

ioGAS™ Re-Wired

On-line course (via Zoom), best practice geochemical (and structural) workflows for geologists on geologists, using ioGAS

Week commencing Weds May 13th, 2020, each day 0700 GMT (0800 central Europe, 0900 Finland)



Presenters: Nick Oliver (HCOVGlobal) with James Cleverley (IMDEX) and Nick Cook (Mawson Resources)

Organisers: Nick Oliver, Nils Jansson (LTU and EXpLORE), Aleksi Salo (GTK and Geologiliitto)

Technical delivery support: Nick Cook (Mawson), Putra Sadikin and Sophie Alexander (IMDEX)

Sponsors: IMDEX/REFLEX, Geologiliitto Ry, EIT EXpLORE Masters Program, Mawson Resources, GTK

Pre-register your interest now!

Registration opens end of April but your place will only be secure if you pre-register by return email

Final numbers of participants may depend on the sequence of pre-registration, at the organisers' discretion.

Contact: nickoliver@hcovglobal.com, for pre-registration and further details

ioGAS™ is the premium geochemical package for geologists, but also has high-level capacity in enhanced mapping, structural geology, fusing geochemistry and structure, and easy export of 2D and 3D outputs into GIS and 3D modelling packages (including GoogleEarth, Mapinfo, ArcGIS, QGIS and Leapfrog). More than a decade of development and knowledge transfer from ioGAS™ experts has resulted in optimised workflows and easy-to-use tools that incorporate industry best practice in interpretive techniques. Over 500 commercial, government and academic research organizations are using ioGAS, and the global impact on efficient workflows is now widely recognised. This recognition has been attained by the easy and intuitive user interface, the logical yet flexible structure of the program, the easy translation of results into other mapping and 3D modelling software (especially Leapfrog), on-line webinars and support within the IMDEX network, data transfer and management excellence (including via IMDEXHUB-IQ™) and the consequent excellent value-for-money equation.

This course is intended for geologists working in the minerals sector, geological surveys, research organizations and students (including those in the EXpLORE program), to learn and/or improve their ioGAS skills, no matter their level of experience. Until you've used ioGAS, you won't understand how effective it is for optimising workflows, teaching you new geochemical, geostatistical and structural skills, and generally making your life easier and more productive through its cleverly engineered interface.

The workshop will cover:

- Data suitability and QAQC of data, types of geochemical (and other) data suitable for use in ioGAS
- Principles of the use of geochemistry in primary (sedimentary, igneous) and secondary (metamorphic, hydrothermal) environments, focussed on how to subsequently solve with ioGAS

- Data import, using 'Data Doctor', how to get up and running
- Basic tools of data classification
- Functionality of embedded diagrams
- Using published mineral and rock compositions to help understand your system
- Distinguishing protolith variability from alteration, metamorphism and veining
- Intermediate to advanced data classification, geostatistics in ioGAS
- Visualization in ioGAS – 2D, 3D, down-hole, maps, grids
- Speaking with other systems – export styles for GIS and 3D packages and the ioGAS/Leapfrog link
- Linking other datasets within and around ioGAS – structural data cleanup, alpha/beta to dip/dir conversion, attributing structure data with geochemistry and vice versa, linking to down-hole/3D and mapped surface data (e.g. spectral, geophysics), extracting vein abundance and identifying replacement trends
- Applying all the above to real datasets that you will also work on between the daily sessions
- Developing time-saving workflows in ioGAS

Who should attend

The course is intended largely for the original registrants for the March 2020 course in Helsinki, but has been re-opened in a limited capacity due to the change in format. It is suitable for geologists of any experience (students, researchers, industry, geological surveys) who are wanting to learn how to best handle geochemical (and structural) datasets. A basic geochemical understanding is useful, but the course will be suitable for novice geochemists, geologists with geochemical skills who have not yet tried ioGAS, and existing ioGAS users with a range of experience. In the second week, James Cleverley will lead key aspects of the advanced ioGAS workflows, ensuring that people that already have substantial ioGAS experience will still be able to develop further by focussing on aspects of the program that are more closely related to their own data and problems. There will be a feedback session for EXpLORE students at the end of the course.

The presenters: **Nick Oliver** (PhD, FSEG, FAIG, MSGA) is a consultant specialising in the assessment and fusion of geochemical, structural, and geophysical datasets and application of these to solving field-, drill core- and mine-based geological problems. He has used ioGAS on over 50 projects in the last 10 years, including consulting jobs in northern Finland and Sweden since 2013. Nick Oliver ran several collaborative research, training, and graduate student programs with the GTK in the 1998-2005 period, when he was Professor of Economic Geology and Director of the Economic Geology Research Unit at James Cook University in northern Australia. He has delivered short courses to over 4500 geologists, including courses on fusing geochemistry and structure in Helsinki and Luleå in 2018, and together with **Nick Cook** (PhD, Mawson Resources) and **James Cleverley** (PhD, Reflex/Imdex) presented a successful course on drill core analysis and interpretation at FEM, Levi, in October 2019, where he also delivered a keynote talk. Also with Rod Holcombe (HCOVGlobal) and REFLEX geoscientists, Nick Oliver assisted in the development of linked stereographic projections and geochemical analysis in REFLEX's ioGAS software package. **Nick Cook** has a wealth of practical exploration experience in the Fennoscandian context, and has used ioGAS successfully in the progressive development of the Rajapalot Au-Co resource in Lapland. Some of those datasets will be used in this course. **James Cleverley's** background in hydrothermal geochemistry R&D puts him in a major technical leadership role within the IMDEX family of companies, and he has been intimately involved with some of the 'cutting-edge' capabilities of ioGAS as well as across the spectrum of IMDEX's geoscientific, industrial platforms.

Nick Oliver and Nick Cook are Promoters for ioGAS but are not employees of IMDEX/REFLEX. HCOVGlobal is a consortium of independent consultants and Nick Oliver trades as HCO Associates Pty Ltd within that consortium. Nick Cook is acting as an independent consultant for the purposes of this course, but his involvement is endorsed by Mawson Resources. James Cleverley is representing IMDEX/Reflex.

Costs

Pricing 350€, discounted for Geogiliitto members. Students heavily discounted; Contact nickoliver@hcovglobal.com

Logistics

- Weds 13 May 0700GMT, 0800 Sweden/central Europe, 0900 Finland/eastern Europe 1600 east Australia): Introduction and Set-up, 30 to 60 minutes (to ensure server licences for ioGAS OK, audiovisual OK for everyone, setup rules/guidelines for Zoom meeting)
- Thursday and Friday 14th to 15th May: two x 2.5 to 3 hour sessions starting at 9 AM Finland time, introductory part of course
- Monday and Tuesday 18th to 19th of May, two x 2.5 to 3 hour sessions starting at 9 AM Finland time, advanced part of course
- Practical work includes "home-work" after the official course hours on several of the course days

This arrangement will also give some time for feedback and practical work over the weekend, or, trialling some of your own project data

COURSE SPONSORS

