



Curriculum Vitae

Name: **Vautard, Robert**

Nationality: **French**

Birth date: **04/03/1963**

Senior scientist (Directeur de Recherche) at CNRS, Institut Pierre-Simon Laplace, France

Candidate co-chair WGI

Education

- 1994 « Habilitation à diriger les recherches », University Pierre & Marie Curie, Paris, France
- 1987-1989 Postdoctoral position at U.C.L.A. under supervision of Prof. Michael Ghil
- 1987 PhD: Time scales of atmospheric motions, couplings and parameterization of rapid modes, Laboratoire de Météorologie Dynamique, Université Pierre & Marie Curie, Paris, France
- 1984 Master : Météorologie et Océanographie, Université Pierre & Marie Curie, Paris, FR
- 1982-1986 Student at Ecole Normale Supérieure de la rue d'Ulm, Paris, France, in mathematics

National appointments and responsibilities

- 2019- Head of Institut Pierre-Simon Laplace (IPSL), federation of research units, 1400 staff
- 2019- Coordinator of the "IPSL Climate Graduate School" program (14 M€ / 10 years)
- 2012- Head of climate services program at IPSL
- 2011 - 2018 Coordinator of the LABEX L-IPSL research program
- 2008 - 2014 Vice coordinator of the « GIS Climat-Environnement-Société » research program
- 2006 - 2011 Head of Laboratoire des Sciences du Climat et de l'Environnement (LSCE, 350 staff)
- 2000 - 2005 Head of the « air pollution » team at laboratoire de Météorologie Dynamique
- 1996 - 2000 Head of the « climate variability team » at laboratoire de Météorologie Dynamique

International responsibilities and coordination

- 2021 (sep) - Coordinator of the EU H2020 project **XAIDA** (6 M€)
- 2018 - 2021 Coordinating Lead Author of 6th Assessment Report, WGI, chapter 12: « Climate change information for regional impact and for risk assessment »
- 2022- Core group member of the « World Weather Attribution » network
- 2016 - 2018 Coordinator of the European Copernicus C3S project **CLIM4ENERGY**
- 2017 - 2018 Contributing author of the IPCC special report on 1.5°C warming
- 2017 - 2020 Member of the « Science Review Group » of the U.K. Met. Office
- 2009 - 2016 Member of « Scientific Advisory Council » of ECMWF (ECMWF - SAC)
- 2015 - 2019 Co-animator of the **Grand Challenge WCRP** on extreme events
- 2010 - 2013 Review editor of the IPCC WGI AR5
- 2015 - 2020 Co-coordinator of the « Energy » part of **ISI-MIP**
- 2013 - 2020 WP leader of several EU research projects (ATOPICA, IMPACT2C, EUCLEIA, EUPHEME, C3S-Energy, PRINCIPLES, EUCP)

Other national responsibilities and commitments

- 2022- Member of Scientific Committee of the National training program on ecology transition for civil servants
- 2021- co-chair of the "GREC-francilien" science/regional public policy discussion platform for the Greater Paris region

2022- Member of the stakeholder board of Paris City for the climate adaptation plan
2022 - 2023 Member of the stakeholder board of the ORANO company
2021 - 2022 Member of the science advisory board of the French electric transmission system operator (RTE-France) for the design of 2050 carbon-free energy mixes
2017 - 2021 Coordinator of the **Convention Nationale sur les Services Climatiques** (IPSL/Météo-France/CERFACS/BRGM), for the french Ministry of Ecology
2013 – 2016 Coordinator of the **EXTREMOSCOPE project (IPSL/Météo-France)**, Attribution of extremes in France
2013 - 2015 Coordinator of the CEA/DSM-Energy **CLIMIX** project (evaluation climate-energy of energy mixes in EU)
1996 - 2005 Coordinator of the development of the **CHIMERE** air quality model
1998 - 2001 Coordinator of the regional air quality project **ESQUIF**
2004 - 2014 Development of the PREV’AIR national air quality forecasting system

