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# GPlates

1 day Short Course:

**28 April 2010** (AWI Bremerhaven, Bussestrasse 24, 27570 Bremerhaven, Room E4005)

**9 July 2010** (LMU, Dept. of Earth & Env. Sci., Theresienstr. 41, 80333 München, Room C419)

## What can GPlates do?

GPlates is free desktop software running on Windows, Linux and MacOS X. It enables the interactive manipulation of plate-tectonic reconstructions and the visualization of associated data through geological time, including paleomagnetic data. Users can build regional or global plate models, and import their own data. GPlates is specifically designed to enable the linking of plate tectonic models with mantle convection models. GPlates allows the construction of time-dependent plate boundary topologies as well as exporting plate polygons and velocity time-sequences. Mantle convection model output images can be imported and animated with plate tectonic reconstructions overlain. As an accessory to GPlates, Wessel and Smith's Generic Mapping Tools (GMT) software is useful for preparing data for GPlates import or for making publication-quality maps using GPlates output.

## Course content

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| <b>Introduction to GPlates</b>                      | Main window<br>Data file types<br>Loading and saving<br><i>Exercise on loading data and changing colours</i><br>Controlling the view<br><i>Exercise on controlling the view and saving data</i><br>Interacting with features<br><i>Exercise on interacting with features</i> |
| <b>Reconstructions</b>                              | Relative and absolute plate motions and how they are derived<br><i>Exercise on changing reconstructions/deriving new rotation poles</i><br><i>Exercise on reconstructions with paleomagnetic data</i><br><i>Exercise on comparing alternative absolute reference frames</i>  |
| <b>Special data types</b>                           | <i>Exercise on working with shapefiles</i><br><i>Exercise on working with raster data</i>  |
| <b>Linking reconstructions to geodynamic models</b> | Introduction<br><i>Exercise on working with topology tools</i>   |

## Requirements

Places are limited. Please sign up with Klaus Grosfeld (AWI Bremerhaven, Klaus.Grosfeld@awi.de) or Helen Pfuhl (LMU Munich, pfuhl@lmu.de). In preparation download and install the GPlates and GMT software from [www.gplates.org](http://www.gplates.org) and [gmt.soest.hawaii.edu](http://gmt.soest.hawaii.edu) and bring your laptop.



## DFG-Mercator Visiting Professor

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