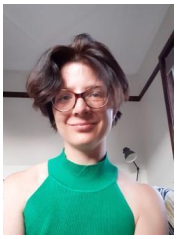
PERSONAL INFORMATION

Julia Pfeffer



Magellium, 1 rue Ariane, 31520 Ramonville-Saint-Agne, France

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https://julia-pfeffer.weebly.com/

Sex Female | Date of birth 29/05/1986 | Nationality French

POSITION

Research engineer

WORK EXPERIENCE

September 2020 to present

Research engineer in spatial studies

Magellium, Ramonville Saint Agne, France

- Main role: expert in satellite gravimetry / scientific coordination of climate studies
- Won 50 000 EUR hybridation challenge for the CNES (project leader)
  - Monitoring glaciers with satellite gravimetry and high-resolution satellite imagery
- Won 150 000 EUR project for the Copernicus Marine Service evolution (project leader)
  - Improvement of the water mass balance in ocean reanalyses using satellite geodesy
- Performed technical and research work on the GRACEFUL project (dir. Anny Cazenave)
  - Search for small amplitude signals from the deep Earth's interior in satellite gravimetry
- Mentoring and training of engineers and students in satellite gravimetry
- Wrote 11 research papers presented at 28 national and international conferences

Business or sector Engineering / Spatial studies / Earth observation

October 2016 to July 2020

Postdoctoral researcher in spatial geodesy

Research School of Earth Sciences, Australian National University, Canberra, Australia

- Managed 190 000$ project to quantify water storage changes in Australia
- Developed the AusPass data portal from scratch: https://auspass.edu.au/
- Developed Python and FORTRAN software to quantify secular sea level changes
- Wrote 5 research papers presented at 6 national and international meetings

Business or sector Research / Spatial gravimetry / Sea Level studies / Seismology

September 2013 to June 2016

Postdoctoral researcher in spatial and terrestrial geodesy

Centre National d'Études Spatiales, Paris, France / Laboratoire de Géologie de Lyon, France

- Won 60 000$ fellowship on a project call from the Centre National d'Études Spatiales
- Processed 20 years of satellite altimetry, GPS & tide gauge data in coastal areas
- Predict vertical land motions due to glacial isostatic adjustment
- Wrote 2 research papers presented at 4 national and international meetings

Business or sector Research / Spatial studies / Sea level studies / Geophysics

September 2012 to August 2013

Research and Teaching assistant

École Normale Supérieure de Lyon, Lyon, France

- 96 h of courses in Earth Sciences, Mathematics and Physics at Bachelor and Master levels
- Research project on the detection of erosion features in Mars topography (MOLA)

Business or sector Teaching / Research / Spatial and planetary studies

January 2012 to August 2012

Postdoctoral researcher in spatial hydrology

Institut de Recherche pour le Développement / Geosciences Environnement Toulouse, France

- Processed 8 years of satellite radar altimetry measurements (ENVISAT)
- Modelling of the water cycle in central Amazon to map groundwater fluctuations
- Wrote 1 research paper and 1 book chapter presented at 2 international meetings

Business or sector Research / Applications of satellite radar altimetry for hydrology

EDUCATION AND TRAINING

2008 – 2011

PhD in Earth Sciences

École et Observatoire des Sciences de la Terre, Strasbourg France

- Directed 4 field campaigns (18 weeks in total) in Niger with a rotating team of 25 people
- Collected, processed and analysed gravity and hydrology measurements in Niger
- Quantified the effect of large scale hydrologic loading using GRACE satellite observations
- Teached 64 hr/yr to bachelor students in Earth Sciences, Thermodynamics and Physics
- Wrote 4 scientific papers presented at 10 national and international meetings

Business or sector Research / Teaching / Field experience / Hydrology / Geophysics: gravimetry

2006 - 2008

Master in Earth Sciences

Université Joseph Fourier, Grenoble, France

- Main topics: Hydrology, Fluid Dynamics, Oceanography, Remote Sensing
- Internship of 6 months (Jan 2008 to June 2008) at the University of KwaZuluNatal, Durban, South Africa: intercomparison of remote sensing products estimating surface soil moisture

