

## Julia Valentim Tavares

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OrCID: <https://orcid.org/0000-0003-3784-5720>

Google scholar: <https://scholar.google.com/citations?user=s5isDXgAAAAJ&hl=en>

### UNIVERSITY EDUCATION

- 2015 –2019 **PhD in Ecology and Climate Change** – School of Geography - University of Leeds, UK. Thesis title: Hydraulic properties of Amazonian trees: spatial variation and consequences for vulnerability to drought . Supervisors: David Galbraith, Emmanuel Gloor and Oliver Phillips
- 2011 – 2013 **MSc in Biology (Ecology)** – National Institute for Amazonian Research (INPA), Brazil. Thesis title: Dry season green-up in the central Amazon: Seasonal patterns of leaf phenology of a terra-firme forest . Supervisors: Bruce Nelson (INPA) and Dalton Valeriano (National Institute for Space Research - INPE)
- 2006 – 2011 **BSc in Biology** – Universidade Federal Rural do Rio de Janeiro (UFRRJ), Brazil.
- 2006 – 2010 **Licenciatura (teaching) in Biology** – Universidade Federal Rural do Rio de Janeiro (UFRRJ), Brazil. Similar to the postgraduate certificate in education in the UK.

### EMPLOYMENTS

- 2022-on going – Postdoctoral researcher in Tropical Forest Ecology, Department of Ecology and Genetics, Uppsala University, Sweden. Supervisor: Robert Muscarella
- 2021-2022 - Research Fellow in Tropical Forest Water Relations, School of Geography, University of Leeds, UK.
- 2021-2021 - Research temporary contract (3 months) – School of Geography, University of Leeds, UK.
- 2020-2020 – Maternity leave (12 months)
- 2019-2019 – Research temporary contract (2 months) – School of Geography, University of Leeds, UK.
- 2013 - 2014 - Assistant Researcher at the National Institute of Science and Technology at the Amazonian Environmental Services - Pioneiras Project - INCT / SERVAMB, Brazil.
- 2010 - 2011 – Teacher of biological sciences in the basic education (public employee), State Education Secretary of Rio de Janeiro, SEEDUC, Brazil.

## RESEARCH COLLABORATOR

- 2022-on going – Co-PI of the National Geographic funded project: “Changing floodscapes: understanding Amazonian flooded forest responses to current and future changes in inundation patterns”. PI: Thiago Silva (Stirling University, UK)
- Associate researcher at the Postgraduate Program in Ecology and Conservation, Federal University of Mato Grosso (UNEMAT), Brazil

## GRANTS AND AWARDS

- Granted the King Carl XVI Gustaf's 50-year fund for science, technology and the environment for outstanding early-career researchers in Sweden
- Luquillo Long-Term Ecological Research program Travel Grant (2023) to join the annual Luquillo meeting in Puerto Rico
- Swedish Phytogeographical Society – research grant (2023)
- Leeds University Climate Research Bursary Fund award (2018): field research projects on issues relating to Climate Research and/or Plant Biology
- Capes Foundation, Ministry of Education (Brazil): full time PhD abroad scholarship 2015-2019
- Best Presentation - Award in the interactive panel session category of work entitled “Object-based image analysis to classify images of leaf phenology monitoring in Central Amazonia” at the XVI Brazilian Symposium on Remote Sensing, Foz do Iguaçu, Brazil (2013)
- Amazonas State Research Support Foundation (FAPEAM): Travel Grant (2013) to join the XVI Brazilian Symposium on Remote Sensing
- Brazilian Research Council (CNPq): Masters Scholarship 2011-2013;
- Rio de Janeiro State Research Support Foundation (FAPERJ): Undergraduate scientific initiation project 2008-2009
- Ministry of Education, Brazil (MEC SESu PROEXT): Undergraduate scientific initiation project 2008

## RESEARCH PAPERS/ MANUSCRIPTS

**Tavares, J.V.**, Oliveira, R.S., Mencuccini, M., ....., Muscarella, R., Phillips, O., Gloor, E., Galbraith, D., 2023. Hydraulic traits predict the carbon balance and biogeography of Amazon forests. *Nature*, pp.1-7.

