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| **Name:** Spyrakos, Evangelos |  |
| **Nationality:** Hellenic/British | **ORCIDID:** 0000-00010-7970-5211 |
| **Website:** https://www.stir.ac.uk/people/257261 | **E-mail:** [evangelos.spyrakos@stir.ac.uk](mailto:evangelos.spyrakos@stir.ac.uk) |

**EDUCATION & PROFESSIONAL HISTORY**

**2024 –** Professor,University of Stirling, UK

**2021 –** Deputy Associate Dean, University of Stirling, UK

**2020 –** Associate Professor of Earth observation, University of Stirling, UK

**2017-2020**: Lecturer in Earth Observation, Programme Director Earth and Planetary observation, University of Stirling, UK

**2012-2017:** NERC Research Fellow, University of Stirling, UK

**2011-2012:** Postdoctoral Research Associate, University of Vigo, Spain

**2007-2011:** Marie Curie Research Fellow, University of Vigo, Spain

**2009-2012:** University of Vigo PhD. Applied Physics (cum-laude)

**2007-2009:** University of Vigo MSc. Applied Physics (sobresaliente)

**2005-2007:** University of Aegean MSc. Integrated Coastal Management

**2000-2005:** University of Aegean B.Sc. (Hons) Marine Sciences (First class)

**SELECTED RECENT & CURRENT GRANTS:** from a total of >40 grants since 2012 as PI, institutional PI (iPI) or Co-I worth over £60M

**2025: Innovate UK on smart aquaculture**. PI (£0.7M)

**2025: BBSRC AquaSoS.** iPI (£5M)

**2025: ESA Africa.** Co-I (£50k)

**2024: ESA Anaconda**. Co-I (£1M)

**2024: NERC SenseH2O**. Co-I (£0.7M)

**2024: UKRI STFC Radio Astronomy**. iPI **(**£5M**)**

**2024: Horizon Europe InnoSeD**. iPI **(**€10M**)**

**2024: NERC SenseH2O**. Co-I (£0.7M)

**2023: Horizon Europe LandSeaLot**. iPI **(**€10M**)**

**2023: ESA CDOM**. PI (€100k)

**2023: UK Cornelia.** PI (£600k)

**2022: Horizon Europe Danube4all**. iPI (€10M)

**2021: H2020 CERTO.** Co-I (€3M)

**2021: H2020 DOORs**.Co-I (€10M)

**2020:** **H2020** **Water-FORCE.** iPI: Copernicus for Water (€3M)

**2020:** **European Space Agency CCI**. iPI ESA CCI+ Consistency (€100k)

**2020: H2020-SPACE-2019**. Co-I: Copernicus Evolution – Research for Transitional-water Observation (Certo) (£2.85M).

**2020: European Space Agency & National Remote Sensing of China**. PI: Innovative User-relevant Satellite Products for Coastal and Transitional Waters

**2020: European Space Agency.** iPI:Climate Change Initiative + Lakes (£1.8M total)

**2020:** **UKRI GCRF.** PI: Predicting flooding in Bagladesh (£50k)

**2019: ENVRI-FAIR.** Co-I (€19M)

**2019: EPSRC.** Co-I:Developing statistical downscaling to improve water quality understanding and management in the Ramganga Sub-Basin. (£0.46M total).

**2019:** **UKRI NERC**. Co-I. Delivering Resilience to Climate Impacts on UK Freshwater Quality. (£50k)

**2018**: **UK National Environment Council** FSF Aeronet station at Loch Leven. Project PI (instrument grant $88K to USTIR estimated)

**2017: H2020-SC5-18-2017**. Co-I: Multiscale Observation Networks for Optical monitoring of Coastal waters, Lakes and Estuaries Co-I (€5M total)

**2017: H2020-EO-1-2017**. iPI. Commercial service platform for user-relevant coastal water monitoring services based on Earth observation. Co-I (€2 total)

**2016: EO-1-2016 EOMORES**: Earth Observation based services for Monitoring and Reporting of Ecological Status. Co-I (€0.11M to Stirling, €2 total)

**2016:** **H2020-INFRADEV-2016-2** Preparatory phase for the pan-European Research Infrastructure DANUBIUS (Danubius-PP). (€0.2M to Stirling, €2 total)

**SELECTED PUBLICATIONS from 2020:** more than 50 peer-reviewed publications with ISI *h* index = 22 and more than 2500 total citations.