2003 - 2006

Bachelor in Earth Sciences

Main topics: Maths, Physics, Geophysics, Astrophysics

PERSONAL SKILLS

Mother tongue(s) French

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C2	C2
	TOEFL IBT (June 2016): total score 102/120, with reading skills of 28/30 (high level), listening skills of 26/30 (high level), speaking skills of 24/30 (fair level) and writing skills of 24/30 (good level).				
German	A1	A1	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Excellent oral and written communication skills, including scientific communication
- Good interpersonal communication skills : research collaborations and teamwork
- Good teaching skills acquired during my PhD thesis and ½ ATER at ENS

Organisational / managerial skills

- Good organisational and managerial skills, including successful grant writing
- Good leadership skills: project leader on two projects in 2022 and 2023
- Good mentoring skills: supervision of 4 master students and 4 engineers

Job-related skills

- Excellent problem solving skills: 14 years of research experience
- Expert in satellite geodesy, particularly satellite gravimetry (GRACE & GRACE-FO)
- Excellent skills in data processing, analysis and visualisation
- Excellent skills in applied mathematics and numerical modelling

Computer skills

- Advanced programming skills in Python, Matlab and FORTRAN
- Maintain a project on Github and work collaboratively with other developers via Github
- Novice skills in web development: HTML and PHP
- Excellent command of Mac OS, Linux, Windows and office tools (Microsoft and Libre Office)

PUBLICATION LIST

Articles in review for peer reviewed journals

1. Storto, A., Chierici, G., Pfeffer, J., Barnoud, A., Bourdalle-Badie, R., Blazquez, A., Cavaliere, D., Coupry, B., Drevillon, M., Fourest, S., Larnicol, G., and Yang, C.: Variability of manometric sea level from reanalyses and observation-based products over the Arctic and North Atlantic Oceans and the Mediterranean Sea, State Planet Discuss. [preprint], https://doi.org/10.5194/sp-2023-28 , in review, 2023