Fancourt, Max, Guy Ziv, Klaas Folkert Boersma, **Julia Tavares**, Yunxia Wang, and David Galbraith. "Background climate conditions regulated the photosynthetic response of Amazon forests to the 2015/2016 El Nino-Southern Oscillation event." *Communications Earth & Environment* 3, no. 1 (2022): 1-9.

Signori-Müller, C., Oliveira, R.S., **Valentim Tavares, J.**, Carvalho Diniz, F., Gilpin, M., de V. Barros, F., Marca Zevallos, M.J., Salas Yupayccana, C.A., Nina, A., Brum, M. and Baker, T.R., 2022. Variation of non-structural carbohydrates across the fast–slow continuum in Amazon Forest canopy trees. *Functional Ecology*, 36(2), pp.341-355.

Signori-Müller, C., Oliveira, R.S., de Vasconcellos Barros, F., **Tavares, J.V.**, Gilpin, M., Diniz, F.C., Zevallos, M.J.M., Yupayccana, C.A.S., Acosta, M., Bacca, J. and Chino, R.S.C., 2021. Non-structural carbohydrates mediate seasonal water stress across Amazon forests. *Nature communications*, 12(1), pp.1-9.

Alves, E.G., Tóta, J., Turnipseed, A., Guenther, A.B., Vega Bustillos, J.O.W., Santana, R.A., Cirino, G.G., **Tavares, J.V.**, Lopes, A., Nelson, B.W. and... De Souza, R.A., 2018. Leaf phenology as one important driver of seasonal changes in isoprene emission in central Amazonia. *Biogeosciences*, 15, pp 4019–4032.

Wu, J., Albert, L.P., Lopes, A.P., Restrepo-Coupe, N., Hayek, M., Wiedemann, K.T., Guan, K., Stark, S.C., Christoffersen, B., Prohaska, N. and... **Tavares, J.V.**, 2016. Leaf development and demography explain photosynthetic seasonality in Amazon evergreen forests. *Science*, 351(6276), pp.972-976.

Lopes, A.P., Nelson, B.W., Wu, J., de Alencastro Graça, P.M.L., **Tavares, J.V.**, Prohaska, N., Martins, G.A. and Saleska, S.R., 2016. Leaf flush drives dry season green-up of the Central Amazon. *Remote Sensing of Environment*, 182, pp.90-98.

Alves, E.G., Jardine, K., Tota, J., Jardine, A., Yáñez-Serrano, A.M., Karl, T., **Tavares, J.**, Nelson, B., Gu, D., Stavrakou, T. and Martin, S., 2016. Seasonality of isoprenoid emissions from a primary rainforest in central Amazonia. *Atmospheric Chemistry and Physics*, 16(6), pp.3903-3925.

## POSTGRADUATE SUPERVISION

Ongoing PhD students co-supervision: 3 (Brazil);

Ongoing master students co-supervision: 1 (Brazil);

Master students finished co-supervision 4 (Brazil);

## **POSTGRADUATE EXAMINER**

Examiner of master's dissertation 2 (Brazil) and 3 (Sweden);  
Examiner of qualification exam for the master's dissertation: 2 (Brazil);  
Examiner of doctoral thesis: 1 (Brazil);  
Examiner of qualification exam for the doctoral thesis: 1 (Brazil);

## **LECTURES**

On-going - Teacher contributing to the course: "The structure and function of plants", University of Uppsala, Sweden.  
2022 – Teacher contributing to the course: "Human Security and Sustainable Development in Tropical Ecosystems", University of Uppsala, Sweden.  
2012 - Teaching assistant of "remote sensing applied to ecology" at the Master Program in Ecology of the National Institute of Amazonian Research (INPA), Brazil.

## **GIVEN TALKS AND WORKSHOPS**

December 2022 – Annual British Ecological Society meeting– Edinburgh, UK: "Hydraulic properties of Amazonian trees: spatial variation and consequences for vulnerability to drought"

October 2019 Training course given at the workshop Understanding the sensitivity of the Amazon rainforest to climate change– Universidade Federal do Acre (UFAC), Brazil: "Plant hydraulic system: Overview of theory, measurements and recent results" (40h)

September 2018 Training course given at the Plant Ecology & Ecophysiology – Sirsi (India): "Plant hydraulics from root to leaf: theory, measurement approaches and recent key results" (40h)

October 2017 Talk given at the Allpahuayo Mishana Reserve at the invitation of the Amazon Biodiversity Research Program (Peru): "Are our Amazonian forests in danger?"