1. White, S., Lopez, E. M., Silva, T., Spyrakos, E., Martin, A., & Amoudry, L. (2025). Exploring the link between spectra, inherent optical properties in the water column, and sea surface temperature and salinity. *Remote Sensing Applications: Society and Environment*,
2. Atton Beckmann, D., Werther, M., Mackay, E., Spyrakos, E., Hunter, P., & Jones, I. (2025). Are more data always better? – Machine learning forecasting of algae based on long-term observations. *Journal of Environmental Management*,
3. Sent, G., Antunes, C., Spyrakos, E., Jackson, T., Atwood, E. C., & Brito, A. C. (2024). What time is the tide? The importance of tides for ocean colour applications to estuaries. *Remote Sensing Applications: Society and Environment*,
4. Baltodano, A., Agramont, A., Lekarkar, K., Spyrakos, E., Reusen, I., & van Griensven, A. (2024). Exploring Global Remote Sensing Products for Water Quality Assessment: Lake Nicaragua case study. *Remote Sensing Applications: Society and Environment*,
5. Liu, D., Spyrakos, E., Tyler, A., Shi, K., & Duan, H. (2024). Satellite algorithms for retrieving dissolved organic carbon concentrations in Chinese lakes. *Science of the Total Environment*,
6. Liu, D., Shi, K., Chen, P., Yan, N., Ran, L., Kutser, T., Tyler, A. N., Spyrakos, E., Woolway, R. I., Zhang, Y., & Duan, H. (2024). Substantial increase of organic carbon storage in Chinese lakes. *Nature Communications*,
7. Atwood, E. C., Jackson, T., Laurenson, A., Jonsson, B. F., Spyrakos, E., Jiang, D., Sent, G., Selmes, N., Simis, S., Danne, O., Tyler, A., & Groom, S. (2024). Framework for Regional to Global Extension of Optical Water Types for Remote Sensing of Optically Complex Transitional Water Bodies. *Remote Sensing*,
8. Jiang, D., Jones, I., Liu, X., Simis, S. G. H., Cretaux, J.-F., Albergel, C., & Spyrakos, E. (2024). Impacts of droughts and human activities on water quantity and quality: Remote sensing observations of Lake Qadisiyah, Iraq. *International Journal of Applied Earth Observation and Geoinformation*,
9. González Vilas, L., Spyrakos, E., Pazos, Y., & Torres Palenzuela, J. M. (2024). A New Algorithm Using Support Vector Machines to Detect and Monitor Bloom-Forming Pseudo-nitzschia from OLCI Data. *Remote Sensing*,
10. Jiang, D., Matsushita, B., Pahlevan, N., Gurlin, D., Fichot, C. G., Harringmeyer, J., …Spyrakos, E. (2023). Estimating the concentration of total suspended solids in inland and coastal waters from Sentinel-2 MSI: A semi-analytical approach. *ISPRS Journal of Photogrammetry and Remote Sensing*,
11. Lehmann MK, Gurlin D, Pahlevan N, Anstee J, Balasubramanian SV, Barbosa CCF, Binding C, Bracher A, Bresciani M, Burtner A, Cao Z, Dekker AG, Jiang D, Spyrakos E & Werther M (2023) GLORIA - A globally representative hyperspectral in situ dataset for optical sensing of water quality. *Scientific Data*
12. Wang, S., Jiang, X., Spyrakos, E., Li, J., McGlinchey, C., Constantinescu, A. M., & Tyler, A. N. (2023). Water color from Sentinel-2 MSI data for monitoring large rivers: Yangtze and Danube. *Geo-Spatial Information Science*,
13. De Keukelaere, L., Moelans, R., Knaeps, E., Sterckx, S., Reusen, I., De Munck, D., …Tyler, A. (2023). Airborne Drones for Water Quality Mapping in Inland, Transitional and Coastal Waters-MapEO Water Data Processing and Validation. *Remote Sensing*,
14. Jiang, D., Scholze, J., Liu, X., Simis, S. G. H., Stelzer, K., Müller, D., …Spyrakos, E. (2023). A data driven approach to flag land affected signals in satellite derived water quality from small lakes. *International Journal of Applied Earth Observation and Geoinformation*,
