Research output

Methane Derived Authigenic Carbonate (MDAC) Aragonite Cemented Quaternary Hardground from a Methane Cold Seep, Rathlin Basin, Northern Ireland: δ 13C and δ 18O Isotopes, Environment, Porosity and Permeability

3DGPR for the Non-Destructive Monitoring of Subsurface Weathering of Sandstone Masonry

Equifinality and preservation potential of complex eskers

Gamma-ray log correlation and interpretation of Fitton and Casey’s Stratigraphy with offshore borehole 99/16-1

Geographical Information Science (GIS), Spatial Sampling and Soil variability examined using a case of Manslaughter Forensic Soil Science and Geology

The Desktop Study, an essential element of Geoforesics search: homicide and environmental cases (West Belfast, N.Ireland, UK)

The Desktop Study, an essential element of Geoforesics search: homicide and environmental cases (West Belfast, N.Ireland, UK)

Location of the Brecourt (Normandy, France) WW2 Howitzer battery using a geoforesnic search strategy.
Ruffell, A., Wach, G. D. & Wach, G. D., 01 Mar 2019, In : Journal of Conflict Archaeology. 10

The long arm of the (geoforesnic) law

Location of the Brecourt (Normandy, France) WW2 Howitzer battery using a geoforesnic search strategy

Buried Evidence

Forensic geophysics and the search of building interiors, peat bogs and water
Triassic extinctions and explosions

Water and Cosmology in the Prehistoric Maltese World: Fault Control on the Hydrogeology of Ġgantija, Gozo (Maltese Islands)

12th International Conference on Geostatistics for Environmental Applications Proceedings: geoENV2018 Conference Proceedings

Detecting Voids within a Historical Building Façade: A Comparative Study of Three High Frequency GPR Antenna

A continental record of the Carnian Pluvial Episode (CPE) from the Mercia Mudstone Group (UK): palynology and climatic implications.

First workshop on the Carnian Pluvial Episode (Late Triassic): a report

International case studies in forensic geology: fakes and frauds, homicides and environmental crime

Global developments in forensic geology

International case studies in forensic geology: fakes and frauds, homicides and environmental crime

The science of finding buried bodies
Pringle, J. & Ruffell, A., 01 May 2017, In : The Conversation. 7783

The use of geoscience methods for aquatic forensic searches

How science is helping the police search for bodies in water.

Forensic Geoscience Group - the first decade
Spatial distribution of soil geochemistry in geoforensics

A GIS-based landscape approach to Forensic Search Strategies and RAG mapping

Rapid glacial retreat on the Kamchatka Peninsula during the early 21st Century

Integrated protocols for monitoring the impacts of landfill-derived leachates in intertidal environments.

Discovery of relict subglacial lakes and their geometry and mechanism of drainage

Do spectral gamma ray data really reflect humid-arid palaeoclimates? A test from the Palaeogene Interbasaltic weathered horizons at the Giant's Causeway, N.Ireland

The Carnian Humid Episode of the late Triassic: A Review

Compositional Data Analysis in Forensic Geoscience

A RAG System for the Management Forensic and Archaeological Searches of Burial Grounds

Spatial Distribution of Soil Geochemistry in Geoforescnsics

Spectral gamma-ray logs and palaeoclimatic change? Permian – Triassic, Persian Gulf

Volumetric Carbon Content Calculations: A Geostatistical and Compositional Approach

Isotopic Dating and Provenance in Geoforescnsics

Spatial and Temporal Changes in Soil Organic Carbon Assessment using an Integrated Geostatistical and Compositional Data Analysis Approach

Lacustrine flow (divers, side scan sonar, hydrogeology, water penetrating radar) used to understand the location of a drowned person
Search protocols for hidden forensic objects beneath floors and within walls

Forensic Geomorphology

A spatiotemporal remotely-sensed assessment of peat covered areas using airborne radiometrics

Spatial statistics to estimate peat thickness using airborne radiometric data

Soil mineralogy and its effect on oral bioaccessibility of Ni and Cr in soils overlying basalt lavas, Northern Ireland

Ground Penetrating Radar. Geomorphological Techniques

An integrated stratigraphic, petrophysical, geochemical and geostatistical approach to the understanding of burial diagenesis: Triassic Sherwood Sandstone Group, South Yorkshire, UK.