Teaching and communication

Numerous courses and research seminars on air quality, climate change, and media interventions (currently typically 3-4 per week)

Scientific articles

243 publications in peer-review journals, among which 18 in Nature / Science / PNAS families

h index 71

19000 citations (without self citations, Clarivate)

Highly Cited Author, Clarivate in 2018 and 2020

Peer-reviewed publications (and accepted articles)

2023

243. Otto, F. E. L., M. Zachariah, F. Saeed, A. Siddiqi, K. Shahzad, H. Mushtaq, K. AchutaRao, S. T. Chaitrah, C. Barnes, S. Philip, S. Kew, R. Vautard, G. Koren, I. Pinto, P. Wolski, M. Vahlberg, R. Singh, J. Arrighi, M. van Aalst, L. Thalheimer, E. Raju, S. Li, W. Yang, L. J. Harrington, B. Clarke, 2023, Climate change increased extreme monsoon rainfall, flooding highly vulnerable communities in Pakistan. *Environ. Res.: Climate*, in press.
242. Quesada, B., **R. Vautard** and P. Yiou, 2023: Cold waves still matter: characteristics and associated climatic signals in Europe. *Clim. Change*, in press.
241. **Vautard, R.**, van Oldenborgh, G. J., Bonnet, R., Li, S., Robin, Y., Kew, S., Philip, S., Soubeyroux, J.-M., Dubuisson, B., Viovy, N., Reichstein, M., Otto, F., and Garcia de Cortazar-Atauri, I.: Human influence on growing-period frosts like in early April 2021 in central France, *Nat. Hazards Earth Syst. Sci.*, 23, 1045–1058, <https://doi.org/10.5194/nhess-23-1045-2023>, 2023.

2022

240. Ruane, A. C., **Vautard, R.**, Ranasinghe, R., Sillmann, J., Coppola, E., Arnell, N., et al. (2022). The Climatic Impact-Driver Framework for assessment of risk-relevant climate information. *Earth's Future*, 10, e2022EF002803. <https://doi.org/10.1029/2022EF002803239>.
239. Philip, S. Y., Kew, S. F., van Oldenborgh, G. J., Anslow, F. S., Seneviratne, S. I., **Vautard, R.**, Coumou, D., Ebi, K. L., Arrighi, J., Singh, R., van Aalst, M., Pereira Marghidan, C., Wehner, M., Yang, W., Li, S., Schumacher, D. L., Hauser, M., Bonnet, R., Luu, L. N., Lehner, F., Gillett, N., Tradowsky, J. S., Vecchi, G. A., Rodell, C., Stull, R. B., Howard, R., and Otto, F. E. L.: Rapid attribution analysis of the extraordinary heat wave on the Pacific coast of the US and Canada in June 2021, *Earth Syst. Dynam.*, 13, 1689–1713, <https://doi.org/10.5194/esd-13-1689-2022>, 2022.
238. Harrington, L. J., P. Wolski, I. Pinto, A. M. Ramarosandratana, R. Barimalala, **R. Vautard**, S. Philip, S. Kew, R. Singh, D. Heinrich, J. Arrighi, E. Raju, L. Thalheimer, T. Razanakoto, M. van Aalst, S. Li, R. Bonnet, W. Yang, F. E. L. Otto, G. J. van Oldenborgh, 2022: Limited role of climate change in extreme low rainfall associated with southern Madagascar food insecurity, 2019-21. *Environmental Research: Climate*.
237. Diez-Sierra, M. Iturbide, J. M. Gutiérrez, J. Fernández, J. Milovac, A. S. Cofiño, E. Cimadevilla, G. Nikulin, G. Levvasseur, E. Kjellström, K. Bülow, A. Horányi, A. Brookshaw, M. García-Díez, A. Pérez, J. Baño-Medina, B. Ahrens, A. Alias, M. Ashfaq, M. Bukovsky, E. Buonomo, S. Caluwaerts, S. C. Chou, O. B. Christensen, J. M. Ciarlo, E. Coppola, L. Corre, M.-E. Demory, V. Djurdjevic, J. P. Evans, R. Fealy, H. Feldmann, D. Jacob, S. Jayanarayanan, J. Katzfey, K. Keuler, C. Kittel, M. Levent Kurnaz, R. Laprise, P. Lionello, S. McGinnis, P. Mercogliano, P. Nabat, B. Öno, T. Ozturk, H.-J. Panitz, D. Paquin, I. Pieczka, F. Raffaele, A. R. Remedio, J. Scinocca, F. Sevault, S. Somot, C. Steger, F. Tangang, C. Teichmann, P. Termonia, M. Thatcher, C. Torma, E. van Meijgaard, **R. Vautard**, K. Warrach-Sagi, K. Winger, G. Zittis, 2022, The worldwide C3S CORDEX grand ensemble: A major contribution to assess regional climate change in the IPCC AR6 Atlas. *Bull. Am. Meteor. Soc.*, in press.
236. Yu, S. and **R. Vautard**, 2022, A transfer method to estimate hub-height wind speed from 10 meters wind speed based on machine learning. *Renewable and Sustainable Energy Rev.*, in press

