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Title:	**Computer-aided antenna design for SAW sensor based temperature telemetry in industrial environments**
Abstract:	Numerical computer simulations are predestinated for the development and optimization of antenna designs with regard to mechanical restrictions and the interaction with materials in a given setup. This presentation outlines the application of state of the art CAD software to provide fundamental insight to the physical behavior of complex antenna structures used in harsh industrial environments. Using the example of a continuous casting mold the CAD supported design process of an antenna link for a surface acoustic wave (SAW) sensor based temperature telemetry is presented in detail. From the initial step of generating a useful simulation model of the real world problem to the optimized antenna and its electromagnetic performance the necessary design steps and challenging problems will be described.