CATRY Thibault – IRD / UMR ESPACE-DEV
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Dr CATRY Thibault is a geophysicist specialized in SAR remote-sensing for the monitoring of environmental processes (health and environment, natural hazards, wetland dynamics).He is currently research engineer working for the French Institute of Research for the development (IRD) within the Espace-Dev research unit (Space for Development) based in Montpellier, France.
His research interest focus on monitoring environmental processes using data from Earth Observing satellites, especially RADAR data, with techniques including SAR interferometry and Altimetry. He develops new methodologies to process satellite images and product spatialized indicators. His main area of interest is the Amazon on which he has been working for 3 years, dealing with the use of remote-sensing for the characterization of the relationship between environmental factors and vector-borne diseases or wetland dynamics and hydrological processes in the Amazon basin for the estimation of water stocks.
He has been involved in interdisciplinary or transdisciplinary research team and projects for the last few years, with many collaborations in French Guyana and Brazil. He has a strong experience in the organization of training courses to facilitate the transfer of competencies and methodologies to his partners.

Main publications

[1] **Catry, T**., Li, Z., Roux, E., Herbreteau, V., Gurgel, H., Mangeas, M., ... & Dessay, N. (2018). Wetlands and malaria in the Amazon: Guidelines for the use of synthetic aperture radar remote-sensing. International journal of environmental research and public health, 15(3), 468.
[2] Li Z.., **T. Catry**, N. Dessay, H. Gurgel, CA. de Almeida, C. Barcellos, E. Roux (2017). Towards Large-scale Implementation of a Malaria Normalized Landscape-based Hazard Index – a Case Study in the Brazilian Legal Amazon Region. Accpeted by Data in October 2017.
[3] Pinel S., MP. Bonnet, J. Santos Da Silva, S. Calmant, **T. Catry**, F. Seyler. Detailed 2D flow simulation of an Amazonian floodplain as an onset for evaluating flows exchanges and velocity patterns. Submitted to *Journal of Hydrology*.
[4] Peltier A., JL. Froger, N. Villeneuve and **T. Catry** (2017). Assessing the reliability and consistency of InSAR and GNSS data for retrieving 3D displacement rapid changes, the example of the 2015 Piton de la Fournaise eruptions, *Journal of Volcanological and Geothermal Research,* https://doi.org/10.1016/j.jvolgeores.2017.03.027
[5] **Catry, T.,** Li, Z., Roux, E., Herbreteau, V., Révillion, C., & Dessay, N. (2016). Fusion of SAR and Optical Imagery for Studying the Eco-Epidemiology of Vector-Borne Diseases in Tropical Countries. In *Living Planet Symposium* (Vol. 740, p. 8).
[6] Li, Z., **Catry, T**., Dessay, N., Roux, E., Mahé, E., & Seyler, F. (2016). Multi-sensor data fusion for identifying malaria environmental features. In Geoscience and Remote Sensing Symposium (IGARSS), *2016 IEEE International* (pp. 2529-2532). IEEE.
[7] Li, Z., **Catry, T**., Dessay, N., Roux, E., & Seyler, F. (2016). Mapping soil typologies using geomorphologic features extracted from DEM and SAR data: environmental factor affecting malaria transmission in the Amazon. In Geoscience and Remote Sensing Symposium (IGARSS), *2016 IEEE International* (pp. 3140-3143). IEEE.

Coordination and participation to scientific Projects

[1] *Participation : BONDS* Biodiversa project *:* Balancing biOdiversity conservatioN with Development in Amazon wetlandS
[2] *Participation* : CNES Observatoire Spatial des dynamiques Socio-Environnementale en Amazonie 2016
[3] *Participation* : CNES TOSCA Analyse par télédétection des relations entre Paysages URbains dEngue et ZikA 2016 (French Space Agency program for the use of remote-sensing dedicated to health and environment)
[4] *Coordination* : DEM TanDEM-X call by DLR (German Space Agency) 2016
Participation : Projets Exploratoires Premier Soutien CNRS 2016 MAMBO (Mangroves – Madagacar – Bombetoka)
[5] *Participation*: CNES TOSCA Centre d'expertise Occupation du sol 2017 (French Space Agency program for the use of remote-sensing dedicated to landcover)
[6] *Participation*: CNES TOSCA Centre d'expertise Artificialisation 2017 (French Space Agency program for the use of remote-sensing dedicated to urban areas)

[7] *Participation*: Programme de Coopération Interreg Amazonie GUYAMAZON 2017 (regional collaboration in the Amazon region), 2 proposals under review