235. Wehrli, K., F. Luo, M. Hauser, H. Shiogama, D. Tokuda, H. Kim, D. Coumou, W. May, P. Le Sager, F. Selten, O. Martius, **R. Vautard**, and S. Seneviratne, 2022: The ExtremeX global climate model experiment: investigating thermodynamic and dynamic processes contributing to weather and climate extremes. *Earth Syst. Dyn.*, 13, 1167–1196, 2022, <https://doi.org/10.5194/esd-13-1167-2022>
234. van Oldenborgh, M. F. Wehner, G. J., **R. Vautard**, F. Otto, S. I. Seneviratne, P. Stott, G. C. Hegerl, S. Y. Philip and S. F. Kew, 2020: Attributing and projecting heatwaves is hard: we can do better. *Earth's Future*, 10, e2021EF002271. <https://doi.org/10.1029/2021EF002271>.
233. Luu, L., **R. Vautard**, P. Yiou, and J.-M. Soubeyrou, Evaluation of convection-permitting extreme precipitation simulations for the south of France. *Earth's System Dynamics*, in press.

2021

232. Ranasinghe, R., A.C. Ruane, **R. Vautard**, N. Arnell, E. Coppola, F.A. Cruz, S. Dessai, A.S. Islam, M. Rahimi, D. Ruiz Carrascal, J. Sillmann, M.B. Sylla, C. Tebaldi, W. Wang, and R. Zaaboul, 2021: Climate Change Information for Regional Impact and for Risk Assessment. In *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1767–1926, doi:10.1017/9781009157896.014.
231. van Oldenborgh, G.J., van der Wiel, K., Kew, S., Philip, S., Otto, F., **Vautard, R.**, King, A., Lott, F., Arrighi, J., Singh, R., and M. van Aalst, Pathways and pitfalls in extreme event attribution. *Climatic Change* **166**, 13 (2021). <https://doi.org/10.1007/s10584-021-03071-7>
230. Luu, L., P. Scussolini, S. Kew, S. Philip, M. H. Hariadi, **R. Vautard**, K. Van Mai, T. Van Vu, K. Ba Truong, F. Otto, G. van der Schrier, M. van Aalst, G. J. van Oldenborgh, 2021: Attribution of typhoons-induced torrential precipitation in Central Vietnam, October 2020. *Climatic Change*, in press.
229. Petit, J.-E., J.-C. Dupont, O. Favez, V. Gros, Y. Zhang, J. Sciare, L. Simon, F. Truong, N. Bonnaire, T. Amodeo, **R. Vautard**, M. Haeffelin, 2021, Response of atmospheric composition to COVID-19 lockdown measures during Spring in the Paris region (France), *Atmos. Chem. And Physics*, in press.
228. Stegehuis, A. I., M. M. Vogel, **R. Vautard**, P. Ciais, A. J. Teuling, and S. I. Seneviratne, 2021: Early summer soil moisture contribution to Western European summer warming. *Journal of Geophysical Research: Atmospheres*, 126, e2021JD034646. <https://doi.org/10.1029/2021JD034646>
227. Quaas, J., Gryspeerdt, E., **Vautard, R.** and Boucher, O., 2021, Climate impact of aircraft-induced cirrus assessed from satellite observations before and during COVID-19. *Environ. Res. Letters*, 16, 064051, doi: 10.1088/1748-9326/abf686.
226. Spinoni, J., Barbosa, P., Bucchignani, E., Cassano, J., Cavazos, T., Cescatti, A., Christensen, J. H., Christensen, O. B., Coppola, E., Evans, J., Forzieri, G., Geyer, B., Giorgi, F., Jacob, D., Katzfey, J., Koenigk, T., Laprise, R., Lennard, C. J., Levent Kurnaz, M., Li, D., Llopart, M., McCornick, N., Naumann, G., Nikulin, G., Ozturk, T., Panitz, H.-J., Porfirio da Rocha, R., Solman, S. A., Syktus, J., Tangang, F., Teichmann, C., Vautard, R., Vogt, J. V., A., Winger, K., Zittis, G., and A. Dosio (2021). Global exposure of population and land-use to meteorological droughts under different Warming Levels and Shared Socioeconomic Pathways: A Coordinated Regional Climate Downscaling Experiment-based study. *International Journal*

