

CMRC INTERESTS and capabilities in relation to 2012 SPACE

SPA.2012.1.1-05: Sentinel data.

- contribute in development of distribution and product select tools (web portal elements)
- carry out data validation activities.
- As a university can offer MSc and PhD student opportunities, as requested in the call
- Link with National Space Centre, Co. Cork Ireland, who are developing infrastructure to become an ENVISAT and SENTINEL ground station

SPA.2012. 1.3-01 and 3-03: in-situ component and climate change- data archiving and exchange:

- Development of tools for access, recovery, logging, QA, synthesis etc.
- particular expertise in semantic interoperability, data harmonisation and standards.
- links to INPE in Brazil
- the Centre focuses on marine applications

Contact:

Dr Ned Dwyer
Deputy Director
CMRC – UCC
Telephone: +353 (21) 470 3104
Email: n.dwyer@ucc.ie

http://cmrc.ucc.ie/pages/staff_page.php?id=7

Overview of Coastal and Marine Research Centre, Ireland

The CMRC, within University College Cork, was established in 1994 to undertake research and consultancy into coastal and marine resource management. Staff include biologists, computer scientists, hydrographers, geographers and engineers, all of whom work collaboratively in a project orientated environment. The Centre's expertise and skill sets are highly regarded both nationally and internationally. Fundamental and applied research in the CMRC is organised according to five specialist areas: marine geomatics; applied remote sensing and GIS; marine and coastal governance; coastal processes and seabed mapping and marine ecology. The expertise within the applied remote sensing and GIS group is of particular significance to the space call area.

This expertise in remote sensing has been built over recent years and has involved work with data from a wide range of satellite EO instruments including MERIS, MODIS, ASAR, PALSAR and higher resolution optical datasets (e.g. Landsat, IRS, SPOT, IKONOS) for land, coastal and marine applications. These have included ship detection as part of the FP7 LIMES, sea state and oil pollution as part of the FP5 MARS AIS and inter-tidal monitoring as part of HIMOM (FP5). More recently staff at the Centre carried out saltmarsh classification using SPOT and IKONOS data as part of a BNSC funded project. Ongoing nationally funded projects include vegetation phenology and seasonality tracking using MODIS and MERIS, peat land classification and subsidence measurement (INSAR), using C-band ASAR imagery and soil moisture determination using both intensity and interferometric approaches based on C-band ASAR and L-band ALOS.

The centre has just started an ESA DUE funded project, eSurge, led by Logica UK, which has a primary goal of collating data and information on historical storm surge events and providing an enhanced prediction capacity. The CMRC will focus on flood extent mapping from optical and SAR data, data product handbook compilation and training activities. The Centre was also successful as a partner in a winning FP7 project under the 2011 SPACE call. This project entitled OSS 2015, led by ACRI France will focus on developing enhanced ocean biogeochemical products. The CMRC will assist primarily in in-situ data management and also co-ordination of the field studies in the North Atlantic.

The Geomatics team focuses on knowledge and information management including GIS and web-GIS for data management and geo-spatial analysis; Internet technologies and services; data integration; semantic interoperability; open source software, geomatics standards (e.g. ISO 19000 family, OGC and INSPIRE); data mining; data visualisation; data quality; metadata; high powered computing and data modelling (e.g. GeoSciML, ArcMarine Data Model). Current EU funded projects requiring geomatics skills include NETMAR, MESMA and GEOSEAS.