Lluís Palma

PhD Student · Climate Dynamics / Machine Learning

Barcelona Supercomputing Center, C/Jordi Girona 29, Barcelona, 08034 (Spain)

lluis.palma@bsc.es | @lluispalma

Education

Universitat de Barcelona — *Barcelona*

PhD Physics — *01/10/2022 - present*

- Advisors: Dr. Markus Donat & Albert Soret

Universitat de Barcelona — *Barcelona*

Msc Meteorology — *01/10/2019 - 01/02/2022*

- Advisor: Dr. Llorenç Lledó

Universitat Politècnica de Catalunya — *Castelldefels*

BSc Aerospace Engineering — *01/10/2013 - 01/07/2018*

- Honors final degree thesis
  research advisors: Dr. Xevi Prats & Dr. Ramón Dalmau

Professional Experience

2022-Now	**PhD Student**, Earth Sciences Dept., Barcelona Supercomputing Center
2018-2022	**Jr. Research Engineer**, Earth Sciences Dept., Barcelona Supercomputing Center
2017-2018	**Undergraduate Research Assistant**, ICARUS research group, Universitat Politècnica de Catalunya

Publications

Manrique-Suñén, A., Palma, L., Gonzalez-Reviriego, N., Doblas-Reyes, F. J., Soret, A. (2023). **Subseasonal predictions for climate services, a recipe for operational implementation.** Climate Services, 30(100359), 100359. https://doi.org/10.1016/j.cliser.2023.100359

Chou, C.,, Marcos-Matamoros, R., Garcia, L. P., Pérez-Zanón, N., Teixeira, M., Silva, S., Fontes, N., Graça, A., Dell'Aquila, A., Calmanti, S., González-Reviriego, N. (2023). **Advanced seasonal predictions for vine management based on bioclimatic indicators tailored to the wine sector.** Climate Services, 30(100343), 100343. https://doi.org/10.1016/j.cliser.2023.100343

Vitart, F., Robertson, A.W., Spring, A., Pinault, F., Roškar, R., Cao, W., Bech, S., Bienkowski, A., Caltabiano, N., De Coning, E., Denis, B., Dirkson, A., Dramsch, J., Dueben, P., Gierschendorf, J., Kim, H. S., Nowak, K., Landry, D., Lledó, L., Palma, L., Rasp, S., Zhou, S. (2022). **Outcomes of the WMO Prize Challenge to Improve Sub-Seasonal to Seasonal Predictions Using Artificial Intelligence**, Bulletin of the American Meteorological Society (published online ahead of print 2022). Retrieved Nov 18, 2022, from https://journals.ametsoc.org/view/journals/bams/aop/BAMS-D-22-0046.1/BAMS-D-22-0046.1.xml

White, C. J., Domeisen, D. I. V., Acharya, N., Adefisan, E. A., Anderson, M. L., Aura, S., Balogun, A. A., Bertram, D., Bluhm, S., Brayshaw, D. J., Browell, J., Büeler, D., Charlton-Perez, A., Chourio, X., Christel, I., Coelho, C. A. S., DeFlorio, M. J., Delle Monache, L., Di Giuseppe, F., García-Solórzano, A. M., Gibson, P. B., Goddard, L., González Romero, C., Graham, R. J., Graham, R. M., Grams, C. M., Halford, A., Huang, W. T. K., Jensen, K., Kilavi, M., Lawal, K. A., Lee, R. W., MacLeod, D., Manrique-Suñén, A., Martins, E. S. P. R., Maxwell, C. J., Merryfield, W. J., Muñoz, Á. G., Olaniyan, E., Otieno, G., Oyedepo, J. A., Palma, L., Pechlivanidis, I. G., Pons, D., Ralph, F. M., Reis , D. S., Jr., Remenyi, T. A., Risbey, J. S., Robertson, D. J. C., Robertson, A. W., Smith, S., Soret, A., Sun, T., Todd, M. C., Tozer, C. R., Vasconcelos, F. C., Jr., Vigo, I., Waliser, D. E., Wetterhall, F., Wilson, R. G. (2022). **Advances in the Application and Utility of Subseasonal-to-Seasonal Predictions**, Bulletin of the American Meteorological Society, 103(6), E1448-E1472. Retrieved Nov 18, 2022, from https://journals.ametsoc.org/view/journals/bams/103/6/BAMS-D-20-0224.1.xml