- 225. Vautard, R.**, N. Kadygrov, C. Iles, F. Boberg, E. Buonomo, K. Bülow, E. Coppola, L. Corre, E. van Meijgaard, R. Nogherotto, M. Sandstad, C. Schwingshackl, S. Somot, E. Aalbers, O. B. Christensen, James M. Ciarlo, M.-E. Demory, F. Giorgi, D. Jacob, R. G. Jones, K. Keuler, E. Kjellström, G. Lenderink, G. Levavasseur, G. Nikulin, J. Sillmann, S. Lund Sørland, C. Solidoro, C. Steger, C. Teichmann, K. Warrach-Sagi, V. Wulfmeyer, 2019: Evaluation of the large EURO-CORDEX regional climate model ensemble, *Journal of Geophysical Research: Atmospheres*, 126, e2019JD032344. <https://doi.org/10.1029/2019JD032344>.
224. van Oldenborgh, G. J., Krikken, F., Lewis, S., Leach, N. J., Lehner, F., Saunders, K. R., van Weele, M., Haustein, K., Li, S., Wallom, D., Sparrow, S., Arrighi, J., Singh, R. P., van Aalst, M. K., Philip, S. Y., **Vautard, R.**, and Otto, F. E. L.: Attribution of the Australian bushfire risk to anthropogenic climate change, *Nat. Hazards Earth Syst. Sci. Discuss.* [preprint], <https://doi.org/10.5194/nhess-2020-69>, in press, 2021.
- 2020**
223. Iles, C., **R. Vautard**, J. Strachan, S. Joussaume, B. Eggen and C. Hewitt, 2020 : The benefits of increasing resolution in global and regional climate simulations for European climate extremes. *Geosci. Mod. Dev.*, 13, 5583-5607, <https://doi.org/10.5194/gmd-13-5583-2020>
222. Philip, S., S. Kew, G. J. van Oldenborgh, F. Otto, **R. Vautard**, K. van der Wiel, A. King, F. Lott, J. Arrighi, R. Singh, and M. van Aalst, 2020: A protocol for probabilistic extreme event attribution analyses. *Adv. in Statistical Climatology, Meteorology and Oceanography*, 6, 177-203, <https://doi.org/10.5194/ascmo-6-177-2020>
221. Coppola, E., R. Nogherotto, J. M. Ciarlo, F. Giorgi, E. van Meijgaard, C. Iles, N. Kadygrov, C. Iles, L. Corre, M. Sandstad, S. Somot, P. Nabat, **R. Vautard**, G. Levavasseur, C. Schwingshackl, J. Sillmann, E. Kjellström, G. Nikulin, E. Aalbers, G. Lenderink, O. B. Christensen, F. Boberg, S. L. Sørland, M.-E. Demory, K. Bülow, C. Teichmann, K. Warrach-Sagi, and V. Wulfmeyer (2021). Assessment of the European climate projections as simulated by the large EURO-CORDEX regional and global climate model ensemble. *Journal of Geophysical Research: Atmospheres*, 126(4), e2019JD032356.
- 220. Vautard, R.**, M. van Aalst, O. Boucher, A. Drouin, K. Haustein, F. Kreienkamp, G.-J. van Oldenborgh, F. E. L. Otto, A. Ribes, Y. Robin, M. Schneider, J.-M. Soubeyroux, P. Stott, S. I. Seneviratne, M. Vogel, M. Wehner, 2019, Human contribution to the record-breaking June and July 2019 heat waves in Western Europe, *Environ. Res. Lett.*, <https://iopscience.iop.org/article/10.1088/1748-9326/aba3d4/pdf>.
219. Demory, M.-E., S. Berthou, J. Fernandez, S. L. Sørland, R. Brogli, M. J. Roberts, U. Beyerle, J. Seddon, R. Haarsma, C. Schär, E. Buonomo, O. B. Christensen, J. M. Ciarlo, R. Fealy, G. Nikulin, D. Peano, D. Putrasahan, Christopher D. Roberts, R. Senan, C. Steger, C. Teichmann, **R. Vautard**, 2020: European daily precipitation according to EURO-CORDEX RCMs and high-resolution GCMs from HighResMIP. *Geos. Mod. Dev.*, 13, 5485-5506. <https://doi.org/10.5194/gmd-13-5485-2020>.
218. Yalaw, S., M. van Vliet, D. Gernaat, F. Ludwig, A. Miara, C. Park, E. Byers, E. De Cian, F. Piontek, G. Iyer, Dr. I. Mouratiadou, J. Glynn, M. Hejazi, O. Dessens, P. Rochedo, R. Pietzcker, R. Schaeffer, S. Fujimori, S. Dasgupta, S. Mima, S. R. Santos da Silva, V. Chaturvedi, **R. Vautard**, and D. van Vuuren : Impacts of climate change on energy systems in global and regional scenarios. *Nature Energy* (2020) <https://doi.org/insu.bib.cnrs.fr/10.1038/s41560-020-0664-z>.