September 2017 Training course given at the Peruvian Amazon Research Institute (IIAP - Peru): "Quantification of water stress in the Amazonian forests: Techniques for collecting ecophysiological data " (16 h)

September 2017 Talk given at the Peruvian Amazon Research Institute (IIAP - Peru), invited by the PROBOSQUES research program director: "Mechanisms and consequences of increasing mortality in Amazonian forests: a vision of ecophysiology"

April 2017 Talk given at the Universidade Federal do Acre (UFAC), Brazil: "Mechanisms and consequence of the increase of tree mortality in the Amazon"

March 2017 Training course given at Noel Kempff Mercado Natural History Museum, Bolivia: "Practical Taller in Eco-physiology" (16h)

March 2017 Talk given at Noel Kempff Mercado Natural History Museum, Bolivia: "Mechanisms and consequences of increased mortality in the Amazonian forests: a vision of ecophysiology"

May 2016 Talk given at the UNICAMP, Brazil: "Towards a more mechanistic understanding of the climatic sensitivity of Amazon rainforests"

## OUTREACH AND MEDIA COVERAGE

### Video:

Documentary Amazon Perpetual Planet by National Geographic and Rolex (to be released in the 2024)

Short movie by Rolex about the Amazon Perpetual Planet project and expedition (to be released in the summer 2023)

### Live interviews:

[https://www.youtube.com/watch?v=\\_hVG9mgICZ4&ab\\_channel=CanalSa%C3%BAdeOficial](https://www.youtube.com/watch?v=_hVG9mgICZ4&ab_channel=CanalSa%C3%BAdeOficial)

[https://www.youtube.com/watch?v=FD0Mt-ciCSY&t=2278s&ab\\_channel=Observat%C3%B3riodeJusti%C3%A7aeConserva%C3%A7%C3%A3o](https://www.youtube.com/watch?v=FD0Mt-ciCSY&t=2278s&ab_channel=Observat%C3%B3riodeJusti%C3%A7aeConserva%C3%A7%C3%A3o)

### News:

<https://www.kungahuset.se/arkiv/nyheter/2023-05-29-kungen-delade-ut-stipendier-ur--konung-carl-xvi-gustafs-50-arsfond>

<https://www.gov.br/capes/pt-br/assuntos/noticias/artigo-de-bolsista-da-capes-e-publicado-na-nature>

<https://news.mongabay.com/2023/05/not-all-parts-of-the-amazon-will-survive-future-droughts-study-says/>

<https://www.sciencenews.org/article/amazon-tipping-trouble-climate-cerrado>

<http://www.natureasia.com/ko-kr/nature/highlights/120700>

<https://al-ain.com/article/amazon-danger-drought-dialogue>

<https://al-ain.com/article/drought-threatens-amazon-forest-trees-study>

[https://www.cas.cn/kj/202305/t20230510\\_4886704.shtml](https://www.cas.cn/kj/202305/t20230510_4886704.shtml)

<https://www.labroots.com/trending/earth-and-the-environment/25194/predicting-future-drought-impact-amazon-rainforest-2>

<https://www.earth.com/news/the-amazon-rainforest-and-the-looming-threat-of-drought/>

<https://phys.org/news/2023-04-amazon-rainforest-cope-effect-future.html>

<https://germanic.news/wissenschaftler-bringen-ein-tragbares-labor-in-den-amazonas-um-die-anpassung-von-baumen-an-durre-zu-untersuchen/>

<https://www.sciencedaily.com/releases/2023/04/230426210500.htm>

<https://www.miragenews.com/amazon-how-will-it-cope-with-drought-994146/>

<https://swifttelecast.com/scientists-take-a-portable-laboratory-into-the-amazon-to-study-adaptation-of-trees-to-drought/>

[https://www.cas.cn/kj/202305/t20230510\\_4886704.shtml](https://www.cas.cn/kj/202305/t20230510_4886704.shtml)

<https://www.elcolombiano.com/medio-ambiente/arboles-de-la-amazonia-estan-en-riesgo-de-desaparecer-por-la-sequia-que-cause-deforestacion-y-cambio-climatico-JD21334683>

