

Industry Applications of Numerical Analysis

2nd November 2017

09:30am - 11:30am

CIT Auditorium (Level 2), NUS Computer Centre Building
2 Engineering Drive 4, Singapore 117584

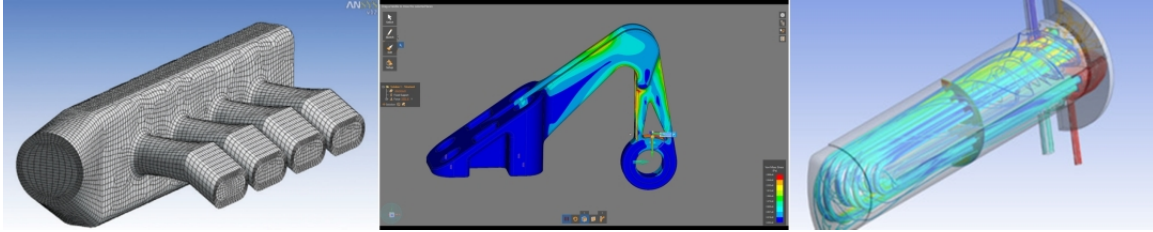
REGISTER HERE

Numerical analysis and simulation are changing how products and processes are analysed and engineered. Register for this half-day seminar to familiarise yourself and enhance your skillsets with current breakthroughs in simulation technology and IoT.

Our engineering experts will be presenting the latest developments in engineering simulation technology, including introduction of industrial applications of CFD and FEA technologies. There will also be a preview of a new, innovative, tool that will change how simulation software are used. This new tool is built on a new solver architected specifically to exploit graphic processing unit (GPU) technology, making digital exploration through simulation available to all engineers.

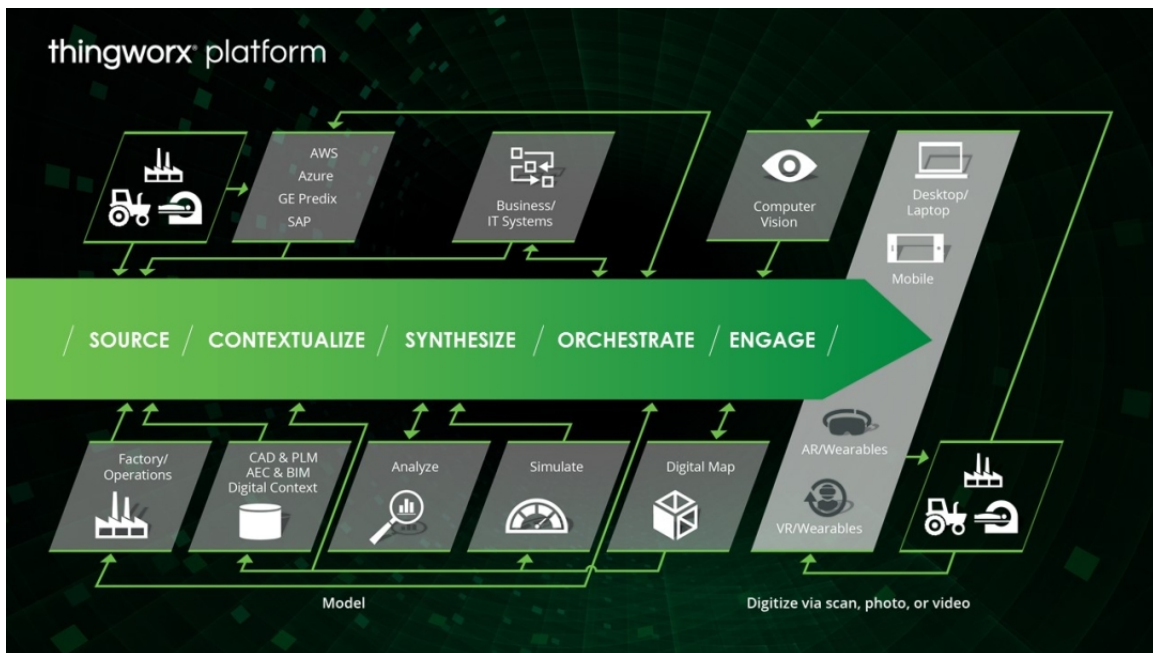
On the other hand, this seminar would also be introducing the upcoming trend of industrial IoT which interconnects sensors and devices that form big data, to intelligent monitoring and achieving predictive maintenance with Machine Learning (or Artificial Intelligent) capability as well as accurate visualization with Augmented reality technique. Apart from that, this trend comes in conjunction with the local initiative to push for industry 4.0 with the aid of IoT, resulting in the transformation of our local industry to employ new technologies and produce more 'Smart Factory'.

Register now to learn more.



Seminar Agenda

- **Introduction to Computational Fluid Dynamics (CFD):**
Capabilities and new features in current CFD solver (overset mesh, optimization)
- **Introduction to Finite Element Analysis (FEA):**
Capabilities of FEA (vibration analysis, stress/strain, harmonics)
- **Fluid Structure Interaction (FSI):**
Multi-physics interactions between fluid flow and structural analysis.
- **High Performance Computing (HPC):**
Effective usage of increasing hardware capability to perform scalability of computing performance, as well as how HPC expands the range of simulations which were previously not feasible.
- **Industry Applications:**
Real life applications of both CFD and FEA simulations in the industry.
- **Next Generation Simulation Tools**
- **Industry Application of IoT (Internet of Things):**
Upcoming trend of IoT to interconnect devices to exchange data and push for Industry 4.0.



Presenters' Profile

Dr Vincent Chai is currently a Program Manager at CAD-IT Consultants (Asia) Pte Ltd. He is part of the technical team that supports customers in various disciplines. He graduated from NTU with a Ph.D. in Mechanical and Aerospace Engineering, where his thesis is focused on flapping wings aerodynamics for unmanned vehicles. He has worked as a project officer for DSTA project on debris flight analysis and as a Research Engineer at NIDEC Singapore.

Mr. Ramesh Veerappan is currently a PLM/SLM/IOT Program Director at CAD-IT Consultants (Asia) Pte Ltd. Ramesh brings with him 25 years of experience in product manufacturing, mechanical design, administration, PLM and business application development. His achievements include winning and executing high profile PLM projects in Aerospace, Defence, Offshore and Oil & Gas sectors and providing engineering process consulting in varied domains. Ramesh graduated from Nanyang Technological University in 1996 with a Masters Degree in Mechanical Engineering. He is a certified PTC Windchill Business Consultant and have won a number of PTC Certification Awards over the years.



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