. The Contribution of Belgian Research to the Achievements of the International Polar Year 2007–2009*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussels, Belgium, pp. 30–32.
- [60] Lietaer, O., E. Deleersnijder, T. Fichefet, M. Vancoppenolle, R. Comblen, S. Bouillon, and V. Legat, 2010 : SLIM : a finite-element, unstructured-mesh model for simulating thermodynamic and dynamic sea-ice processes. Application : The sea-ice age. In *Belgian IPY Symposium. The Contribution of Belgian Research to the Achievements of the International Polar Year 2007–2009*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussels, Belgium, pp. 24–26.
- [61] Massonnet, F., T. Fichefet, H. Goosse, P. Mathiot, C. König Beatty, and M. Vancoppenolle, 2010 : Comparative study of sea ice response from NEMO-LIM3 to two atmospheric forcings. In *Belgian IPY Symposium. The Contribution of Belgian Research to the Achievements of the International Polar Year 2007–2009*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussels, Belgium, pp. 19–23.
- [62] Mathiot, P., H. Goosse, T. Fichefet, B. Barnier, and H. Gallée, 2010 : Modeling the variability of the Antarctic Slope Current. In *Belgian IPY Symposium. The Contribution of Belgian Research to the Achievements of the International Polar Year 2007–2009*, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussels, Belgium, pp. 47–51.
- [63] Vancoppenolle, M., S. Bouillon, T. Fichefet, H. Goosse, O. Lecomte, M.A. Morales Maqueda, and G. Madec, 2012 : LIM, The Louvain-la-Neuve Sea Ice Model. *Note du Pôle de Modélisation N°31*, ISSN N°1288-1619, Institut Pierre Simon Laplace des Sciences de l'Environnement Global, IPSL Global Climate Modeling Group, Paris, 85 pp.
- [64] Fichefet, T., M.-F. Loutre, H. Goosse, P. Huybrechts, H. Goelzer, and A. Mouchet, 2012 : Assessment of modelling uncertainties in long-term climate and sea level change projections "ASTER" (SD/CS/01A). Research Programme Science for a Sustainable Development : Final Report, Belgian Science Policy, Brussels, 139 pp.
- [65] Mitchell, J.F., R. Budich, S. Joussaume, B. Lawrence, J. Marotzke, G. Alisio, J.-C. André, J.M. Baldasano, C. Basu, J. Biercamp, S. Bony, P. Braconnot, B. Collins, P. Delecluse, S. Denvil, P. Poblans Reyes, T. Fichefet, R. Ford, M.-A. Foujols, M. Giorgetta, E. Guilyardi, T. Halenka, W. Hazeleger, C. Heinze, A. Hense, C. Hewitt, W. Hiller, R. Hutjes, C. Jones, M. Juckes, P. Kabat, I. Kirchner, M. Lautenschlager, B. Lawrence, C. Levy, T. Ludwig, D. Majewski, E. Manzini, M.V. Martin, M. Mineter, S. Mullerworth, A. Navarra, C. Page, T. Palmer, S. Planton, G. Riley, J. Silen, B. Stevens, R. Swart, U. Ulbricht, S. Valcke, P.L. Vidale, and S. Yang, 2012 : Infrastructure

Strategy for the European Earth System Modelling Community 2012–2022. European Network for Earth System Modelling and InfraStructure for the European Network for Earth System Modelling, 33 pp.

- [66] Iovino, D., M. Vancoppenolle, and T. Fichefet, 2013 : Implementation of LIM sea ice model in the CMCC global high-resolution configuration. *Centro Euro-Mediterraneo sui Cambiamenti Climatici Research Papers, Issue 2013, December 2013*, Centro Euro-Mediterraneo sui Cambiamenti Climatici, Bologna, 13 pp.
- [67] Swingedouw, D., T. Fichefet, J. Mignot, et P. Hezel, 2016 : Les changements climatiques futurs en Arctique. In : *Le Groenland, climat, écologie et société*, V. Masson-Delmotte, E. Gauthier, D. Grémillet, J.-M. Huctin, et D. Swingedouw (Eds.), CNRS Editions, Paris, pp. 89–95.