Domeisen, D. I. V., White, C. J., Afargan-Gerstman, H., Muñoz, Á. G., Janiga, M. A., Vitart, F., Wulff, C. O., Antoine, S., Ardilouze, C., Batté, L., Bloomfield, H. C., Brayshaw, D. J., Camargo, S. J., Charlton-Pérez, A., Collins, D., Cowan, T., del Mar Chaves, M., Ferranti, L., Gómez, R., González, P. L. M., González Romero, C., Infanti, J. M., Karozis, S., Kim, H., Kolstad, E. W., LaJoie, E., Lledó, L., Magnusson, L., Malguzzi, P., Manrique-Suñén, A., Mastrangelo, D., Materia, S., Medina, H., Palma,

L., Pineda, L. E., Sfetsos, A., Son, S., Soret, A., Strazzo, S., Tian, D. (2022). **Advances in the Subseasonal Prediction of Extreme Events: Relevant Case Studies across the Globe**, Bulletin of the American Meteorological Society, 103(6), E1473-E1501. Retrieved Nov 18, 2022, from https://journals.ametsoc.org/view/journals/bams/103/6/BAMS-D-20-0221.1.xml

Soret, A.,, Torralba, V., Cortesi, N., Christel, I., Palma, L., Manrique-Suñén, A., Lledó, L., González-Reviriego, N., Doblas-Reyes, F. J. (2019). **Sub-seasonal to seasonal climate predictions for wind energy forecasting**. Journal of Physics. Conference Series, 1222(1), 012009. https://doi.org/10.1088/1742-6596/1222/1/012009

Awards, Fellowships, & Grants

2022 **2nd Awarded team - S2S-AI challenge**, World Meteorological Organisation (WMO) *CHF 10,000*

Presentations

Invited Talks

Palma, Ll.,u Lledó, Ll., Gómez, C., Bech, S., Manrique-Suñén, A., Soret, A., Gonzalez-Reviriego, N., Serradell, K., Doblas-Reyes, F., On the use of machine learning for subseasonal-to-seasonal predictions, ISC High Performance 2022, Hamburg, Germany, 1st June, https://app.swapcard.com/event/isc-high-performance-2022/planning/UGxhbm5pbmdfODgyNTI3

Contributed Presentations

Palma, Ll., Manrique-Suñén, A., Gonzalez-Reviriego, N., Doblas-Reyes, F.J., Soret, A. Best practices for an operational climate service implementation based on subseasonal to seasonal predictions (P502), WMO OCP-3, Lisbon, Portugal, 20-22 September 2022. https://community.wmo.int/meetings/third-wmo-workshop-operational-climate-prediction-ocp-3-20-22-september-2022

Palma, Ll., Manrique, A., Lledó, L., Nicodemou, A., Bretonnière, P.-A., Pérez-Zanón, N., Ho, A., and Soret, A.: Lessons learned from the implementation of the near real-time S2S4E Decision Support Tool, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-15537, https://doi.org/10.5194/egusphere-egu21-15537, 2021.

Mentoring

2019-2020 **Francesc Roura**, Research intern, Universitat de Barcelona

2021-2022 **Sergi Bech**, Research intern, Universitat de Barcelona

2023-Now **Alejandro Peraza**, Research intern, Universitat Politècnica de Cataluña

Outreach & Professional Development

Development

Boosting sub-seasonal forecasts with explainable AI Leiden, Netherlands 5-9 Sept. 2022. Participation in the workshop, attending talks from experts in the fields and actively coding software with the aim of improving subseasonal predictions of drought in the horn of Africa. https://www.lorentzcenter.nl/boosting-sub-seasonal-forecasts-with-explainable-ai.html

XAIDA summer school on artificial intelligence for attribution and detection of climate extremes (remote participation)