

# Full publications list

## Publications in journals

- [1] T. Alboussière, R. Moreau and D. Camel, “*Influence d’un champ magnétique sur la solidification d’alliages métalliques*”, C. R. Acad. Sci. Paris **313** série II, pp. 749–755 (1991)
- [2] J. P. Garandet, T. Alboussière and R. Moreau, “*Buoyancy-driven convection in a rectangular enclosure with a transverse magnetic field*”, Int. J. Heat Mass Transfer **35** 4, pp. 741–748 (1992)
- [3] T. Alboussière, J. P. Garandet and R. Moreau, “*Buoyancy-driven convection with a uniform magnetic field. Part 1. Asymptotic analysis*”, J. Fluid Mech. **253**, pp. 545–563 (1993)
- [4] R. Moreau, T. Alboussière, O. Laskar, D. Camel, P. Contamin, “*Thermoelectric MHD as a solidification affecting tool*”, Magnitnaya Gidrodinamika, **29** n° 4, pp. 72–77, (1993)
- [5] A.C. Neubrand, J. P. Garandet, R. Moreau and T. Alboussière, “*Effect of a slight non-uniformity of the magnetic field on MHD convection*”, Magnetohydrodynamics **31** n° 1, pp. 3–18 (1995)
- [6] L. Davoust, R. Moreau, R. Bolcato, T. Alboussière, A.C. Neubrand and J.P. Garandet, “*Influence of a vertical magnetic field on convection in the horizontal Bridgman crystal growth configuration*”, Magnetohydrodynamics **31** n° 3, pp. 218–227 (1995)
- [7] T. Alboussière, A.C. Neubrand, J.P. Garandet and R. Moreau, “*Magnetic field and segregation during Bridgman growth*”, Magnetohydrodynamics **31** n° 3, pp. 228–235 (1995)
- [8] T. Alboussière, J.P. Garandet and R. Moreau, “*Asymptotic analysis and symmetry in MHD convection*”, Phys. Fluids **8** n° 8, pp. 2215–2226 (1996)
- [9] J.P. Garandet, J.P. Praizey, S. Van Vaerenbergh and T. Alboussière, “*On the problem of natural convection in liquid phase thermotransport coefficients measurements*”, Phys. Fluids **9** n° 3, pp. 510–518 (1997)
- [10] T. Alboussière, A.C. Neubrand, J.P. Garandet and R. Moreau, “*Segregation during horizontal Bridgman growth under an axial magnetic field*”, Journal of Crystal Growth **181**, pp. 133–144 (1997)
- [11] T. Alboussière, V. Uspenski, A. Kljukin and R. Moreau, “*An experimental investigation of quasi-2D turbulence with or without buoyancy effects*”, Fluid mechanics and its application **41**, IUTAM symposium on Variable Density Low-Speed Turbulent Flows, pp. 213–219 (1997)
- [12] T. Alboussière, J.P. Garandet, P. Lehmann and R. Moreau, “*Convective effects in the measurement of diffusivities and thermotransport coefficients. Liquid metal alloys and the use of a magnetic field*”, Entropie **218**, pp. 59–62 (1999)
- [13] P. Lehmann, T. Alboussière, R. Moreau and V. Uspenski, “*MHD control of convection applied to chemical diffusivities measurements*”, J. Chim. Phys. **96**, pp. 1105–1110 (1999)
- [14] J.P. Garandet and T. Alboussière, “*Bridgman growth: modelling and experiments*”, Progress in Crystal Growth and characterization of Materials **38** n° 1–4, pp. 73–132, (1999)

