## Steam Tables and Property Libraries for Excel, MATLAB, Mathcad, Dymola, SimulationX, LabVIEW, Engineering Equation Solver, Smartphones, Tablets, Pocket Calculators and Online Use

Hans-Joachim Kretzschmar, Matthias Kunick, and Sebastian Herrmann

Department of Technical Thermodynamics, Zittau/Goerlitz University of Applied Sciences, 02763 Zittau, Germany

Email: hj.kretzschmar@hszg.de

The software developed for calculating the thermodynamic and transport properties for water and steam, mixtures with water and steam, and other working fluids have been designed for very convenient use by engineers who routinely calculate heat cycles, steam or gas turbines, boilers, heat pumps, or other thermal or refrigeration processes.

The following software solutions will be presented:

Add-In FluidEXLGraphics for Excel®

Add-On FluidLAB for MATLAB®

Add-On FluidMAT for Mathcad®

Add-On FluidDYM for Dymola® (Modelica) and SimulationX®

Add-On FluidVIEW for LabVIEW™ and

Add-On *FluidEES* for the Engineering Equation Solver® (EES).

The program *FluidDIA* was developed for calculating and plotting large-sized and camera-ready thermodynamic charts.

Steam tables are available for iPhone, iPad and iPod touch, and for Android smartphones and tablets.

The software for using steam tables and property software on Texas Instruments®, Hewlett Packard®, and Casio® pocket calculators is of particular interest for students.

Thermodynamic and transport properties of several working fluids can be online calculated using the *Fluid Property Calculator* at our website www.thermodynamics-zittau.de.