Articles published in peer reviewed journals

1. Pfeffer, J., Cazenave, A., Blazquez, A., Decharme, B., Munier, S., and Barnoud, A. (2023). Assessment of pluri-annual and decadal changes in terrestrial water storage predicted by global hydrological models in comparison with the GRACE satellite gravity mission, Hydrol. Earth Syst. Sci., 27, 3743–3768, https://doi.org/10.5194/hess-27-3743-2023
2. Pfeffer, J., Cazenave, A., Rosat, S., Moreira, L., Mandea, M., Dehant, V., & Coupry, B. (2023). A 6-year cycle in the Earth system. *Global and Planetary Change*, 104245. https://doi.org/10.1016/j.gloplacha.2023.104245
3. Cazenave, A., Pfeffer, J., Mandea, M., & Dehant, V. (2023). ESD Ideas: A 6-year oscillation in the whole Earth system?. *Earth System Dynamics*, *14*(4), 733-735. https://doi.org/10.5194/esd-14-733-2023
4. Lecomte, H., Rosat, S., Mandea, M., Boy, J.-P., & Pfeffer, J. (2023). Uncertainty of low-degree space gravimetry observations: Surface processes versus Earth's core signal. *Journal of Geophysical Research: Solid Earth*, 128, e2023JB026503. https://doi.org/10.1029/2023JB026503
5. Goux, O., Pfeffer, J., Blazquez, A., Weaver, A. T., Ablain, M. (2023). A mass conserving filter based on diffusion for gravity recovery and climate experiment (GRACE) spherical harmonics solutions, *Geophysical Journal International*, Volume 234, Issue 1, July 2023, Pages 56–72, https://doi.org/10.1093/gji/ggad016
6. Barnoud, A., Pfeffer, J., Cazenave, A., Fraudeau, R., Rousseau, V., and Ablain, M. (2023): Revisiting the global mean ocean mass budget over 2005–2020, Ocean Sci., 19, 321–334, https://doi.org/10.5194/os-19-321-2023
7. Marti, F., Blazquez, A., Meyssignac, B., Ablain, M., Barnoud, A., Fraudeau, R., Jugier, R., Chenal, J., Larnicol, G., Pfeffer, J., Restano, M., and Benveniste, J. (2022). Monitoring the ocean heat content change and the Earth energy imbalance from space altimetry and space gravimetry, Earth Syst. Sci. Data, 14, 229–249, https://doi.org/10.5194/essd-14-229-2022
8. Chen J., Cazenave A., Dahle C., Llovel W., Panet I., Pfeffer J. and Moreira L., (2022). Applications and Challenges of GRACE and GRACE Follow-On Satellite Gravimetry. *Surv Geophys* 43, 305–345 (2022). https://doi.org/10.1007/s10712-021-09685-x
9. Allgeyer, S., Tregoning, P., McQueen, H., McClusky, S. C., Potter, E.-K., Pfeffer, J., et al. (2022). ANU GRACE Data analysis: Orbit modeling, regularization and inter-satellite range acceleration observations. *Journal of Geophysical Research: Solid Earth*, 127, e2021JB022489. https://doi.org/10.1029/2021JB022489
10. Tregoning, P., McGirr, R., Pfeffer, J., Purcell, A., McQueen, H., Allgeyer, S., & McClusky, S. C. (2022). ANU GRACE data analysis: Characteristics and benefits of using irregularly shaped mascons. *Journal of Geophysical Research: Solid Earth*, 127, e2021JB022412. https://doi.org/10.1029/2021JB022412
11. Pfeffer, J., Cazenave, A. & Barnoud, A. Analysis of the interannual variability in satellite gravity solutions: detection of climate modes fingerprints in water mass displacements across continents and oceans (2022). *Clim Dyn* 58, 1065–108. https://doi.org/10.1007/s00382-021-05953-z
12. Barnoud, A., Pfeffer, J., Guérou, A., Frery, M.-L., Siméon, M., Cazenave, A., et al. 2021. Contributions of altimetry and Argo to non-closure of the global mean sea level budget since 2016. *Geophysical Research Letters*, 48, e2021GL092824. https://doi.org/10.1029/2021GL092824
13. Hawkins, R., Husson, L., Choblet, G., Bodin, T., & Pfeffer, J., 2019. Virtual tide gauges for predicting relative sea level rise. Journal of Geophysical Research: Solid Earth. Volume 124, Issue 12, pages 13367-13391, https://doi.org/10.1029/2019JB017943
14. Frappart, F., Papa, F. Güntner, A., Tomasella, J., Pfeffer, J., Ramillien, G., Emilio, T., Schietti, J., Seoane, L., Da Silva Carvalho, J., Bonnet, M.-P., Seyler, F., 2019. The spatio-temporal variability of groundwater storage in the Amazon River Basin, Advances in Water Resources. Vol. 124, pages 41-52, https://doi.org/10.1016/j.advwatres.2018.12.005
15. Pfeffer J., Tregoning, P., Purcell, A. and M. Sambridge, 2018. Multi-technique assessment of the inter-annual to multidecadal variability in steric sea levels: a comparative analysis of climate mode fingerprints. Journal of Climate, 31(18), 7583-7597. https://doi.org/10.1175/JCLI-D-17-0679.1
16. Pfeffer J., Spada, G., Mémin, A., Boy, J.-P. and P. Allemand 2017, Decoding the origins of vertical land motions observed today at coasts. Geophysical J. International, 210 (1), 148-165. https://doi.org/10.1093/gji/ggx142
17. Pfeffer J. and P. Allemand, 2016, The key role of vertical land motions in coastal sea level variations: a global synthesis of multisatellite altimetry, tide gauge data and GPS measurements, Earth Planetary Science Letters, 439, 39-47, https://doi.org/10.1016/j.epsl.2016.01.027
18. Pfeffer, J., F. Seyler, M.-P. Bonnet, S. Calmant, F. Frappart, F. Papa, R. C. D. Paiva, F. Satgé, and J. S. D. Silva, 2014, Low-water maps of the groundwater table in the central Amazon by satellite altimetry, Geophysical Research Letters, 41, 1981–1987, https://doi.org/10.1002/2013GL059134
19. Pfeffer, J., Champollion, C., Favreau, G., Cappelaere, B., Hinderer, J., Boucher, M., Oï, M., Mouyen, M., Henri, C., Boulain, N., Le Moigne, N., Deroussi, S., Demarty, J., Benarrosh, N., Robert, O., 2013, Evaluating surface and subsurface water