- [15] R.J. Lingwood and T. Alboussière, “*On the stability of the Hartmann layer*”, Phys. Fluids **11** n° 8, pp. 2058–2068 (1999)
- [16] T. Alboussière, V. Uspenski and R. Moreau “*Quasi-2D MHD turbulent shear layers*”, Exp. Therm. and Fluid Science **20** n° 1, pp. 19–24 (1999)
- [17] Y. Delannoy, B. Pascal, T. Alboussière, V. Uspenski and R. Moreau “*Quasi-two-dimensional turbulence in MHD shear flows: the MATUR experiments and simulations*”, Fluid mechanics and its application **51**, Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, pp. 93-106 (1999)
- [18] T. Alboussière, J.P. Garandet, P. Lehmann and R. Moreau “*Measurement of solute diffusivity in electrically conducting liquids*”, Fluid mechanics and its application **51**, Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, pp. 359-372 (1999)
- [19] J.P. Garandet, S. Corre, S. Kaddeche and T. Alboussière, “*The influence of convection on the duration of the initial solute transient in alloy crystal growth*”, J. Cryst. Growth **209**, pp. 970–982 (2000)
- [20] T. Alboussière and R.J. Lingwood, “*A model for the turbulent Hartmann layer*”, Phys. Fluids **12** n° 6, pp. 1535–1543 (2000)
- [21] B. Sreenivasan and T. Alboussière, “*Evolution of a vortex in a magnetic field*”, Eur. J. Mech. B - Fluids **19**, pp. 403–421 (2000)
- [22] V. Botton, J.P. Garandet, T. Alboussière and P. Lehmann, “*Additional transport by oscillatory buoyancy driven convection in diffusion experiments*”, J. Phys. IV **11** Pr6, pp. 57–64 (2001)
- [23] D.J. Maclean and T. Alboussière, “*Measurement of solute diffusivities. Part I. Analysis of coupled solute buoyancy-driven convection and mass transport*”, Int. J. Heat Mass Transfer **44** n° 9, pp. 1639–1648 (2001)
- [24] M.D. Cowley, D.J. Maclean and T. Alboussière, “*Natural convection in rectangular enclosures of arbitrary orientation with magnetic field vertical – Problem revisited*”, Magnetohydrodynamics **37** n° 1–2, pp. 135–142 (2001)
- [25] T. Alboussière, “*Quasi characteristic MHD flows*”, C. R. Acad. Sci. Paris série IIb **329** n° 10, pp. 767–773 (2001)
- [26] B. Sreenivasan and T. Alboussière, “*Experimental study of a vortex in a magnetic field*”, J. Fluid Mech. **464**, pp. 287–309 (2002)
- [27] P. Moresco and T. Alboussière, “*Weakly nonlinear stability of Hartmann boundary layers*”, Eur. J. Mech. B - Fluids **22**, pp. 345–353 (2003)
- [28] T. Alboussière, D. Henry and S. Kaddeche, “*Note on braking and stabilization laws for buoyant flows under a weak magnetic field*”, Fluid Dynamics Research **33**, pp.287–297 (2003)
- [29] A. Pothérat and T. Alboussière, “*Small scales and anisotropy in low  $R_m$  magnetohydrodynamic turbulence*”, Phys. Fluids **15**:10, pp. 3170–3180 (2003)
- [30] A. Pothérat and T. Alboussière, “*Mathematical estimates for the attractor dimension in MHD turbulence*”, Magnetohydrodynamics **39**:3, pp. 229–236 (2003)
- [31] P. Moresco and T. Alboussière, “*Experimental study of the instability of the Hartmann layer*”, J. Fluid Mech. **504**, pp. 167–181 (2004)