217. Jézéquel, A., Bevacqua, E., d'Andrea, F., Thao, S., Vautard, R., Vrac, M., & Yiou, P. (2020). Conditional and residual trends of singular hot days in Europe. *Environmental Research Letters*, 15(6), 064018.
216. Cowan, T., G. Hegerl, A. Schurer, S. Tett, **R. Vautard**, P. Yiou, A. Jézéquel, F. Otto, L. Harrington and B. Ng., 2019, Ocean and land forcing of the record-breaking dust bowl heat waves across central United States, *Nature Communications*, in press.
215. Selten, F., R. Bintanja, **R. Vautard** & B. J. J. M. van den Hurk, 2020: Future continental summer warming constrained by the present-day seasonal cycle of surface hydrology. *Scientific Reports*, <https://doi.org/10.1038/s41598-020-61721-9>.
214. Jacob, D., C. Teichmann, S. Sobolowski, E. Katragkou, I. Anders, M. Belda, R. Benestad, F. Boberg, E. Buonomo, R. M. Cardoso, A. Casanueva, O. B. Christensen, J. H. Christensen, E. Coppola, L. De Cruz, E. L. Davin, A. Dobler, M. Domínguez, R. Fealy, J. Fernandez, M. Á. Gaertner, M. García-Díez, F. Giorgi, A. Gobiet, K. Goergen, J. J. Gómez-Navarro, C. Gutiérrez, J. M. Gutiérrez, I. Güttler, A. Haensler, T. Halenka, S. Jerez, P. Jiménez-Guerrero, R. G. Jones, K. Keuler, E. Kjellström, S. Knist, S. Kotlarski, D. Maraun, E. van Meijgaard, P. Mercogliano, J. P. Montávez, A. Navarra, G. Nikulin, N. de Noblet-Ducoudré, H.-J. Panitz, M. Piazza, E. Pichelli, J.-P. Pietikäinen, A. F. Prein, D. Rechid, B. Rockel, R. Romera, E. Sánchez, K. Sieck, P. M.M. Soares, S. Somot, L. Srnec, S. L. Sørland, P. Termonia, H. Truhetz, **R. Vautard**, K. Warrach-Sagi, V. Wulfmeyer, Regional climate downscaling over Europe: perspectives from the EURO-CORDEX community, *Regional Environmental Change* (2020), (20)2.