storage variations at small time and space scales from relative gravity measurements in semiarid Niger, Water Res. Research, 49 (6): 3276–3291, https://doi.org/10.1002/wrcr.20235
20. Hinderer, J., Pfeffer, J., Boucher, M., Nahmani, S., de Linage, C., Boy, J.-P., Genthon, P., Seguis, L., Favreau, G., Bock, O., Descloitres, M., and the GHYRAF team, 2012, Land water storage changes from ground and space geodesy: first results from the GHYRAF (Gravity and Hydrology in Africa) experiment, Pure and Applied Geophysics, pp. 1-20. https://doi.org/10.1007/s00024-011-0417-9
21. Pfeffer, J., Boucher, M., Hinderer, J., Favreau, G., Boy, J.-P., de Linage, C., Cappelaere, B., Luck, B., Oi, M. and Le Moigne, N., 2011, Local and global hydrological contributions to time-variable gravity in Southwest Niger, Geophysical Journal International, 184: 661-672. https://doi.org/10.1111/j.1365-246X.2010.04894.x
22. Hinderer, J., de Linage, C., Boy, J.P., Gegout, P., Masson, F., Rogister, Y., Amalvict, M., Pfeffer, and the GHYRAF team., 2009, The GHYRAF (Gravity and Hydrology in Africa) experiment: Description and first results, Journal of Geodynamics, 48, 172-181. https://doi.org/10.1016/j.jog.2009.09.014

PhD and Master theses

1. Pfeffer, J., 2011 Étude du cycle de l'eau en Afrique sahélienne: approche multidisciplinaire et apport de la gravimétrie terrestre et spatiale, Thèse de doctorat, Université de Strasbourg, Strasbourg, France, 227 pp. https://tel.archives-ouvertes.fr/tel-00665117
2. Pfeffer, J. Evaluation of remote sensing soil water products by intercomparison over South Africa. Thèse de master, Université Joseph Fourier, Grenoble, France, 2008.

Conference acts with peer review

1. Boucher M., Favreau G., Legchenko A., Pfeffer J., Nazoumou Y., Hinderer J., Cappelaere B. , 2011. Spatio-temporal variations in MRS signal near a temporary pond in the Sahel. Near Surface 2011, 17th European Meeting of Environmental and Engineering Geophysics, Leicester, UK, 12-14 sept 2011 (EAGE conference)
2. Boucher, M., Pfeffer, J., Favreau, G., Legchenko, A., Cappelaere, B., Hinderer, J. and Nazoumou, Y., 2011. Suivi des variations spatio-temporelles du stock d'eau près d'une mare endoréique au Sahel par résonance magnétique des protons et par gravimétrie. Milieux Poreux et Transferts Hydriques, (57) 33-36.