- [32] P. Moresco and T. Alboussière, “*Stability of Bödewadt-Hartmann layers*”, Eur. J. Mech. B - Fluids **23**:6, pp. 851–859 (2004)
- [33] T. Alboussière, “*A geostrophic-like model for large-Hartmann-number flows*”, J. Fluid Mech. **521**, pp. 125–154 (2004)
- [34] H.-C. Nataf, T. Alboussière, D. Brito, P. Cardin, N. Gagnière, D. Jault, J.-P. Masson and D. Schmitt, “*Experimental study of super-rotation in a magnetostrophic spherical Couette flow*”, Geophysical and Astrophysical Fluid Dynamics, **100**, pp. 281–298 (2006)
- [35] A. Pothérat and T. Alboussière, “*Bounds on the attractor dimension for low-Rm wall-bound magnetohydrodynamic turbulence*”, Phys. Fluids, **18**:12, pp. 5102–5114 (2006)
- [36] T. Alboussière, “*Geostrophic versus MHD models*”, in “*Magnetohydrodynamics. Historical Evolution and Trends*”, Series: Fluid Mechanics and Its Applications, **80**, S. Molokov, R. Moreau and H.K. Moffatt Eds. (2007)
- [37] A. Fournier, C. Eymin and T. Alboussière, “*A case for variational geomagnetic data assimilation: Insights from a one-dimensional, nonlinear, and sparsely observed MHD system*”, Nonlinear Processes in Geophysics, **14**, pp. 163–180 (2007)
- [38] R. Deguen, T. Alboussière and D. Brito, “*On the existence and structure of a mush at the inner core boundary of the Earth*”, Physics of the Earth and Planetary Interiors, **164**:1–2, pp. 36–49 (2007)
- [39] H.C. Nataf, T. Alboussière, D. Brito, P. Cardin, N. Gagnière, D. Jault and D. Schmitt, “*Rapidly rotating spherical Couette flow in a dipolar magnetic field: an experimental study of the mean axisymmetric flow*”, PEPI, **170**, pp. 60–72 (2008)
- [40] D. Schmitt, T. Alboussière, D. Brito, P. Cardin, N. Gagnière, D. Jault and H.C. Nataf, “*Rotating spherical Couette flow in a dipolar magnetic field: Experimental evidence of magneto-inertial waves*”, JFM, **604**, pp. 175–197 (2008)
- [41] T. Alboussière, “*Bound of dissipation on a plane Couette dynamo*”, Phys. Rev. E, **79**:6, 066304 (2009)
- [42] T. Alboussière, R. Deguen and M. Melzani “*Melting-induced stratification above the Earth’s inner core due to convective translation*”, Nature, **466**, pp. 744–747 (2010)
- [43] D. Brito, T. Alboussière, P. Cardin, N. Gagnière, D. Jault, P. La Rizza, J.P. Masson, H.C. Nataf, D.Schmitt, “*Zonal shear and super-rotation in a magnetized spherical Couette-flow experiment*”, Phys. Rev. E, **83**:6, 066310 (2011)
- [44] T. Alboussière, P. Cardin, F. Debray, P. La Rizza, J.P. Masson, F. Plunian, A. Ribeiro, D. Schmitt, “*Experimental evidence of Alfvén wave propagation in a Gallium alloy*”, Phys. Fluids, **23**:9, 096601 (2011)
- [45] T. Alboussière and R. Deguen, “*Asymmetric Dynamics of the Inner Core and Impact on the Outer Core*”, Journal of Geodynamics, **61**, pp. 172–182 (2012)
- [46] T. Alboussière and Y. Ricard, “*Reflections on dissipation associated with thermal convection*”, Journal of Fluid Mechanics, **725**, DOI: 10.1017/jfm.2013.241, (2013)

### Conference papers :

- [CP1] R. Moreau, T. Alboussière, O. Laskar, D. Camel, P. Contamin, “*Thermoelectric MHD as a tool to act on solidification*”, Proceedings on the International Conference on Energy Transfer in MagnetoHydroDynamic Flows. Inst. Mech. Grenoble. 1991, pp.193-200. Grenoble, France.
- [CP2] R. Moreau, T. Alboussière, N. Ben-Salah, J.P. Garandet, R. Bolcato and A.M. Bianchi, “*MHD control of free convection in horizontal Bridgman crystal growth*”, *Magnetohydrodynamics* **30** n° 3, pp. 282–288 (1994)
- [CP3] T. Alboussière, J.P. Garandet and R. Moreau, “*Asymptotic flows in non uniform magnetic fields*”, Mahyd’95, Riga (Latvia), August 1995, Plenum. *Magnitnaya Gidrodinamika*, **32**, n° 4, pp. 394–401, Oct.–Dec. 1996

### Other publications :

- [A] T. Alboussière, “*Effet thermoélectrique et magnétohydrodynamique sur la croissance dendritique en tirage Bridgman.*”, Diplôme d’Études Approfondies, INPG, spécialité mécanique, Grenoble, 1990
- [B] T. Alboussière, “*Magnétohydrodynamique et ségrégation solutale en croissance Bridgman horizontale.*”, thèse de doctorat, INPG, spécialité mécanique, Grenoble, 1994
- [C] T. Alboussière, “*Le comportement des écoulements magnétohydrodynamiques et leurs propriétés de transfert*”, Habilitation à Diriger des Recherches, INPG, Grenoble, 2001
- [D] T. Alboussière, “*Geostrophic versus MHD models*”, in *Magnetohydrodynamics. Historical Evolution and Trends*, Series: Fluid Mechanics and Its Applications , **80**, S. Molokov, R. Moreau and H.K. Moffatt (Eds.), 2007
- [E] T. Alboussière et Renaud Deguen, *Voyage au centre de la Terre – la dérive immobile de la graine*, Images de la Physique (2011)