15. Courtecuisse, E., Marchetti, E., Oxborough, K., Hunter, P. D., Spyrakos, E., Tilstone, G. H., & Simis, S. G. H. (2023). Optimising Multispectral Active Fluorescence to Distinguish the Photosynthetic Variability of Cyanobacteria and Algae. *Sensors*,
16. Constantinescu, A. M., Tyler, A. N., Stanica, A., Spyrakos, E., Hunter, P. D., Catianis, I., & Panin, N. (2023). A century of human interventions on sediment flux variations in the Danube-Black Sea transition zone. *Frontiers in Marine Science*,
17. Werther, M., Odermatt, D., Simis, S. G. H., Gurlin, D., Lehmann, M. K., Kutser, T., …Spyrakos, E. (2022). A Bayesian approach for remote sensing of chlorophyll-a and associated retrieval uncertainty in oligotrophic and mesotrophic lakes. *Remote Sensing of Environment*,
18. Simpson, M. D., Marino, A., de Maagt, P., Gandini, E., Hunter, P., Spyrakos, E., …Telfer, T. (2022). Monitoring of Plastic Islands in River Environment Using Sentinel-1 SAR Data. *Remote Sensing*,
19. Werther, M., Odermatt, D., Simis, S. G. H., Gurlin, D., Jorge, D. S. F., Loisel, H., …Spyrakos, E. (2022). Characterising retrieval uncertainty of chlorophyll-a algorithms in oligotrophic and mesotrophic lakes and reservoirs. *ISPRS Journal of Photogrammetry and Remote Sensing*,
20. Courtecuisse, E., Oxborough, K., Tilstone, G. H., Spyrakos, E., Hunter, P. D., & Simis, S. G. H. (2022). Determination of optical markers of cyanobacterial physiology from fluorescence kinetics. *Journal of Plankton Research*,
21. Simis, S., Hunter, P., Matthews, M., Spyrakos, E., Tyler, A., & Vaiciute, D. (2022). Improved hyperspectral inversion of aquatic reflectance under non-uniform vertical mixing. *Optics Express*,
22. Liu, X., Steele, C., Simis, S., Warren, M., Tyler, A., Spyrakos, E., …Hunter, P. (2021). Retrieval of Chlorophyll-a concentration and associated product uncertainty in optically diverse lakes and reservoirs. *Remote Sensing of Environment*,
23. Gong, M., Miller, C., Scott, M., O'Donnell, R., Simis, S., Groom, S., …Spyrakos, E. (2021). State space functional principal component analysis to identify spatiotemporal patterns in remote sensing lake water quality. *Stochastic Environmental Research and Risk Assessment*,
24. Werther, M., Spyrakos, E., Simis, S. G. H., Odermatt, D., Stelzer, K., Krawczyk, H., …Tyler, A. (2021). Meta-classification of remote sensing reflectance to estimate trophic status of inland and nearshore waters. *ISPRS Journal of Photogrammetry and Remote Sensing*,
25. Pahlevan, N., Mangin, A., Balasubramanian, S. V., Smith, B., Alikas, K., Arai, K., …Tyler, A. (2021). ACIX-Aqua: A global assessment of atmospheric correction methods for Landsat-8 and Sentinel-2 over lakes, rivers, and coastal waters. *Remote Sensing of Environment*,
26. Bellas Aláez, F. M., Torres Palenzuela, J. M., Spyrakos, E., & Gonzalez Vilas, L. (2021). Machine Learning Methods Applied to the Prediction of Pseudo-nitzschia spp. Blooms in the Galician Rias Baixas (NW Spain). *ISPRS International Journal of Geo-Information*,
27. Simpson, M., Marino, A., de Maagt, P., Gandini, E., Hunter, P., Spyrakos, E., …Telfer, T. (2021). Monitoring Surfactants Pollution Potentially Related to Plastics in the World Gyres Using Radar Remote Sensing.
28. Wang, S., Li, J., Zhang, B., Lee, Z., Spyrakos, E., Feng, L., …Zhang, X. (2020). Changes of water clarity in large lakes and reservoirs across China observed from long-term MODIS. *Remote Sensing of Environment*,
29. Spyrakos, E., Hunter, P., Simis, S., Neil, C., Riddick, C., Wang, S., …Tyler, A. (2020). Moving towards global satellite based products for monitoring of inland and coastal waters. Regional examples from Europe and South America.