Conference presentation with peer reviewed abstracts

1. Pfeffer J., Cazenave A., Rosat S., Mandea M., Dehant V., Moreira L.,(2023): Are internal and external geodynamics linked at a 6-year period? Abstract DI21A-03 presented at the AGU 2023 Fall meeting, December 11 -15. (Invited talk)
2. Pfeffer J., Storto A., Blazquez A., Yang C., Larnicol G. and Chierici G. (2023): First results of the WAMBOR project. Abstract G11B-0432 presented at the AGU 2023 Fall meeting, December 11 -15.
3. Marti F., Blazquez A., Meyssignac B., Ablain M.,Fraudeau R., Rousseau V., Chenal J., Barnoud A., Lalau N., Larnicol G., Pfeffer J., Restano M., Benveniste J. and Dibarboure G., (2023): Latest Improvements in the Assessment of the Global Ocean Heat Content and Earth Energy Imbalance from Space Gravimetry and Altimetry. Abstract GC23N-1235 presented at the AGU 2023 Fall meeting, December 11 -15.
4. Cazenave A., Pfeffer J., Mandea M., Dehant V. (2023). A 6-year cycle in the length of day and in the surface fluid envelopes Abstract G34A-01 presented at the AGU 2023 Fall meeting, December 11 -15.
5. Marti, F., Blazquez, A., Meyssignac, B., Ablain, M., Barnoud, A., Fraudeau, R., Rousseau, V., Chenal, J., Larnicol, G., Pfeffer, J., Restano, M., Benveniste, J., Dibarboure, G., and Bignalet-Cazalet, F.: New improvements for monitoring the Ocean Heat Content and the Earth Energy imbalance (MOHeaCAN)., EGU General Assembly 2023, Vienna, Austria, 23–28 Apr 2023, EGU23-14931, https://doi.org/10.5194/egusphere-egu23-14931, 2023
6. Pfeffer, J., Cazenave, A., Rosat, S., Mandea, M., Dehant, V., Moreira, L., and Barnoud, A.: Detections of a 6-year cycle in the Earth system, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-7746, https://doi.org/10.5194/egusphere-egu23-7746, 2023
7. Cazenave, A. Pfeffer, J., Moreira, L., Mandea, M., Dehant, V., de Viron, O., & Rosat, S. (2022, December). A 6-7 year cycle in the Earth System. In *AGU Fall Meeting Abstracts* (Vol. 2022, pp. G16A-03).
8. Barnoud A., Pfeffer J., Guérou A., Frery M.-L., Siméon M., Cazenave A., Chen J., Llovel W., Thierry V., Legeais J.-F. and Ablain M. (2022). Non-closure of the global mean sea level budget since 2016: contributions of altimetry and Argo. Oral presentation. Ocean Surface Topography Science Team Meeting, 31 Octobre - 4 Novembre 2022, Venice (Italy).
9. Pfeffer, J., Decharme, B., Cazenave, A., Munier, S., Blazquez, A., and Barnoud, A. 2022: Slow changes in terrestrial water storage underestimated by global hydrological models, GRACE/GRACE-FO Science Team Meeting 2022, Potsdam, Germany, 18–20 Oct 2022, GSTM2022-25, https://doi.org/10.5194/gstm2022-25
10. Barnoud, A., Pfeffer, J., Cazenave, A., and Ablain, M., 2022: Revisiting the global mean ocean mass budget over 2005-2020, GRACE/GRACE-FO Science Team Meeting 2022, Potsdam, Germany, 18–20 Oct 2022, GSTM2022-50, https://doi.org/10.5194/gstm2022-50
11. Pfeffer, J., Cazenave, A., Mandea, M., Dehant, V., de Viron, O., Saraswati, A., and Zhu, P., 2022. A 6-year cycle in the climate system, GRACE/GRACE-FO Science Team Meeting 2022, Potsdam, Germany, 18–20 Oct 2022, GSTM2022-26, https://doi.org/10.5194/gstm2022-26
12. Barnoud A., Cazenave A., Meyssignac B., Blazquez A., Marti F., Pfeffer J., Ablain M., Fraudeau R. and Rousseau V. (2022). EEI from space altimetry and space gravimetry; causes of non-closure of the sea level budget since 2015. Invited oral presentation, Workshop on challenges in the understanding of the global water energy cycle and its changes in response to

greenhouse gases emissions, 26-30 September 2022, ISSI, Bern (Switzerland).