213. Spinoni, J., P. Barbosa, E. Bucchignani, J. Cassano, T. Cavazos, J. H. Christensen, O. B. Christensen, E. Coppola, J. Evans, B. Geyer, F. Giorgi, P. Hadjinicolaou; D. Jacob, J. Katzfey, T. Koenigk, R. Laprise, C. J. Lennard, M. L. Kurnaz, D. Li; M. Llopart, N. McCormick, G. Naumann, G. Nikulin; T. Ozturk, H.-J. Panitz, R. Porfirio da Rocha, B. Rockel, S. A. Solman, J. Syktus, F. Tangang; C. Teichmann, **R. Vautard**, J. V. Vogt, K. Winger, G. Zittis, A. Dosio, 2020: Future global meteorological drought hotspots: a study based on CORDEX data, *Journal of Climate*, 33(9), 3635-3661.

2019

212. van Oldenborgh, G. J., E. Mitchell-Larson, G. Vecchi, H. de Vries, **R. Vautard**, and F. E. L. Otto, 2019: Cold waves are getting milder in the northern midlatitudes. *Environmental Research Letters*, <https://doi.org/10.1088/1748-9326/ab4867>
211. Bartok, B., I. Tobin, **R. Vautard**, M. Vrac, X. Jin, G. Levavasseur, S. Denvil, L. Dubus, S. Parey, P.-A. Michelangeli, A. Troccoli, Y.-M. Saint-Drenan, 2018 : A climate projection dataset tailored for the European energy sector. *Climate Services*, A climate projection dataset tailored for the European energy sector, *Climate Services*, 16, 2019, 100138, <https://doi.org/10.1016/j.cliser.2019.100138>.
210. **Vautard, R.**, van Oldenborgh, G.-J., Otto, F. E. L., Yiou, P., de Vries, H., van Meijgaard, E., Stepek, A., Soubeyroux, J.-M., Philip, S., Kew, S. F., Costella, C., Singh, R., and C. Tebaldi, 2019: Human influence on European wind storms such as those of January 2018. *Earth System Dynamics*, 10, 271-286.
209. Jerez, S.; Tobin, I.; Turco, M., López-Romero, J. M., Montavez, J., Jimenez-Guerrero, P. and **R. Vautard**, 2018, Future changes, or lack thereof, in the temporal variability of the combined wind-plus-solar power production in Europe. *Renewable Energy*, in press.
208. Ribes, A., S. Thao, **R. Vautard**, B. Dubuisson, S. Somot, J. Colin, S. Planton, J.-M. Soubeyroux, 2019 : Observed increase in extreme daily rainfall in the French Mediterranean. *Climate Dynamics*, 52, 1095-1114.
207. **Vautard, R.**, N. Christidis, A. Ciavarella, C. Alvarez-Castro, O. Bellprat, B. Christiansen, I. Colfescu, T. Cowan, F. Doblas-Reyes, J. Eden, M. Hauser, G. Hegerl, N. Hempelmann, K. Klehmet, F. Lott, C. Nangini,