Environmental and Criminal Geoforesics

The use of geoscience methods for terrestrial forensic searches

Geological fakes and frauds

Permian to late Triassic post-orogenic collapse and rifting: arid deserts, evaporating seas and mass extinctions

An apparently jawless cadaver

How Porosity and Permeability Vary Spatially With Grain Size, Sorting, Cement Volume, and Mineral Dissolution In Fluviatil Triassic Sandstones: The Value of Geostatistics and Local Regression

Maximising trace soil evidence: An improved recovery method developed during investigation of a $26 million bank robbery
An apparently jawless cadaver: a case of post-mortem slippage  

Ground penetrating radar as an innovative tool for identifying areas of scour and soil stratification around bridge foundations  

The improvement of peat depth models for Northern Ireland through the Investigation of Tellus data  
Robinson, M., Ruffell, A., McKinley, J. & Young, M., Sep 2010, p. 36-38. 3 p.

Geophysics and the search of freshwater bodies: a review  

Investigation of Tellus data to produce peat depth models for Northern Ireland and its application to Carbon Stocks  

Palaeoclimate change recorded in Upper Cretaceous (Albian-Cenomanian) Kazhdumi Formation Borehole spectral Gamma-Ray Logs, South Pars Gas field, Persian Gulf  

An Integrated Toolkit for the Conservation of Stone-Built Heritage  

A preliminary investigation into the use of testate amoebae for the discrimination of forensic soil samples  

Application of Geophysical Techniques in Identifying Illegally Buried Toxic Waste  

Forensic Geology in Environmental Crime: Illegal Waste Movement Burial in Northern Ireland  

Location and Assessment of an Historic (150-160 years old) mass grave using geographic and ground penetrating radar investigation  

DEVELOPING A 'NON-DESTRUCTIVE SCIENTIFIC TOOLKIT' TO MONITOR MONUMENTS AND SITES  

Geological trace evidence: forensic and legal perspectives  

Spatial Thinking in Search Methodology: A Case Study of the 'No Body Murder Enquiry', West of Ireland  

Geoforensics  
Suspect burial excavation procedure


Palaeosalinity variations in the Early Cretaceous of the Neuquen Basin, Argentina: evidence from oxygen isotopes and palaeoecological analysis


Southern Hemisphere Early Cretaceous (Valanginian-Early Barremian) carbon and oxygen isotope curves from the Neuquén Basin, Argentina


Suspect burial excavation procedure: a cautionary tale


Forensic analysis of wooden safety matches - A case study


Conditional assessment and report for two stone statutes, Caldragh Graveyard, Boa Island, Co. Fermanagh

Curran, J., Ruffell, A. & McKinley, J., Apr 2007, Unknown Publisher.

Use of geostatistics in the Integration of multi-source geophysical data in mapping the geological underlay of Northern Ireland

McKinley, J., Ruffell, A. & Lloyd, C., Feb 2007, Unknown Publisher.

Under-water scene investigation using ground penetrating radar (GPR) in the search for a sunken jet ski, Northern Ireland


Use of geostatistics in the integration of multi-source geophysical and geochemical data in mapping the geological underlay of Northern Ireland


Geostatistical analysis in weathering studies: case study for Stanton Moor building sandstone


Conjunctive use of clay mineralogy and spectral gamma-ray logs in defining late Jurassic – early Cretaceous palaeoclimate change


Freshwater Under water scene of crime reconstruction using freshwater ground-penetrating radar (GPR) in the search for an amputated leg and jet-ski, Northern Ireland

Permian: arid basins and hypersaline seas

The Valanginian (Early Cretaceous) positive carbon-isotope event recorded in terrestrial plants.

Burial Location Using Cheap and Reliable Quantitative Probe Measurements

Geostatistical analysis of spatially varying rock characteristics: applications to the identification and quantification of the spatial variability of rock properties.

Heterogeneous mixed-layer clays from the Cretaceous greensand, Isle of Wight, southern England

Use of variography in permeability characterisation of visually homogeneous sandstone reservoirs with examples from outcrop studies

Characterizing ground hazards induced by historic salt mining using ground-penetrating radar

Distinguishing faults from flooding surfaces on spectral gamma-ray logs.

Authigenic phosphate nodules (Late Cretaceous, Northern Ireland) as condensed succession microarchives

Calcicaceous nannofossils from late Jurassic sediments of the Volga Basin (Russian Platform): evidence for productivity-controlled black shale deposition.

Variscan structure of the Inner Bristol Channel

Ground-penetrating radar facies as an aid to sequence stratigraphic analysis: application to the Archaeology of Clonmacnoise Castle, Ireland

Heterogenous mixed-layer clays from a Cretaceous transgressive siliciclastic succession, Isle of Wight (Southern England)

Isotopic evidence for Late Jurassic-Early Cretaceous climate change
Kinetic fractionation of stable isotopes in belemnite rostra

Permeability variations in visibly homogeneous sandstones

Geostatistical Analysis of permeability of visibly homogeneous sedimentary structures with probe permeametry
Lloyd, C., Ruffell, A. & McKinley, J., Dec 2003, Unknown Publisher.