### Communications in Conferences

- [C1] T. Alboussière and J. P. Garandet, “*Convection naturelle et champ magnétique en configuration Bridgman horizontale.*”, COMET 6, Grasse (France), December 1991 (no proceedings)
- [C2] O. Laskar, T. Alboussière and R. Moreau, “*Influence d’un champ magnétique sur la solidification en présence d’effet thermoélectrique.*”, COMET 6, Grasse (France), December 1991 (no proceedings)
- [C3] T. Alboussière, N. Ben Salah, J. P. Garandet and R. Moreau, “*Buoyancy driven convection in a Bridgman configuration with a uniform magnetic field.*”, EUROMECH, Aussois (France), October 1992 (no proceedings)
- [C4] R. Moreau, T. Alboussière, N. Ben-Salah, J.P. Garandet, R. Bolcato and A.M. Bianchi, “*MHD control of free convection in horizontal Bridgman crystal growth*, 7th Beer-Sheva Int. Seminar on MHD flows and Turbulence, February 1993. Also appears in *Magnetohydrodynamics*, **30**, n° 3, pp. 282–288, 1994

- [C5] R. Moreau, N. Ben-Salah and T. Alboussière, "*Numerical analysis of MHD controlled horizontal crystal growth in comparison with asymptotics and experiments*", 3rd World Congress on Computational Mechanics, Chiba (Japan), paper F6-4 (page 797), August 1994
- [C6] L. Davoust, R. Moreau, R. Bolcato, T. Alboussière, A.C. Neubrand and J.P. Garandet, "*MHD controlled convection in horizontal Bridgman crystal growth*", 2th Europ. Fluid Mech. Cong., Warsaw (Poland), 1994, Sept. 20–24
- [C7] T. Alboussière, A.C. Neubrand, J.P. Garandet and R. Moreau, "*Magnetic field and segregation during Bridgman growth.*", PAMIR, Aussois (France), September 1994. Also appears in *Magnetohydrodynamics*, **31**, n° 3, pp. 228–235 (1995)
- [C8] L. Davoust, R. Moreau, R. Bolcato, T. Alboussière, A.C. Neubrand and J.P. Garandet, "*Influence of a vertical magnetic field on convection in the horizontal Bridgman crystal growth configuration.*", PAMIR, Aussois (France), 1994, Sept. 26–30. Also appears in *Magnetohydrodynamics*, **31**, n° 3, pp. 218–227 (1995)
- [C9] T. Alboussière, J.P. Garandet and R. Moreau, "*Asymptotic flows in non uniform magnetic fields*", Mahyd'95, Riga (Latvia), August 1995 (proceedings and also appeared in *Magnetohydrodynamics*)
- [C10] A.C. Neubrand, T. Alboussière and J.P. Garandet, "*Magnetic field and segregation during Bridgman growth*", 9th European Symposium "Gravity Dependant Phenomena in Physical Sciences", Berlin (Germany), May 2–5, 1995 (proceedings)
- [C11] T. Alboussière, V. Uspenski, A. Kljugin and R. Moreau, "*An experimental investigation of quasi-2D turbulence with or without buoyancy effects*", IUTAM Symposium on Variable Density Low Speed Turbulent Flows, Marseille (France), 1996, July 8–10 (proceedings)
- [C12] T. Alboussière, Y. Delannoy, A. Kljugin, R. Moreau and V. Uspenski, "*Two-dimensional turbulence developed from a free shear layer*", XIXth Int. Congress of Theoretical and Applied Mechanics, Kyoto (Japan), 1996, Aug. 25–31 (no proceedings)
- [C13] T. Alboussière, V. Uspenski, A. Kljugin and R. Moreau, "*Experimental investigation of jet-like shear layers*", Karlsruhe workshop on turbulence and heat transfer (Germany), 1996, Oct. 9–10 (no proceedings)
- [C14] T. Alboussière, V. Uspenski and R. Moreau, "*Quasi-2D MHD turbulent shear layers*", TSF11, Elenventh Symposium on Turbulent shear Flows, Grenoble (France), 1997, Sept. 8–10 (proceedings)
- [C15] T. Alboussière, V. Uspenski, B. Pascal and R. Moreau, "*An experimental investigation on quasi-two-dimensional turbulence in MHD shear flows*", PAMIR, Third International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Aussois (France), 1997, Sept. 22-26, (proceedings)
- [C16] T. Alboussière, J.P. Garandet, P. Lehmann and R. Moreau, "*Measurement of solute diffusivity in electrically conducting liquids*", PAMIR, Third International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Aussois (France), 1997, Sept. 22-26, (proceedings)
- [C17] T. Alboussière, J.P. Garandet, P. Lehmann and R. Moreau, "*Convective effects in the measurement of diffusivities and thermotransport coefficients. Liquid metal alloys and the use of a magnetic field*", RIT3-IMT3, Third International Meeting on Thermodiffusion, Mons (Belgium), 1998, Aug. 31 – Sept 4, (proceedings)

