



Last Name : **ANDREOLI**  
First name : **Rémi**  
**45 years old**

*Engineer in remote sensing, environment and  
geomorphology*  
[remi.andreoli@tauha.net](mailto:remi.andreoli@tauha.net)  
[remi.andreoli@quintesens.net](mailto:remi.andreoli@quintesens.net)  
tel. +687 87 11 60

## 1) BIO

With a master's degree in remote sensing and environment, Remi started his career as engineer at the University of Strasbourg within the Young Scientist Program of the European Space Agency. Member of the MOST-ESA Dragon program between European Space Agency and China Space Agency, he worked specifically in the monitoring of China wetlands with remote sensing (water dynamic, environment, floods and droughts, diseases). Member of the Rapid Mapping team of France (SERTIT), Remi participated in the damage assessment of the 2004 Indian Ocean earthquake and tsunami and the 2005 Hurricane Katrina in New Orleans, among many others. Since 2009, Remi is at the head of the Space Applications Department of BLUECHAM SAS and teaches geographic information system and remote sensing at the University of New Caledonia and the University of the South Pacific in Vanuatu. In 2018, he co-founded Quintesens Pty Ltd and became a member of the Pacific Geographic Information System and Remote Sensing Council (PGRSC) in 2019.

Senior expert in remote sensing, Remi and his team won 12 international awards that recognize the technical excellence, innovations in remote sensing and commitment for people and communities in the Pacific. Author of more than 20 international peer-reviewed publications and three book chapters, Remi is still publishing in international scientific journals in remote sensing and in environment. His team is continuously developing innovative ways to exploit remote sensing data using Cloud Computing of Big Data, deep learning and Artificial Intelligence to better understand and monitor an ever-changing environment (mangroves, coastal areas, vegetation, urban areas, mining exploration and exploitation, invasive species). He has forged strong partnerships with space agencies worldwide, in particular with MAXAR - the world leader in high-resolution imaging - or CNES (Agence Spatiale Française).

## 2) PROFESSIONAL EXPERIENCE

- 2025: **Founder of Tauhã**
- Since 2019: **Founding Member of the Pacific GIS and Remote Sensing Council (PGRSC)**
- Since 2014: **Temporary Lecturer at the University of New Caledonia**  
Remote Sensing  
Geographic Information Systems and spatial modelling  
Digital cartography
- 2017: **Co-founder of Quintesens Pty Ltd**
- 2020-2025: **Chief Operations Officer - BLUECHAM SAS**
- 2014-2025: **Director of Space Applications - BLUECHAM SAS**
- 2009 -2014: **Head of Space Applications - BLUECHAM SAS**  
Engineer in remote sensing and spatial modelling  
Expertise and assistance in data acquisitions  
Earth Observation data processing  
Change detection  
Research and development of new technologies

Since 2011 : Representative of BLUECHAM SAS at the Technical Competence Center of the French space agency (CNES)

2006-2008: **Engineer at the University of Strasbourg - SERTIT, European Rapid Mapping center**  
Rapid mapping in case of major disaster such as the 2004 Tsunami or Hurricane Katrina (USA).

Member of the ESA-MOST DRAGON program (UE/China) on the use of Earth Observation data to monitor and manage wetlands (floods, water dynamic, environment, diseases)

Expertise on new sensors

Participation in the design of new sensors (Pléiades, Pléiades Néo)

Remote sensing methodologies for wetlands, water bodies and change detection

2005-2006 : **European Space Agency Young Scientist (ESA) / University of Strasbourg - SERTIT**  
Radar and optical Sensors specifications and synergies for wetlands management  
flood monitoring and water dynamic assessment

### 3) TEACHING

2007: Advanced Training Course on Land Remote Sensing  
*Instituto Superior de Estatística e Gestão de Informação, Universidade Nova de Lisboa*  
*European Space Agency*

Since 2014: Mapping and GIS - Master's degree  
Remote sensing - Master's degree & Bachelor's degree  
*University of New Caledonia*

2018: Remote sensing, interoperability and cloud computing - Master's degree  
*University of Vanuatu*

### 4) ACADEMIC QUALIFICATIONS

2004: **Master in Space Technologies with Highest Honours**  
University of Strasbourg.

2003: **Master in spatial systems and Environment with Highest Honours**  
University of Strasbourg.

2002: **M. Sc. in Physical Geography with Highest Honours**  
University of Strasbourg.