**SELECTED BOOK CHAPTERS AND REPORTS:** more than 50

1. Greb, S., SchaeFer, B., DiGiacomo, P., Wang, M., Odermatt, D., and **Spyrakos, E.,** 2017: Chapter 3 Complementarity of in-situ and satellite measurements. Coastal and Inland Water Quality. Reports of the International Ocean-Colour. Coordinating Group.
2. Dekker, A., Hesrin, E., Lee, Z., Bernard, S., and **Spyrakos, E.**, 2017: Chapter 6 Sensors. Coastal and Inland Water Quality. Reports of the International Ocean-Colour Coordinating Group.

**CONFERENCES AND WORKSHOPS:** more than 200 oral & poster presentations in several scientific international and regional conferences / workshops e.g and a number of keynotes and invited talks:

* International Ocean Colour Science (IOCS) meeting
* European Space Agency (ESA) Living Planet Symposium
* European Geosciences Union (EGU) General Assembly
* Colour and Light in the Ocean from Earth Observation (CLEO)
* MERIS/(A)ATSR & OLCI, SLSTR Preparatory Workshop, ESA-ESRIN
* MERIS/(A)ATSR Workshop, ESA-ESRIN
* Sentinel3-Validation Team meetings
* Workshop on Remote Sensing of the Coastal Zone (EARSeL)
* International Conference on Remote Sensing and Geoinformation of Environmen
* SPIE Remote Sensing
* Remote Sensing and photogrammetry society annual conference with Irish Earth
* Observation Symposium
* Black Sea from Space Workshop
* GCOS-The conference Global Climate Observation: the Road to the Future
* Association for the Sciences of Limnology and Oceanography

**AWARDS AND OTHER INDICATORS OF ESTEEM**

1. MARIE CURIE fellowship 2008 to 2011
2. 3-year contract with British Council for assessment of research awards and grants applications 2016 to 2019
3. Participation at GEO Water Quality Summit (WMO, Geneva) in order to define specific requirements of the water quality observing system components and develop a plan to establish a harmonized multi-scale global water quality monitoring service 2015
4. Chair of several conference sessions e.g.: International Conference on Remote Sensing and Geoinformation Environment Pafos (08-10 April 2013
5. Co-author (AN Tyler, CJ Merchant, S Simis, S Groom, PD Hunter, M. Dowel, E Spyrakos) of Community note to Global Climate Observing System (GCOS) on extending the scope of the Essential Climate Variables (ECVs)
6. Organiser of several (more than 10) meetings (e.g. Group on Earth Observations-GEO meeting, Geneva 2015 and Stirling 2019), workshops and other scientific events.