- [C18] O. Paireau, P.A. Davidson and T. Alboussière, “*Natural convection in an aluminium ingot*”, Fluid flow phenomena in metals processing: Symposium at 128th TMS Annual Meeting, San Diego, CA (USA), 1999, Feb – March
- [C19] T. Alboussière and R.J. Lingwood, “*Stability and transition to turbulence of the Hartmann layer*”, ICIAM’99, The Fourth International Congress on Industrial and Applied Mathematics, Edimburgh (UK), 1999, July 5 – 9
- [C20] T. Alboussière, J.P. Garandet and R. Moreau, “*Asymptotic MHD convection and symmetries*”, ICTAM 2000, 20th International Congress of Theoretical and Applied Mechanics, Chicago (USA), 2000, Aug 27 – Sept 2
- [C21] T. Alboussière and R.J. Lingwood, “*Hartmann layers and turbulence*”, PAMIR 2000, 4th International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Presqu’île de Giens (France), 2000, Sept 18 – 22
- [C22] D.J. Maclean, T. Alboussière and M.D. Cowley, “*Buoyancy driven convection in a tall cavity with a uniform horizontal magnetic field*”, PAMIR 2000, 4th International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Presqu’île de Giens (France), 2000, Sept 18 – 22
- [C23] B. Sreenivasan and T. Alboussière, “*Study of an isolated vortex subject to a uniform magnetic field*”, PAMIR 2000, 4th International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Presqu’île de Giens (France), 2000, Sept 18 – 22
- [C24] M.D. Cowley, D.J. Maclean and T. Alboussière, “*Natural convection in rectangular enclosures of arbitrary orientation with magnetic field vertical – problem revisited*”, PAMIR 2000, 4th International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Presqu’île de Giens (France), 2000, Sept 18 – 22
- [C25] T. Alboussière, “*Characteristic surfaces and MHD flows in arbitrary cavities*”, International Seminar on Electromagnetic Control of Liquid Metal Processes, Coventry, 2001, June 27 – 29
- [C26] T. Alboussière, “*Comparison of the asymptotic structures of flows under strong magnetic fields and strong rotation*”, UKMHD 2002 Conference, Department of Physics, University of Warwick, Coventry, 2002, May 23 – 24
- [C27] A. Pothérat and T. Alboussière, “*Attractor dimension, small scales and anisotropy in MHD turbulence*”, UKMHD 2002 Conference, Department of Physics, University of Warwick, Coventry, 2002, May 23 – 24
- [C28] P. Moresco and T. Alboussière, “*Stability of Hartmann layers: experiments and analysis*”, UKMHD 2002 Conference, Department of Physics, University of Warwick, Coventry, 2002, May 23 – 24
- [C29] T. Alboussière, “*On the existence of MHD shear layers of thickness  $Ha^{-1/4}$* ”, PAMIR 2002, 5th International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Ramatuelle (France), 2002, Sept 16 – 20
- [C30] A. Pothérat, T. Alboussière, “*Attractor Dimension and Dissipative Scales in MHD Turbulence*”, PAMIR 2002, 5th International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Ramatuelle (France), 2002, Sept 16 – 20
- [C31] P. Moresco, T. Alboussière and F. Debray, “*Experimental study of the stability of Hartmann layers with rotation*”, PAMIR 2002, 5th International Conference on Transfer Phenomena in Magnetohydrodynamic and Electroconducting flows, Ramatuelle (France), 2002, Sept 16 – 20