Conditional simulation of sandstone permeability

Variogram analysis of permeability in visibly homogeneous sandstone reservoirs

Groundwater circulation patterns and isotope geochemistry in the Chalk of Northern Ireland

The Vöhrum section (northwest Germany) and the Aptian/Albian boundary

Geophysical investigation of abandoned salt mine hazards

Macro- to micro-scale controls on reservoir properties of the Sherwood Sandstone group of north-east Ireland.


Clay mineralogy of the Late Cretaceous and Early Tertiary non-marine successions of the Cauvery Basin (South-Eastern India): Implications for sediment source and palaeoclimates at the K/T boundary

Fuller’s earth (bentonite) in the Lower Cretaceous (Upper Aptian) of Shanklin (Isle of Wight, southern England)

Heterogeneity of rock properties (permeability, porosity, gamma-ray) and mineral cements in the Mullaghmore Formation: NW Carboniferous Basin.

Palaeoclimate controls on spectral gamma-ray emission from sandstones

Palaeoclimate indicators (clay minerals, calcareous nanofossils, stable isotopes) compared from two successions in the late Jurassic of the Volga Basin (SE Russia).
Remote detection and identification of organic remains


The northwestwards continuation of the Sticklepath Fault: Bristol Channel, SW Wales, St. Georges Channel and Ireland.

Contact Diagenesis: the effect of an intrusion on reservoir quality in the Triassic Sherwood Sandstone Group, N.Ireland

Permian - late Triassic post-orogenic collapse, early Atlantic rifting, deserts, weird seas and mass extinctions

Isotopic evidence for temperature variation during the early Cretaceous (late Ryazanian - mid-Hauterivian.

Palaeoclimatic, sequence stratigraphy and diagenesis

Palaeomagnetic constraints on the age of the Red Arch Formation and associated sandstone dykes, Northern Ireland

Gamma-ray spectroscopy in structural correlations: an example from the Neoproterozoic succession of Donegal (NW Ireland)

Palaeoecology of a condensed section (Carboniferous Leitrim Group, Northwest Ireland).

Introduction and background: Interpretations of landscape change

Activities
Archaeology for All: Event 2 at The Giant's Ring
Laura Basell (Organiser), Michael O'Mahony (Organiser), Jonathan Small (Organiser), Kirsten Cottey (Organiser), Lauren Carberry O'Neill (Organiser), Adam Purvis (Organiser), Georgia Vince (Organiser), Dan Clarke (Host), James Perkins (Contributor), Alastair Ruffell (Contributor), Stine Carlsson (Contributor), Barrie Hartwell (Contributor), & Tomasz Ciesielski (Presenter)
19 May 2018

Albertiana (Journal)
Alastair Ruffell (Peer reviewer)
01 Jan 2018

Albertiana (Journal)
Alastair Ruffell (Peer reviewer)
01 Jan 2018
Geological Murders, Suicides and Accidents
Alastair Ruffell (Advisor)
31 Oct 2017

Tower Museum Archaeology Day (speaker)
Alastair Ruffell (Participant)
08 Jul 2017

South Eastern Regional College
Alastair Ruffell (Presenter)
16 Jan 2017

Ussher Society
Alastair Ruffell (Invited speaker)
04 Jan 2017

Murders and Suicides
Alastair Ruffell (Interviewee)
10 Nov 2016

One Day CPD event: Forensic Archaeology Case Study & CPD Workshop on RAG mapping for forensic search.
Alastair Ruffell (Invited speaker)
22 Oct 2016

One Day CPD event: Forensic Archaeology Case Study & CPD Workshop on RAG mapping for forensic search.
Alastair Ruffell (Invited speaker)
22 Oct 2016

Survey of Glenock Cemetery
Alastair Ruffell (Advisor)
18 Sep 2016

Forensic Geology
Alastair Ruffell (Speaker)
16 Sep 2016

A GIS-based landscape approach to Forensic Search Strategies and RAG mapping
Jennifer McKinley (Invited speaker), & Alastair Ruffell (Advisor)
29 Aug 2016

IGC Cape Town
Alastair Ruffell (Session chair)
29 Aug 2016

5th European Meeting on Forensic Archaeology
Alastair Ruffell (Organiser)
11 Aug 2016

University of Messina
Alastair Ruffell (Visitor)
05 Jul 2016 → 26 Jul 2016
Civil Structural Health Monitoring Workshop (CSHM-6) – Structural health monitoring of new and ageing infrastructure
Alastair Ruffell (Invited speaker)
27 Jun 2016