**ASSOCIATIONS, MEMBERSHIPS AND NETWORKS:**

* Steering Committee NERC FSF
* Funder of Earth observation workstream of UN WWQA
* Scottish Academics for Space Research Forum, Geotechnical Chamber of Greece; Association for the Sciences of Limnology and Oceanography; American Geophysical Union; Group of Earth Observation (GEO) community of practice- Aquawatch; International Ocean-Colour Coordinating Group (IOCCG) Remote Sensing of inland and nearshore waters working group; UK National Earth observation services; Scottish Space innovation group; IOCCG HABs hyperspectral forming working group; Blue Economy sandpit; BIOAQUA (Spanish network on water quality); IOCCG Water types working group

**RESEARCH PANELS AND GRANT REVIEWING**

* NERC; Belgian Space Agency; British Council-Institutional Links panel reviewer 2019; British Council-Institutional Links Russia 2017; British Council-Institutional Links STREAM 2017; British Council-Institutional Links UK-Gulf 2017; British Council-Newton Institutional Links 2017; British Council-UK Research Links 2017; Netherlands Organisation for Scientific Research-User Support Programme Space Research 2016; COST Action-European Cooperation in Science and Technology 2015

**AD HOC REVIEWS OF MANUSCRIPTS FOR SCIENTIFIC JOURNALS AND EDITOR ROLES**

* Remote Sensing of Environment; Remote Sensing ; Frontiers in RS (Editor); Sensors; Geophysical Research-Oceans; Environmental Monitoring and Assessment; Science and Technology; Water Research; Ocean Science; Aquatic Ecology; Water (Editor); ISPRS Journal of Photogrammetry and Remote Sensing; Limnology and Oceanography; Frontiers in marine sciences (Editor); Journal of Limnology; Computers and Geosciences; Critical Reviews in Environmental Science and Technology etc.

**PhD SUPERVISION**

1. C McClinchey Remote Sensing of phytoplankton properties. Primary Supervisor. Funded by ESA
2. D. Beckmann Using satellite remote sensing and automated in situ sensors to monitor and predict cyanobacterial blooms in multiple lakes. Funded by Scottish government. Co-supervisor 2021-
3. G. Sent Earth observation products for coastal waters in support of water quality monitoring. . Funded by FTC. Co-supervisor 2022-
4. Nicola Horsburgh. Coastal environments. Co-supervisor 2022-
5. S. White Salinity and temperature from optical sensors. Funded by UKRI. Co-supervisor 2021-
6. J. Ganesh A tale of two lagoons: Determining the drivers and trajectories of change for the Venice (Italy) and Razelm-Sinoe (Danube-Delta, Romania) lagoons through Earth observation and modelling. Funded by UKRI. Co-supervisor. 2021-
7. X. Vega Aguilar Remote Sensing of Carbon fluxes in coastal Antarctica. Self -funded. Main supervisor 2021-
8. M. Werther Optical biogeochemistry of clear lakes. USTIR Matched-funded with EAWAG and PML. Main supervisor. 2018-2022
9. E. Courtecuisse Fluorescence assessment on cyanobacteria. NERC. Co-supervisor. 2018-
10. J. Bailey Monitoring icebergs in satellite images using articial intelligence. Self-funded. co-supervisor. 2018-
11. A. Constantinescu Sediment uxes from the Danube to Black Sea. Co-supervisor. 2014-2019
12. M. Encina Aullo Earth observation of CDOM in inland systems. co-supervisor. 2013-2019

**OTHER SKILLS**

**Languages:** English (fluent)**;**  Spanish (fluent)**;** German (Grundstufe)**;** Greek (native)

**Computer Skills:** Advanced skills in Programming (MatLab; R; IDL; LATEX; Python)**;** Excellent main computer skills**;** Advanced skills in GIS and RS (e.g. SNAP, BEAM, BRAT, Bilko, SeaDAs)

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