### 5) SKILLS

Remote sensing	Modelling	Signal analysis
Geomorphology	Management	Synthetic Aperture Radar
GIS	Natural Hazard	Physical geography
Disasters	Wetlands	Mapping and Rapid mapping
	Floods	

### 6) HONOURS AND RECOGNITION

2014 : DigitalGlobe Excellence Award for the Asia-Pacific Region  
DigitalGlobe Innovation Award for the Asia-Pacific Region  
Numeric Company Award - CCI New Caledonia

- 2015 : SIBA (Space Industry and Business Association - Australia) Technical excellence Award for Pacific Countries - Suva (Fidji)  
 FACCI (French-Australia Chamber of Commerce & Industry) Award Smart Cities - Sydney
- 2016 : DigitalGlobe Excellence Award for the Asia-Pacific Region  
 DigitalGlobe Seeing A Better World Award for the Asia-Pacific Region
- 2017 : DigitalGlobe Excellence Award for the Asia-Pacific Region  
 DigitalGlobe Innovation Award for the Asia-Pacific Region  
 SIBA Technical excellence Award for Pacific Countries - Suva (Fidji)  
 SIBA Innovation and Commercialisation Award for Pacific Countries - Suva (Fidji)
- 2018 : SIBA Technical excellence Award for Pacific Countries - Suva (Fidji)  
 DigitalGlobe Seeing A Better World Award
- 2020 : MAXAR Seeing A Better World Award
- 2025 : 1<sup>st</sup> Prize ActInSpace New Caledonia

## 7) MAIN SCIENTIFIC RESULTS

- Dupouy, C., Whiteside, A., Tan, J., Wattlez, G., Murakami, H., Andreoli, R., Lefèvre, J., Röttgers, R., Singh, A., Frouin, R., « A Review of Ocean Color Algorithms to Detect Trichodesmium Oceanic Blooms and Quantify Chlorophyll Concentration in Shallow Coral Lagoons of South Pacific Archipelagos », *Remote Sensing*, vol. 15, n° 21, p. 5194, oct. 2023, doi: 10.3390/rs15215194.
- B. van Haaren, R. Andreoli, P. Dumas, D. Lille, et H. Géraux, « Characterizing forest ecosystem services degradation within water catchments. An application to a South West Pacific tropical and semi-arid island (New Caledonia) », *Environmental Challenges*, p. 100151, mai 2021, doi: 10.1016/j.envc.2021.100151.
- Andreoli R., Ducarouge B., Maura J., Leopold A., Mougél P.-N., Durand A., Marchand C., Folsher-Selmaoui N., Yesou H., Tinel C., Fonatanaz D., Lille D.. (2015). L'imagerie spatiale à très haute résolution au coeur du dispositif de Geospatial Cloud Computing QähnelöTM : application aux données Pléiades en Nouvelle-Calédonie. *Revue Française de Photogrammétrie et de Télédétection*, 209(2).
- Andreoli, R., Allenbach, B., Battiston, S., Bestault, C., Caspard, M., Clandillon, S., ... Yesou, H. (2008). Question de cartographie d'urgence. Actes de Conférence Du Festival International de La Géographie, Saint-Dié-Des-Vosges, 2 - 5 Oct. 2008, 8.
- Andreoli, R., Marchand, C., Léopold, A., Tinel, C., & Fontanaz, D. (2014). Mangroves monitoring using VHR Pléiades data under mining constraints. In *Pléiades Days*. Toulouse, France.
- Andreoli, R., Marchand, C., Selmaoui-Flocher, N., Yesou, H., Tinel, C., & Fontanaz, D. (2013). Monitoring of Pacific islands' environment from the mountain to the coral reefs under mining constraints : case study of the Great South of New Caledonia with Pleiades VHR data. Presented at the IEEE International Geoscience and Remote Sensing Symposium (IGARSS'13), Melbourne: IEEE.
- Andreoli, R., Selmaoui-Folcher, N., Maura, J., Mougél, P.-N., Tinel, C., & Fontanaz, D. (2014). Spatial and temporal data mining of remote sensing data applied to erosion process discovery and analysis. In *Pléiades Days*. Toulouse, France.
- Andreoli, R., Yesou, H., Li, J., & Desnos, Y.-L. (2007). Inland lake monitoring using low and medium resolution ENVISAT ASAR and optical data: Case study of Poyang Lake (Jiangxi, P.R. China). In *Geoscience and Remote Sensing Symposium, 2007. IGARSS 2007. IEEE International* (pp. 4578 –4581). doi:10.1109/IGARSS.2007.4423876
- Andreoli, R., Yesou, H., Maura, J., Durand, A., Vama, A., Tinel, C., & Fontanaz, D. (2014). VHR Pléiades data in support to cyclone and tsunami risk management for local communities through geospatial cloud computing platform. In *Pléiades Days*. Toulouse, France.
- Andreoli, R., Yésou, Y., Li, J., Desnos, Y.-L., H., S., & De Fraipont, P. (2007). Poyang Hu (Jiangxi Province, P. R. of China) Area Variations between January 2004 and June 2006 Using ENVISAT Low and Medium Resolution Time Series. *Geographic Information Sciences*, 13(1-2), 24–35. doi:10.1080/10824000709480629
- Andreoli R., Binet R., Ledrappier F., Clandillon S., Chesnel A.L., Meyer C., Battiston S., Yesou H., 2007: Change detection based on correlation analysis exploiting metric and sub-metric optical imagery, *GMOSS Conference 2007*.

