

## GT-SUITE NEWS FROM GAMMA TECHNOLOGIES

### March 2008 Issue:

This issue of the European GT-SUITE Newsletter is reporting on the following topics:

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### **Dr. Thomas Morel, GTI President, Receives Doctorate Honoris Causa**

We are pleased to announce that the president of Gamma Technologies, Dr. Thomas Morel, received an honorary degree Doctor Honoris Causa from the Czech Technical University in Prague. The degree was awarded on January 22, 2008. The ceremony took place in the Old Town section of Prague in the historic Bethlehem Chapel (built in 1392 for the Czech Reformed Church, which was emerging at that time). For more detail see our website:  
[http://www.gtisoft.com/Thomas\\_Morel\\_Doctor\\_Honoris\\_Causa.pdf](http://www.gtisoft.com/Thomas_Morel_Doctor_Honoris_Causa.pdf)

The degree was awarded to Dr Thomas Morel in recognition of his: **“Worldwide contributions to the design of internal combustion engines, leading to the reduction of their fuel consumption and to reduction of emissions; for his personal support provided to young Czech scientists; and for the many years of cooperation with the Czech Technical University in Prague”.**

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### **Version 6.2, Build 8, Released with Many New Features**

The latest GT-SUITE, v6.2.0 patch, has been released and is available for downloading from our website. As is the case with every patch of GT-SUITE that is released, Build 8 contains a number of significant new features and developments that will extend the user's ability to address today's most sophisticated modeling challenges. A small sample of some of the new features in Build 8 include the ability to allow multiple S-functions in coupled GT-SUITE/Simulink models, a fixed timestep simulation option for GT-POWER (mainly for use in real time models), a co-simulation option with ASCET, and a new compressor surge model. There have also been numerous enhancements made to our 3D modeling tools, GEM and COOL3D. To download the latest GT-SUITE build, please visit our website at: <http://www.gtisoft.com/download.html>

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### **dSpace HIL Systems Now Run GT-SUITE Real Time Engine Models**

GTI and dSpace GmbH ([www.dspace.com](http://www.dspace.com)) are pleased to announce that GT-SUITE real time models are now available for execution on hardware-in-the-loop (HIL) systems provided by dSpace. Through this new integration, users can incorporate their GT-SUITE models into a dSpace ControlDesk model, and perform ECU testing and validation via dSpace HIL simulators. With this addition, GT-SUITE can now run on real time targets from dSpace, ETAS, Cybermetrix, A&D, and Real Time Technologies. If you would like to learn more about GTI's offerings in the areas of software-in-the-loop (SIL), HIL, and real time model execution, please contact us.

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### Latest GT-SUITE papers to be presented at the 2008 SAE Congress

As in previous years, this year's SAE Congress will include a large number of papers on various automotive projects carried out using GT-SUITE. In addition to the many industrial and academic applications of GT-SUITE that will be presented by users, there are also four papers, being published by GTI, which introduce new technologies and applications of GT-SUITE (see below):

**2008-01-0292** "Application of an Integrated Valvetrain and Hydraulic Model to Characterization and Retuning of Exhaust Valve Behavior with a DPF"

**2008-01-0866** "Development of a Quasi-Steady Approach Based Simulation Tool for System Level Exhaust Aftertreatment Modeling"

**2008-01-0871** "Game Theory Approach to Engine Performance Optimization"

**2008-01-0990** "Development of Real-Time Capable Engine Plant Models for use in HIL Systems"

For a complete listing of papers to be presented, visit the SAE website at: <http://www.sae.org>

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### 2008 GT-SUITE Conferences: Call for Papers

The 2008 GT-SUITE Conference in Europe will be held again at the Steigenberger Frankfurt Airport Hotel. The date is October 20, 2008. The North American Conference will be held in Birmingham, MI on November 10, 2008. Please save the dates. **Also, please contact us if you would like to contribute a paper to either one or both of the conferences.** We expect a total of 300 attendees at these conferences, so you will have a large and prestigious audience of specialists and experts listen to your presentation.

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### GT-POWER Basic Training: Multiple Dates and Locations

1. **Southfield, Michigan, March 10-11, 2008**
2. **Bologna, Italy, April 7-8, 2008**
3. **Stockholm, Sweden, June 2-3, 2008**

This two-day course is designed for new users of GT-POWER and GT-SUITE and will focus on the simulation of internal combustion engines through the use of GT-POWER. A 1-day GT-POWER Advanced Training class follows this class (see the next item below).

More information: <http://www.gtisoft.com/training/training.php>

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### GT-POWER Advanced Training: Multiple Dates and Locations

1. **Southfield, Michigan, March 12, 2008**
2. **Bologna, Italy, April 9, 2008**
3. **Stockholm, Sweden, June 4, 2008**

This one-day course is designed for users of GT-POWER who want to learn some of the more advanced features including: Turbochargers, Cylinder Pressure Analysis, Controls, Optimization/DOE, and others.

More information: <http://www.gtisoft.com/training/training.php>

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### Quick Tip: How to Transfer data into User Models

Do you know that there are two ways of retrieving variables/parameters that are not currently available in a User Model argument list?

- 1) Wiring Harness: User Model authors can have access to any sensible (via SensorCon) variable by connecting a sensor output to a WiringHarness part. The value of the sensed quantity will be automatically loaded in the User Model array "gsens". This array is available in the **USER\_HARN\_MOD** module and, alternatively, the variable can also be easily retrieved by inserting the following statement in the User Model code.

```
call GET_USER_HARN_INPUT(port,harn,VALUE)
```

The value of the sensor output will be loaded in the variable VALUE.

- 2) Special Calls: GTI has provided some special overloaded routines for retrieval of some of the commonly used variables and flags. Here are two examples:

```
call GET_GLOBAL_INFO(ISTEP=istep, TIME=time, THETA=theta, ....)
call GET_CYLINDER_INFO(icyl, BORE=bore , STROKE=stroke, ....)
```

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