13. Barnoud A., Pfeffer J., Cazenave A. and Ablain M. (2022). Closing the global mean ocean mass and sea level budgets over 2005-2019. Online poster, WCRP sea level conference, 12-16 July 2022, Singapore and online.
14. Barnoud A., Pfeffer J., Cazenave A. and Ablain M. (2022). Assessment of the global mean ocean mass and sea level budgets over 2005-2020. Poster, Congrès national de gravimétrie spatiale du champ variable, 27-28 juin 2022, Marseille (France).
15. Pfeffer J., Cazenave A., Barnoud A., 2022. Chasing small amplitude signals from the deep Earth's interior in GRACE measurements. Oral presentation at the Living pLanet Symposium, Bonn, 23-27 May 2022
16. Barnoud A., Pfeffer J., Guérou A., Frery M.-L., Simeon M., Cazenave A., Chen J., Llovel W., Thierry V., Legeais J.-F., Ablain M., 2022. Non-closure of the global mean sea level budget since 2016: contributions of altimetry and Argo. Oral presentation at the Living pLanet Symposium, Bonn, 23-27 May 2022
17. Marti F., Blazquez A., Meyssignac B., Ablain M., Barnoud A., Pfeffer J., Jugier R., Fraudeau R., Chenal J., Restano M., Benveniste J., Larnicol G., Dibarboure G. and Bignalet-Cazalet F., (2022) Monitoring the Ocean Heat Content and the Earth Energy imbalance from space altimetry and space gravimetry. Accepted for an oral presentation at the Living Planet Symposium, Bonn, 23-27 May 2022
18. Marti F., Blazquez A., Meyssignac B., Ablain M., Barnoud A., Pfeffer J., Jugier R., Fraudeau R., Chenal J., Restano M., Benveniste J., Larnicol G., Dibarboure G. and Bignalet-Cazalet F., Monitoring the Ocean Heat Content and the Earth Energy imbalance from space altimetry and space gravimetry. Accepted for an oral presentation at the AGU Fall meeting, 13-18 december 2021
19. Barnoud A., Pfeffer J., Ghérou A., Frery M.-L., Siméon M., Cazenave A., Chen J., Llovel W., Thierry V., Legeais J.-F., Ablain M.. Non-Closure of the Global Mean Sea Level Budget Since 2016: Contributions of Altimetry and Argo. Accepted for an e-lightning presentation at the AGU Fall meeting, 13-18/12/2021
20. Pfeffer J., Cazenave A., Barnoud A., Detecting climate modes in the global water cycle measured during the GRACE and GRACE-FO missions. Accepted for an oral presentation at the AGU Fall meeting, 13-18 december 2021
21. Pfeffer J., Cazenave A., Barnoud A., Blazquez A., Mandea M., Dehant V., 2021. Multidisciplinary analysis of the temporal variations of the gravity field acquired during the GRACE and GRACE-FO missions. Accepted for an oral presentation at the AGU Fall meeting, 13-18 december 2021
22. Barnoud, A., Pfeffer, J., Guérou, A., Frery, M.-L., Siméon, M., Cazenave, A., et al. 2021 Contributions of altimetry and Argo to non-closure of the global mean sea level budget since 2016. accepted for an oral presentation at the GRACE Follow-On Science Team Meeting 12-20 October 2021
23. Goux, O., Pfeffer, J., Blazques, A., Weaver, A., Ablain, M., (2021) Mass conserving filter based on diffusion for Gravity Recovery andClimate Experiment (GRACE) spherical harmonics solutions, accepted for an oral presentation at the GRACE Follow-On Science Team Meeting 12-20 October 2021
24. Pfeffer J., Cazenave A. and Barnoud A., 2021. Identification of climate mode fingerprints in GRACE and GRACE-FO measurements, accepted for an oral presentation at the GRACE Follow-On Science Team Meeting, 12-20 October 2021
25. Pfeffer, J., Cazenave, A., and Barnoud, A. 2021: Analysis of the interannual variability in satellite gravity solutions : impact of climate modes on water mass displacements across continents and oceans, EGU General Assembly, 19–30 Apr 2021, EGU21-2217, https://doi.org/10.5194/egusphere-egu21-2217
26. Barnoud, A., Cazenave, A., Pfeffer, J., Ablain, M., Guérou, A., and Chen, J. 2021: Closing the global mean sea level budget from altimetry, GRACE/GRACE Follow-On and Argo data (2005-present), EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-2051, https://doi.org/10.5194/egusphere-egu21-2051, 2021.
27. Pfeffer, J., Cazennave A., Mandea M., Dehant V., Barnoud A., The GRACEFUL project: probing the deep Earth interior with time dependent observations of the gravity field, magnetic field and Earth's rotation, abstract accepted for a live display at the GRACE Science Team Meeting, 28 October 2020
28. P Tregoning, S Allgeyer, H McQueen, R McGirr, J Pfeffer, 2019. Analysis of Level1B GRACE FO Data Using Range Acceleration Observations and Validation of GRACE and GRACE FO Across the Gap Between Missions. Poster presentation at the AGU Fall Meeting, San Francisco, December 2019.
29. Pfeffer, J., Tregoning, P., Purcell, M., Sambridge, M., and Zheng, S, 2018. Uncertainties in the historical reconstructions of steric sea level changes. Oral presentation at the AGU Fall meeting, Washington DC., 13 December 2018
30. Pfeffer, J. Historical reconstructions of steric sea level changes, 2018. Australian Geodesy Meeting, 14 November 2018, Canberra, Australia.
31. Pfeffer, J., Tregoning, P. and A. Purcell, 2017. Revealing climate modes in steric sea levels: lessons learned from satellite geodesy, objective analyses and ocean reanalyses. Oral presentation at the AGU Fall Meeting, New Orleans, 11-15 December 2017.
32. Pfeffer, J., 2017. Agreements and disagreements in steric sea level changes from in situ observations, satellite geodesy and ocean reanalyses. Australian Geodesy Meeting, Canberra, Australia, 28-29 June 2017.
33. Pfeffer J., G. Spada and P. Allemand, 2016. Contribution of vertical land motions to coastal sea level variations: a global synthesis of multisatellite altimetry, tide gauge and GPS measurements, EGU general assembly.
34. J. Hinderer, B. Hector, L. Séguis, J. Pfeffer, M. Calvo, & Boy, J.-P., 2015: Hybrid gravimetry for the monitoring of water storage changes in the critical zone of Africa. AGU fall meeting, San Francisco.
35. Pfeffer and Allemand, 2015. ALTIGAPS: a global synthesis of multisatellite altimetry, tide gauge and GPS Data. AGU fall meeting, San Francisco.
36. Pfeffer, J., F. Seyler, M.-P. Bonnet, S. Calmant, F. Frappart, F. Papa, R.C.D. Paiva, F. Satgé. Towards better characterization of groundwater stocks in Central Amazon using multi-satellite data, 2012. AGU Fall meeting, San Francisco.
37. Pfeffer, J., Champollion, C., Favreau, G., Hinderer, J., Cappelaere, B., Oï, M., Mouyen, M., Nazoumou, Y., Robert, O., et al., 2011: Relative gravity measurements reveal spatial variability of the subsurface water storage in South-West Niger, AGU Fall meeting San Francisco.

