The **Fast Irregular Antenna Field Transformation Algorithm (FIAFTA)** is a general-purpose inverse source solver designed to retrieve equivalent antenna radiation sources from almost arbitrary measurement data. It is based on an integral equation formulation together with a very efficient and flexible evaluation of the integral operators as needed for the solution of the corresponding inverse source problem. FIAFTA is the result of more than ten years of research at the Chair of High-Frequency Engineering at the Technical University of Munich and is routinely used in a variety of industrial environments. It has been proven for antennas with apertures of up to 1000 wavelengths in size.

FIAFTA supports:
- antenna field transformation in free-space
- antenna field transformation above ground half-space (ideally conducting, dielectric, lossy dielectric)
- near-field/far-field, far-field/near-field, near-field/near-field transformation
- plane-wave synthesis
- far-field pattern results
- near-fields in arbitrary observation locations
- diagnostics information for advanced fault/feature detection
- echo suppression by spatial filtering
- integrated modelling of scatterers
- post-processing with variable ground half-space properties
- simple built-in geometry representation
- arbitrary geometry support via mesh import

If you are interested to obtain more information on the possibilities to use FIAFTA, please contact Prof. T. F. Eibert, eibert@tum.de

**Literature:**