



Welcome to the Equinox of spring/autumn Intrepid Geophysics Newsletter of 2017 – Another issue full of news, ideas and offers awaits below! A big hello from the IG team and from Des FitzGerald on the road, between IAMG Perth and SAGA Cape Town.



Focus on Academic and Research Customers

In this edition we focus on the impressive uptake of GeoModeller and INTREPID tools for use in a range of academic teaching and research applications. We remind you, Academic Licences are fully operational, come with tutorials, manuals, models and data. Further resources available soon in GeoModeller v4.0 will include example data hosted on GitHub, Google standard API batch language exposed in the main tool, plus full geology model realisation in the API (eg., for setting simulations and geological uncertainty analysis).

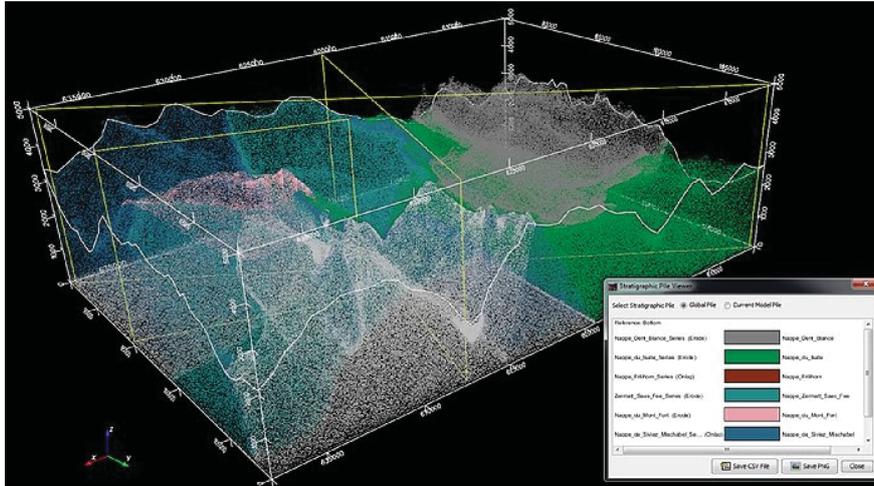
Testimonial from Philippe Renard,

Head of the Stochastic Hydrogeology Group, University of Neuchâtel, Switzerland

"Since about 20 years, we use GeoModeller in the University of Neuchâtel for PhD research projects and teaching purposes at the Master level (around 15 students per year). The main strength of GeoModeller is that it allows our students to be able to generate complex 3D geological models just after a few hours of training. The software is very intuitive and allows the students to construct structural models that we can then import for groundwater or geothermal simulations in FEFLOW or other numerical modeling tools. As compared to the alternative tools currently on the market, we find GeoModeller to be the best choice: We can integrate all important structural data easily (which is not the case in other packages); we can interact rapidly and easily with the model to constrain the geometry interactively when required; we can compute geophysical responses such as gravimetry within the software to check that the model matches adequately the field data. And all of that can be done in a simple manner without having to train the students for months before they can construct their aquifer models. In addition, it is now possible to use geostatistical algorithms and populate the aquifer model with rock properties in such a manner that heterogeneity follows the geological structures". Philippe Renard, July 2017.

Please ask us to quote your class-set or research licences – you'll find our prices very affordable!

Informing Meshes with GeoModeller Geology



Demonstrating standard GeoModeller v3.3 functionality ["Add Current Model Field (geology)"] to any mesh loaded in GeoModeller] - We have recently posted a new video about attributing a point mesh (eg., centroids of a finite element mesh) with spatial geological information, from a GeoModeller project. Transferred via an ASCII points database, this demo (3rd in a series) gives a complete workflow, coupling GeoModeller and FEFLOW. See it now on our YouTube channel.