<https://southafricatoday.net/environment/not-all-parts-of-the-amazon-will-survive-future-droughts-study-says/>

<http://www.natureasia.com/ko-kr/nature/highlights/120700>

<https://www.terra.com.br/byte/quais-regioes-da-amazonia-va-sofrer-mais-com-calor-e-secas,bf406d65e6966f131faf33487ca10a3a7r2kpsua.html>

<https://www.agenciasinc.es/Noticias/Los-arboles-del-Amazonas-meridional-y-occidental-estan-en-mayor-riesgo-de-mortalidad-por-sequia>

<https://nature.altmetric.com/details/146609203/news>

<https://www.unicamp.br/unicamp/ju/686/arvores-respiram-menos-em-areas-secas-da-floresta>

<https://abori.com.br/amazonia/arvores-do-sul-da-amazonia-tem-maior-probabilidade-de-morrer-com-a-seca/>

<http://www.remade.com.br/noticias/19114/arvores-do-sul-da-amazonia-podem-morrer-com-a-seca--revela-estudo>

<https://www.correiobraziliense.com.br/ciencia-e-saude/2023/04/5090208-seca-pode-fazer-arvores-do-oeste-e-sul-da-amazonia-desaparecerem.html>

<https://www.yourweather.co.uk/news/science/amazon-rainforest-climate-coping-strategy->

[drought-risk-forests.html](#)

<https://www.revistaplaneta.com.br/cientistas-mapeiam-como-a-floresta-amazonica-devera-lidar-com-o-efeito-da-seca-no-futuro/>

<https://www.eurasiareview.com/27042023-how-amazon-rainforest-is-likely-to-cope-with-effect-of-future-drought/>

<https://ac24horas.com/2023/04/27/pesquisadores-acreanos-sao-co-autores-de-artigo-cientifico-publicado-na-revista-nature/>

<https://unemat.br/noticias/9-5-2023-estudo-identifica-regioes-da-floresta-amazonica-mais-vulneraveis-a-mudancas-climaticas>

<https://nahoradanoticia.com.br/concurso/apos-enchentes-comunidade-cientifica-internacional-se-preocupa-com-secas-na-amazonia/>

[https://cdn.scooper.news/static/half/detail/8559/42791715.html?without\\_head=1&app=1&&n=42664863&redirect=%2Fstatic%2Fchannel%2Frelate.html&with\\_relate=%2Fstatic%2Fchannel%2Frelate.html](https://cdn.scooper.news/static/half/detail/8559/42791715.html?without_head=1&app=1&&n=42664863&redirect=%2Fstatic%2Fchannel%2Frelate.html&with_relate=%2Fstatic%2Fchannel%2Frelate.html)

<https://www.andifes.org.br/?p=96970>

[https://www.ecoavant.com/naturaleza/regiones-de-la-selva-amazonica-con-mayor-riesgo-climatico\\_11045\\_102.html](https://www.ecoavant.com/naturaleza/regiones-de-la-selva-amazonica-con-mayor-riesgo-climatico_11045_102.html)

<https://euro.eseuro.com/local/265175.html>

<https://jurua24horas.com/com-mais-de-30-anos-de-atuacao-professor-da-ufac-chega-a-ranking-de-mais-citados-em-publicacoes-amazonia-esta-no-centro-das-discussoes/>

<https://eldiariodesonora.com.mx/arboles-del-amazonas-podrian-morir-por-cambio-climatico/>

<https://enfoquedelnoroeste.com/2023/04/27/arboles-del-amazonas-corren-el-mayor-riesgo-de-morir-por-cambio-climatico/>

<https://umsoplaneta.globo.com/biodiversidade/noticia/2023/06/14/era-como-um-medico-medindo-a-pressao-de-uma-pessoa-estudo-avalia-resistencia-da-amazonia-a-seca-e-mostra-que-arvores-sofrem-ate-embolia.ghtml>

<https://www.ieg.uu.se/nyheter/?tarContentId=1059874>

**MEMBER RESEARCH NETWORK**

British Ecological Society

Forestplots.net - Amazon forest inventory network

**PAPER REVIEWER**

1 (journal *Trees*)