British Association for Human Identification
Alastair Ruffell (Invited speaker)
11 Jun 2016

Evening seminar for the Irish Geologists’ Association, Beggars Bush Dublin
Alastair Ruffell (Presenter)
02 Jun 2016

Knowledge Exchange Seminar Series
Alastair Ruffell (Presenter)
18 May 2016

Whodunnit soil forensics game for students
Alastair Ruffell (Organiser)
24 Feb 2016

NI Science Festival
Alastair Ruffell (Host)
23 Feb 2016

Forensic Geology
Alastair Ruffell (Presenter)
25 Jan 2016

International Conference on Engineering Geophysics, 15-18 November 2015
Alastair Ruffell (Invited speaker)
14 Nov 2015

Using Geology and Geographic Information Systems in Forensic Science (Geological Society of London, Hong Kong Regional Group)
Alastair Ruffell (Presenter)
17 Sep 2015

Geological Society of Japan
Alastair Ruffell (Participant)
15 Sep 2015

The University of Hong Kong
Alastair Ruffell (Speaker)
15 Sep 2015

European Meeting of Forensic Archaeology (EMFA)
Alastair Ruffell (Invited speaker)
29 Aug 2015

47th Conference of Irish Geographers
Alastair Ruffell (Organiser)
21 May 2015

58th Irish Geological Research Meeting, Belfast
Alastair Ruffell (Organiser)
21 Feb 2015

Forensic Geoscience: Future Horizon
Alastair Ruffell (Participant)
03 Dec 2014

European Meeting of Forensic Archaeologists
Alastair Ruffell (Participant)
22 Aug 2014

Radiocarbon in the Environment 2014
Alastair Ruffell (Speaker)
18 Aug 2014 → 22 Aug 2014

Evening Seminar
Alastair Ruffell (Speaker)
04 Nov 2013

Second Ibero-American Workshop on Forensic Geology
Alastair Ruffell (Participant)
03 Oct 2013

Soil Forensics and Forensic Geology
Alastair Ruffell (Invited speaker)
Oct 2013

16th International Forensic Science Symposium, held in Lyon (5-8th October)
Alastair Ruffell (Participant)
06 Oct 2010

Press clippings

Projects
R6432ARL: Between a Rock and a Hard Place: context, function and choice of early metalworking tools on Europe's Atlantic facade
Brandherm, D., Ell, P. S., McKinley, J. & Ruffell, A.
18/02/2014 → 30/06/2016

R6781CIV: EDRF INTERREG IVA - TELLUS BORDER PROJECT (VIA GEOLOGICAL SOC NI)
Offerdinger, U. & Ruffell, A.
01/08/2010 → ...

R7359GGY: Evolution climate risks generated and impact on society
Ruffell, A.
01/08/2009 → 17/12/2019

R6395ARL: Fragility and sustainability in restricted island environments: adaption, cultural change and collapse in prehistory
01/08/2012 → ...

R3897GGY: Geology Society of America Annual Conference
Ruffell, A.
R3330ARL: Geophysical Survey 2011-12
Donnelly, C. & Ruffell, A.
01/08/2011 → 17/12/2019

S2284GGY: KTP/Cei Collins Engineers Ltd
Ruffell, A. & Taylor, S.
01/08/2009 → 17/12/2019

R3013GGY: Presentation at Geological Society (America)
Ruffell, A.
01/08/2007 → 17/12/2019

R8256GGY: Prix Du Quebec 2010 (Association of Canadian Studies in Ireland)
Royle, S., Majury, N., McKinley, J. & Ruffell, A.
01/08/2009 → …

R1079NBE: Queens University Belfast & University of Aberdeen Doctoral Research and Training (QUADRAT)
McKinley, J., Blauuw, M., Caplat, P., Emmerson, M., Helyar, S., Roe, H. & Ruffell, A.
21/07/2019 → …

R1084BSC: Queens University Belfast and University of Aberdeen Doctoral Research and Training (QUADRAT)
Emmerson, M., Blauuw, M., Caplat, P., Helyar, S., McKinley, J., Roe, H. & Ruffell, A.
23/07/2019 → …

R1872GGY: Royal Society - Cg 2007R1 (Ruffell)
Ruffell, A.
01/08/2007 → 17/12/2019

R3360ARL: Specialist Projects December 2011 to March 2012
Donnelly, C., Brown, D., Meneely, J. & Ruffell, A.
01/08/2011 → 17/12/2019

R6774GGY: TELLUS Border
McKinley, J. & Ruffell, A.
01/08/2010 → …