<https://www.youtube.com/watch?v=bnLFT7jqutQ>

GeoModeller v4.0 Out Soon

Exciting times are just ahead, as we prepare to release **GEOMODELLER v4.0** at the end of September. Look out for the release installer file on the intrepid-geophysics website at [Products - Downloads](#)

<http://www.intrepid-geophysics.com/ig/index.php?page=downloads>

Airborne EM in GeoModeller v4.0

- Upgraded support for airborne electromagnetic data inversion outcomes
- Integrate your AEM results in model-building
- 100s of sections simultaneously load with productivity improvements
- Unlimited flight-line length (30km +)
- Viewer panel (standard in GeoModeller-Base) showing results, misfits, noise and IP
- User-controlled interpolation of AEM inverted products: 1D (module available) and 2.5D (by service only)
- 2.5D AEM service offering joint inversion of electrical conductivity and IP

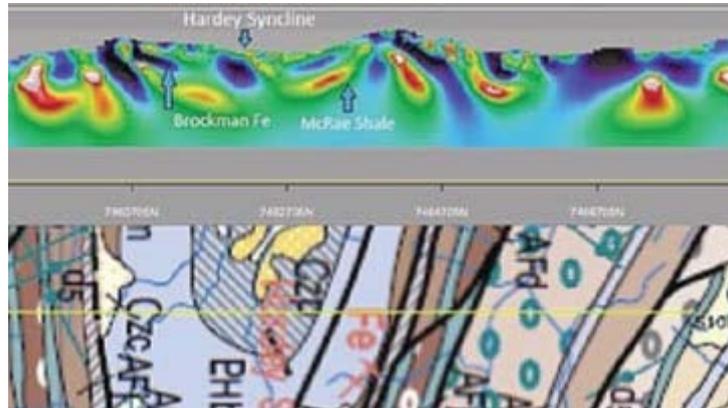
Direct and in-direct meshing support in GeoModeller v4.0

- Mesh export from the implicit 3D modelling engine accessing CGAL libraries
- Adaptive layered, and fully unstructured finite element mesh products
- Water tight and manifold meshes
- User controls for adaptive mesh precision per geological unit
- Attributed VTK and FEFLOW export formats
- Attributed rock types and planar anisotropy angles of geological bedding

Great new offerings await in GeoModeller v4.0 for Groundwater modellers in industry and academia, with application to geothermal, reservoir characterisation, geotechnical and structural geology.

High-precision geology from 2.5D AEM inversions using Intrepid's MOKSHA code - presented at the Iron Ore Conference, Perth, July 2017

Results from the Brockman Syncline in western Australia



Hardey Syncline airborne EM data inversions compare with field mapping and verify structural geology (see image). For details please download the full paper by Paterson et. al. from our website's Home Page, or read our Post on social media LinkedIn <https://www.linkedin.com/pulse/only-one-aem-solutions-even-looks-like-syncline-helen-gibson>

GeoModeller V4.0 workshops 2017-2018 – for groundwater modellers

New release GeoModeller v.4.0 training will be held in Melbourne on Wednesday and Thursday, 15th and 16th of November 2017, and again in 2018: Orléans, France (Monday and Tuesday, 20th and 21st February). This training, co-presented by DHI-WASY will present new workflows for meshing capability with CGAL libraries, and revisit some of the fundamental capability for rapid building of an implicit 3D geology model. We welcome you to find more details about these, and other upcoming events on our website, or send us an [email](#).

[Training Services and Training Calendar](#)

<http://www.intrepid-geophysics.com/ig/index.php?page=training-calendar>



INTREPID software – Industry training events for the Sea-g APP

We look forward in late 2017 to industry training events now gearing-up for the **Sea-g APP and INTREPID Starter bundle**. These will focus on marine gravity processing of data exclusively acquired by Micro g LaCoste meters: the MGS-6 and Air Sea-II.

Please see our Products Page for information about the INTREPID Sea-g APP,

<http://www.intrepid-geophysics.com/ig/index.php?page=sea-g>

and also visit our Partnership Pages

<http://www.intrepid-geophysics.com/ig/index.php?page=partnerships>



Full Tensor data workflows - Coming soon to YouTube

Don't miss these new videos due for upload on our YouTube channel in early October.

Full Tensor data support will be demonstrated in the INTREPID and GeoModeller user interface - including for processing and interpretation. Our new footage is high level and demonstrates impressive capability and native support for full tensors of airborne gradiometer data as a signal type (not just the components of the tensor).

Cheers from the Intrepid Team!

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