R. Orth, S. Radanovics, S. I. Seneviratne, G. J. van Oldenborgh, P. Stott, S. Tett, L. Wilcox, P. Yiou (2019) Evaluation of the HadGEM3-A simulations in view of climate and weather event human influence attribution in Europe. *Climate Dynamics*, <https://doi.org/10.1007/s00382-018-4183-6>.

206. Schewe, J., J. Elliott, Louis Francois, S. N. Gosling, V. Huber, H. K. Lotze, C. Reyer, S. I. Seneviratne, M. T. H. van Vliet, **R. Vautard**, Y. Wada, F. Zhao, L. Breuer, M. Büchner, D. A. Carozza, J. Chang, P. Ciais, M. Coll, D. Deryng, A. de Wit, T. D. Eddy, C. Folberth, K. Frieler, A. Friend, D. Gerten, L. Gudmundsson, N. Hanasaki, A. Ito, N. Khabarov, H. Kim, P. Lawrence, C. Morfopoulos, C. Müller, H. Müller Schmied, R. Orth, S. Ostberg, Y. Pokhrel, T. A. M. Pugh, G. Sakurai, Y. Satoh, E. Schmid, T. Stacke, J. Steenbeek, J. Steinkamp, Q. Tang, H. Tian, D. Tittensor, J. Volkholz, X. Wang, L. Warszawski (2019), State-of-the-art global models underestimate impacts from climate extremes. *Nature Communications*, 10, doi:10.1038/s41467-019-08745-6.

2018

205. Coppola, E.; S. Sobolowski; E. Pichelli; F. Raffaele; B. Ahrens; I. Anders; N. Ban; S. Bastin; M. Belda; D. Belusic; A. Caldas-Alvarez; R. Margarida Cardoso; S. Davolio; A. Dobler; J. Fernandez; L. Fita Borrell; Q. Fumiere; F. Giorgi; K. Goergen; I. Guettler; T. Halenka; D. Heinzeller; Ø. Hodnebrog; D. Jacob; S. Kartsios; E. Katragkou; E. Kendon; S. Khodayar; H. Kunstmann; S. Knist; Á. Lavín; P. Lind; T. Lorenz; D. Maraun; L. Marelle; E. van Meijgaard; J. Milovac; G. Myhre; H.-J. Panitz; M. Piazza; M. Raffa; T. Raub; B. Rockel; C. Schär; K. Sieck; P. M. M. Soares; S. Somot; L. Srnec; P. Stocchi; M. Tölle; H. Truhetz; **R. Vautard**; H. de Vries; K. Warrach-Sagi, 2018, A first-of-its-kind multi-model convection permitting ensemble for investigating convective phenomena over Europe and the Mediterranean, *Clim. Dyn.*, <https://doi.org/10.1007/s00382-018-4521-8>.
204. Lian, J., L. Wu, F.-M. Bréon, G. Broquet, **R. Vautard**, T. Scott Zaccheo, J. Dobler, and P. Ciais, 2018: Evaluation of the WRF-UCM mesoscale model and ECMWF global operational forecasts over the Paris region in the prospect of tracer atmospheric transport modeling, *Elementa – Science of the Anthropocene*, 6, DOI: <http://doi.org/10.1525/elementa.319>
203. Kew, S. F., S. Y. Philip, G. J. van Oldenborgh, F. E. L. Otto, **R. Vautard**, G. van der Schrier, and C. Tebaldi, 2018: Attribution of the exceptional summer heat wave in Southern Europe 2017, *Bulletin of the American Meteorological Society*, 100(1), S49-S53.
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