38. Hinderer, J., Pfeffer, J., Champollion, C., Favreau, G., Cappelaere, B., Oï, M., Mouyen, M., Nazoumou, Y., Robert, O., Le Moigne, N., Deroussi, S., Boucher, M., Benarrosh, N., Demarty, J.2011: Intensive microgravity field campaign dedicated to the search of low to medium amplitude hydrological signals: a case study in Southwest Niger, AGU Fall meeting San Francisco.
39. Hinderer, J., Pfeffer, J., Boy, J.P., Genthon, P., Seguis, L. et al., 2011. The GHYRAF (Gravity and Hydrology in Africa) project using ground and space geodesy to constrain water storage changes: latest results in West Africa, IUGG Melbourne, Australia, 28 june-7 July
40. Boucher M., Favreau G., Legchenko A., Pfeffer J., Nazoumou Y., Hinderer J., Cappelaere B. , 2011. Spatio-temporal variations in MRS signal near a temporary pond in the Sahel. Near Surface 2011, 17th European Meeting of Environmental and Engineering Geophysics, Leicester, UK, 12-14 sept 2011 (EAGE conference)
41. Boucher, M., Favreau, G., Pfeffer, J., Descloitres, M., Nazoumou, Y., Caractérisation hydrogéophysique d'un aquifère libre sédimentaire au sud-ouest du Niger, 2011. Colloque international de Ngaoundéré, "Sciences de l'Eau, du Climat et de l'Environnement pour un développement durable de l'Afrique"
42. Pfeffer, J., Boucher, M., Hinderer, J., Favreau, G., Boy, J.-P., de Linage, C., Cappelaere, B., Luck, B., Oi, M. and Le Moigne, N., 2010, In situ and satellite gravity observations, combined with hydrogeophysical data, constrains the water storage capacity in South West Niger, AGU Fall meeting, San Francisco.
43. Pfeffer, J., Boucher, M., Hinderer, J., Favreau, G., Boy, J.-P., de Linage, C., Luck, B., Oi, M., and Le Moigne, N., 2009, Annual water storage variability in South West Niger: confrontation of absolute gravimetric measurements and MRS surveys with hydrological observations, AGU Fall meeting, San Francisco.
44. Pfeffer, J., Boucher, M., Hinderer, J., Favreau, G., Boy, J.-P., de Linage, C., Luck, B., Oi, M., and Le Moigne, N., 2009, How absolute gravimetric measurements and magnetic resonance soundings surveys elp to constrain water storage variability? The case of a semiarid, endoreic catchment in Sahelian Southwest Niger, Journées Luxembourgeoises de Géodynamique (JLG), Echternach, Luxembourg.
45. Favreau G., Boucher M., Luck B., Pfeffer J., Genthon P., Hinderer J. 2009 Seasonal changes in groundwater storage estimated by absolute ground gravity and MRS surveys in West Africa. EGU 2009 General Assembly, April 19-24, 2009, Vienna, Austria Geophysical Research Abstracts, Vol. 11, 11165.
46. Favreau G., Boucher M., Luck B., Pfeffer J., Nazoumou Y., Genthon P., Hinderer J., 2009 First results of the GHYRAF (Gravity and Hydrology in Africa) experiment: SW Niger. 3rd International AMMA Conference, July 20-24, 2009, Ouagadougou, Burkina Faso, Po.2B.11, p. 62

