Dr Hervé YESOU, PhD
Research Engineer

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Background

Hervé Yésou received his PH.D. Degree from the University of Strasbourg in 1993. Since he is a core member of the SERTIT Unit, a specialized plateform in remote sensing operational applications in the field of Environment (natural resources and territories monitoring, rapid mapping). Since more than 20 years he is involved in rapid mapping activities, mainly within the framework of the International Charter "Space and Major Disasters" and since December 2015 within the Emergency- Mapping Service of Copernicus. In this Copernicus service, he acts as Officer on Duty (ODO).

Another main field of interest is wetland and water bodies' characterization and monitoring. He is member the Science Team of the future Altimetric mission, SWOT.

Since 2000 he has been an external expert for CNES on the definition of VHR future sensors, participating to the ORFEO thematic groups, as well as to the definition of potential new missions, 3S2, Pleiades HR, GEO HR, Arctos. Since 2016 he is member of the MENFIS think tank, working on the definition of USERS requirement for the new coming CO3D project.

Activities in education

Co-organised long training courses such as Catachina, Beijing 2003 at the National Center for Disaster Reduction, MOCA, training on exploitation of EO data for flood rapid mapping. Participation in training sessions on GIS in Ivory Coast, 1998, and on flood mapping and monitoring for Senegal stakeholders (2011); continuing with programs for firemen within the GMES SAFER project, Aix 2011. In December 2015 he participated to the Do SON Summer School on "EO for environmental applications" (Vietnam). In July 2018, he participated to a 2018 French-Iranian remote sensing summer school, at of K.N. Toosi University Teheran (Iran).

Lecturer since 2007 on ESA land Training courses (Lisbon 2007, Pragua 2009, Krakow 2011, Athens 2013, Bucarest 2015) as well as ESA_MOST DRAGON training, (Whuan 2008, Lanzhou 2010, Beijing 2012, Nanchang 2014, Tianjin 2015, Kunming, 2017) on the field of water bodies mapping and monitoring.

Amination on dedicated seminars within engineering school cursus, such as Telecom Strasbourg, from 2007 to 2010, Paris Tech, 2009, Nancy Mines School, 2014. Insure as well the G5 topography courses at the INSA Strasbourg since 2017.

Since 1990, he has supervised more than 30 research students to graduation (MSc) in optical and radar remote sensing applications for environmental/hazards domains

Recent projects

- Emergency Mapping Service: EMS Copernicus
- The Rapid Analysis and Spatialisation Of Risk (RASOR) project, FP7, 2013-2016
- DRAGON 4: New Earth Observations tools for Water resource and quality monitoring in Yangtze wetlands and lakes" (EOWAQYWET)
- RT CNES Sentinel flux and water bodies mapping and monitoring
- SWOT Mask: Exploiting a priori water mask for improving the water bodies' detection within SWOT data flux.

Selected publications

- Ming Shen, Hongtao Duan, Zhigang Cao, Kun Xue, Steven Loiselle and Herve Yesou, 2017: Determination of the Downwelling Diffuse Attenuation Coefficient of Lake Water with the Sentinel-3A OLCI. Remote Sens. 2017, 9(12), 1246
- Hervé Yesou, Eric Pottier, Grégoire Mercier, Manuel Grizonnet, Sadri Haouet, Alain Giros, Robin Faivre, Jérome Maxant, Mathias Studer, Claire, 2016 : Synergy of Sentinel1 and Sentinel2 imagery for wetland monitoring. Information extraction from continuous flow of Sentinel images applied to water bodies and vegetation mapping and monitoring. Proceedings IGARSS 2016, 10-15 July 2016 Beijing, PR China
- Hervé Yésou, Claire HUBER, Sadri HAOUET, Xijun LAI, Shifeng HUANG, Paul de FRAIPONT, & Yves Louis DESNOS, 2016: Exploitating Sentinel1 time series to monitor the largest feresh water bodies in PR China. The Poyang lake case. Proceedings IGARSS 2016, 10-15 July 2016 Beijing, PR China

- Yésou H., Chastanet P., Maxant J., Huber C., Clandillon S., Battiston St., Proy C., de Fraipont P., 2015: Contribution de l'imagerie Pléiades à la cartographie rapide des dégâts suite à des catastrophes majeures: retours d'expérience après deux ans d'actions de cartographie rapide localisées en Asie, en Afrique, en Europe et aux Caraïbes. Revue FPT, 209, 81-88.
- Yésou H., Sarti F., Tholey N., Mouratidis A., Clandillon S., Huber Cl., Studer M. & de Fraipont P., 2013: Addressing emergency flood mapping and monitoring of inland water bodies with Sentinel 1-2. Expectative and perspectives. Living Planet Symposium, Edinburg, Scotland, UK, 9-13 September 2013, ESA SP 722.