- [C32] T. Alboussière, “*Structure of 2D MHD flows*”, International Workshop on The History of Magnetohydrodynamics, Coventry, UK, 2004, May 26–28
- [C33] T. Alboussière and P. Cardin, “*Formation of Taylor columns*”, SEDI 2004, 9th Symposium on the Study of the Earth’s Deep Interior, Garmisch-Partenkirchen, 2004, July 4–9
- [C34] T. Alboussière, “*Turbulence MHD: application à la géodynamo*”, Plan Pluri Formation : Dynamique des Systèmes Complexes, Saint-Pierre de Chartreuse, 2005, December 12–13
- [C35] T. Alboussière, “*Turbulence under an imposed magnetic field*”, Groupement de Recherche Dynamo, Lyon, 2006, March 27–28
- [C36] T. Alboussière, D. Brito, P. Cardin, A. Fournier, N. Gagnière, D. Jault, H.C. Nataf, J.P. Masson and P. La Rizza, “*DTS: results of an MHD spherical Couette flow experiment*”, Warwick Turbulence Symposium, Instabilities and Turbulence in MHD flows, Warwick (UK), 2006, June 29 – July 1
- [C37] T. Alboussière, D. Brito, P. Cardin, N. Gagnière, H.C. Nataf and D. Schmitt, “*First results of the DTS experiment: the turbulent flow*”, SEDI 2006, 10th Symposium on the Study of the Earth’s Deep Interior, Prague, 2006, July 9–14
- [C38] T. Alboussière, D. Brito, P. Cardin, N. Gagnière, H.C. Nataf and D. Schmitt, “*First results of the DTS experiment: the axisymmetric mean flow*”, SEDI 2006, 10th Symposium on the Study of the Earth’s Deep Interior, Prague, 2006, July 9–14
- [C39] R. Deguen, T. Alboussière, D. Brito, J.P. Masson and P. La Rizza, “*On the morphological instability of the inner core boundary*”, SEDI 2006, 10th Symposium on the Study of the Earth’s Deep Interior, Prague, 2006, July 9–14
- [C40] T. Alboussière, “*ANR VSQG : Variations Séculaires, approche Quasi-Géostrophique*”, Groupement de Recherche Dynamo, Nice, 2006, November 6–9
- [C41] R. Deguen, T. Alboussière, D. Brito, P. La Rizza and J.-P. Masson “*Ultrasonic monitoring of dendritic solidification under a pressure gradient*”, EGU, Vienne (Au), 2007, April, 15–20
- [C42] R. Deguen, T. Alboussière and D. Brito “*Dendritic core crystallization of iron meteorites parent bodies*”, EGU, Vienne (Au), 2007, April, 15–20
- [C43] T. Alboussière, D. Brito, P. Cardin, N. Gagnière, D. Jault, H.-C. Nataf and D. Schmitt “*Hydromagnetic waves in a sodium spherical Couette flow experiment*”, EGU, Vienne (Au), 2007, April, 15–20
- [C44] T. Alboussière, “*Dissipation bounds for dynamos*”, ICTAM, Adélaïde, 2008, August 23 – 30
- [C45] R. Deguen, T. Alboussière, D. Brito, P. La Rizza and J.P. Masson, “*Experimental compaction in a crystallizing mushy zone*”, ICTAM, Adélaïde, 2008, August 23 – 30
- [C46] T. Alboussière, “*Dissipation bounds in Couette flows*”, Tetry 2009 – Natural Dynamos, Stara Lesna, 2009, August 30 – September 5
- [C47] T. Alboussière, R. Deguen and M. Melzani, “*The Phœnix inner core*”, SEDI 2010, Santa Barbara, July 18–23
- [C48] T. Alboussière, R. Deguen and M. Melzani, “*A dynamical model for the Earth’s inner core*”, Neutrinos Geoscience, Gran Sasso, 2010, October 6–8
- [C49] T. Alboussière, R. Deguen and M. Melzani, “*The Phœnix inner core – potential geomagnetic implications of an axisymmetric buoyancy flux*”, AGU 2010, San Francisco, December 13–17

- [C50] T. Alboussière, R. Deguen, P. Cardin and M. Melzani, “*Dynamics of the inner core and impact on the outer core*”, IUGG 2011, Melbourne, June 28 – July 7
- [C51] T. Alboussière, R. Deguen, P. Cardin and M. Melzani, “*Crystallization of the core*”, Today Forum 2011, Lyon, October 19–21
- [C52] T. Alboussière, R. Deguen, P. Cardin and M. Melzani, *Asymmetric Dynamics of the inner core*, SEDI 2012, Leeds, July 2–6
- [C53] T. Alboussière, Stéphane Labrosse, Fabien Dubuffet, Fanny Thibon, Ludovic Huguet and Renaud Deguen, *Penetrative convection in water cooled from below*, SEDI 2012, Leeds, July 2–6
- [C54] Ludovic Huguet, Germain Lesœur, Thierry Alboussière, Renaud Deguen, Jena-Paul Masson and Patrick La Rizza, *Solidification of binary alloys under hyper-gravity*, SEDI 2012, Leeds, July 2–6