Invited conferences

1. Pfeffer J., 2022. Depuis les données missions (L1) jusqu'au champ variable (L2). Congrès national de gravimétrie spatiale du champ variable, 27 juin-28 juin, 2022, Marseille (France).
2. Pfeffer J., 2022. Climate Fingerprints from Space Geodesy**.** AGU Geodesy Webinar. Online 28 January 2022. https://connect.agu.org/geodesy/webinar-page
3. Pfeffer J., 2021. Le cycle de l'eau en Amazonie depuis l'espace. Conférence grand public, Copernicus Days, Toulouse, 24 Octobre 2021.
4. Pfeffer, J., 2021. Identification of climate mode fingerprints in GRACE and GRACE-FO measurements, 8th meeting of the ICCC, 23 September 2021
5. Pfeffer J., 2020. Le changement climatique. Conférence-débat au collège Jean-Moulin, Toulouse, 1st December 2020.
6. Pfeffer, J., Reconstruction of the historical sea level variability : driving mechanisms and scientific/societal issues. Invited seminar at Géoazur, Nice, France (video conference). 14 February 2019
7. Pfeffer, J., The key-role of vertical land motions in coastal sea level variations. Invited seminar at ISTerre, Grenoble, France. 10 Mars 2016.
8. Pfeffer, J., Understand the recent coastline mobility: geodynamic & climate components, Laboratoire de Géologie de Lyon, le 25 avril 2014.
9. Pfeffer, J., Variations temporelles des observables géodésiques: vers une meilleure évaluation des ressources et une meilleure gestion du risque, Littoral Environnement et Sociétés, La Rochelle, le 14 novembre 2013.
10. Pfeffer, J., Variations temporelles des observables géodésiques: contribution à l'hydrologie, Laboratoire de Géologie de Lyon : terre-Planètes-Environnement, Université Claude Bernard, Lyon, le 8 mars 2013.
11. Pfeffer, J., F. Seyler, M.-P. Bonnet, S. Calmant, F. Frappart, F. Papa, R.C.D. Paiva, F. Satgé. Towards better characterization of groundwater stocks in Central Amazon using multi-satellite data. Universidade do Estado do Amazonas, le 6 juin 2012 à Manaus, Brésil.
12. Pfeffer, J. Etude du cycle de l'eau en Afrique de l'Ouest : approche multidisciplinaire et apport de la gravimétrie terrestre et spatiale, Université Claude Bernard, Lyon, 8 novembre 2011.
13. Pfeffer, J. Etude du cycle de l'eau en Afrique de l'Ouest : approche multidisciplinaire et apport de la gravimétrie terrestre et spatiale, Laboratoire Géosciences Environnement Toulouse, le 24 mai 2011.
14. Pfeffer, J. Etude du cycle de l'eau en Afrique de l'Ouest : approche multidisciplinaire et apport de la gravimétrie terrestre et spatiale, Laboratoire d'étude des Transferts en Hydrologie et Environnement, Grenoble, le 12 mai 2011.