- Andreoli R., Yésou H., 2007; Large Scale Change Detection Techniques Dedicated to Flood Monitoring Using ENVISAT Wide Swath Mode Data, *Geoscience and Remote Sensing Symposium, 2007. IGARSS 2007. IEEE International 23-28 July 2007 Page(s):2382 – 2385*
- Andreoli R., Rosique T., Schmidt M. et Carozza J-M., 2006 : La dernière phase glaciaire du haut bassin de la Fecht (Vosges, France) : dynamique de l'englacement et chronologie relative de la déglaciation, Géomorphologie : relief, processus, environnement, 1/2006 | 2006, 23-36.
- Bourgeois C., Alfaro A. C., Leopold A., Andreoli R., Bisson A., Desnues A., Duprey J-L., and Marchand C. 2019. "Sedimentary and Elemental Dynamics as a Function of the Elevation Profile in a Semi-Arid Mangrove Toposequence." *CATENA* 173 (February): 289–301. doi:[10.1016/j.catena.2018.10.025](https://doi.org/10.1016/j.catena.2018.10.025).
- Durand, A., Andreoli R., Tinel, C., & Yesou, H. (2013). Multi-strip DSM generation with Pleiades-HR data over a coastal and mountainous mining landscape Case study : Yate, New Caledonia, France. In 33rd EARSeL Symposium. Matera, Italy.
- Huber C., Yesou H., Andreoli R., Uribe C., 2013; Statistical analysis of EO time series : highlight of Drought and Flood trends of Poyang Lake Depression, 2013 *DRAGON Symposium - ESA-MOST China Dragon Cooperation, 6 - 7 June 2013, Palermo, Italy.*
- Meger N., Rigotti C., Gueguen L., Lodge F., Pothier C. Andreoli R., Datcu M., 2012: Normalized mutual information-based ranking of spatio-temporal localization maps, *ESA – EUSC-JRC 2012*
- Yesou H, Huber C., Xijun, L., Averty S., Jiren, L., Daillet S, Bergé-Nguyen M., Xiaoling, C., Shifeng, H., Burnham, J., Crétaux J-F., Marie T., Jinggang, L., Andreoli R. and Uribe C. (2011), *Nine years of water resources monitoring over the middle reaches of the Yangtze River, with ENVISAT, MODIS, Beijing-1 time series, Altimetric data and field measurements. Lakes & Reservoirs: Research & Management*, 16: 231–247.
- Marchand, C., Quiniou, thomas, & Andreoli R. (2013). Suivi des mangroves en contexte minier : mesures in situ / télédétection satellitaire optique et radar (Rapport de recherche No. 1) (p. 130). Nouméa: IRD, UNC, Bluecham SAS, Elecpor Deimos, CNES, LATUV, CNRT.

## 8) BOOKS

- Loubersac, L., Andreoli R., & Dupouy, C. (2010). Traitement des données de télédétection et aménagement du littoral. In *Traitement des données de télédétection* (2<sup>ème</sup> Edition., p. 553). Dunod.
- Andreoli R. (2017). Erosion risk modelling using RUSLE equation. In *Remote Sensing using QGIS* (Baghdadi N., Mallet C. & Zribi M. Editors). In press
- Andreoli R. and Van Haaren B. (2017). Ecosystemic assessment: Application to forests for water protection in tropical islands. In *Remote Sensing using QGIS* (Baghdadi N., Mallet C. & Zribi M. Editors). In press