ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ಎ ಟಿ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)

Visvesvaraya Technological University
(State University of Government of Karnataka Established as per the VTU Act, 1994)
"Jnana Sangama" Belagavi-590018, Karnataka, India

Prof. B. E. Rangaswamy, Ph.D.
Registrar

Phone : (0831) 2498100
Fax : (0831) 2405467

Ref. No.: VTU/BGM/ME/2023-24/529   **Date: 3 0 AUG 2024**

CIRCULAR

Sub: Deputing the faculty members for COE - CAE software training.

The University has established two state-of-art Centres of Excellence (CoEs) in Mechanical Engineering namely:

(1) CoE in Computer Aided Engineering (CAE) in association with DHIO Research & Engineering Pvt. Ltd., Bengaluru

(2) CoE in Visualization Engineering in association with ALTEM Technologies (P) Ltd., Bengaluru.

The activities at CoE involves implantation and training on high end software suitable for training and advanced research with full computational capability. University has already trained the faculty members, Ph.D research supervisors, PhD scholars on these latest software related to CoE in CAE vide ref. VTU/BGM/ME/DHIO/202-21/220 DATED 08/04/2021.

In order to extend the benefit of training to more number of faculty members, research supervisor and research scholars on these software, to give them the working knowledge of software and to enhance the utilization of these software, the University is again organizing the software training in **hybrid mode** for faculty of Mechanical Engineering Sciences. The participants of the training may in-turn train their other faculty members, UG/PG students. Further, each software can be taught as *Value Added Course* of 40 hours duration (3 credit course) to get additional marks in NAAC/NBA accreditation work of a college/institute.

The stream wise offline training on all modules of DHIO software will be conducted at VTU, Belagavi. The stream wise schedule is as shown below.

:Stream wise Training Schedule at VTU Headquarters Belagavi (offline) :

Stream of Training	Name of the Software	Application	Training Dates
Manufacturing Simulation	AFDEX/Z-CAST & Z-HEAT/GV-CNC	Forming, Casting, CNC simulation	10/09/2024 to 14/09/2024.
Thermal Fluid Engineering	FLOWNEX FLOW VISION	1D & 3D CFD Simulation	17/09/2024 to 21/09/2024.
Materials Simulation	J-OCTA KHIMERA	Material Modeling and Simulation	23/09/24 to 27/09/2024.
Structural Integrity/ Design Analysis	ABAQUS/ ISIGHT FE-SAFE	FEA, Optimization, Fatigue durability	30/09/24 to 05/10/2024.
Combustion Engg	CHEMICAL WORK BENCH/ MECHACAL WORK BENCH	Chemical Reaction Kinetics/ Mechanism and Optimization	07/10/24 to 11/10/2024.

The duration of training will be 5 days for each stream. The **offline training** will be conducted for participants from VTU PG Centers, constituent college and affiliated colleges of VTU Belagavi Region.

Faculty members and research scholars from other regions can join the above training through online mode. They can also attend offline training at VTU Belagavi, if interested.

For Registration & Training details, please contact the following nodal coordinators.

Sl. No.	Nodal Center of Dept. of Mech., Engg.	Name of Nodal Coordinators	Email and Phone No. of Nodal Coordinators	Registration Link
1	VTU,Belagavi	Dr. Anil Pol Asst. Professor	a.pol35@gmail.com 9738480136	https://forms.gle/XhuQFpEu4Jce6v2z6
2	VTU, Kalaburagi	Dr.Babureddy Asst. Prof. & Program Coordinator	me_klb@vtu.ac.in/ babureddy.dh@gmail.com 9844419905	
3	VTU, Muddhenhalli	Dr.G.S.Venkatesh Professor and Program Coordinator	me_blr@vtu.ac.in/ venkateshgs2007@gmail.com 7760011955	
4	VTU,Mysore	Dr. R Suersh Professor & Program Coordinator	me_mys@vtu.ac.in/ drsureshvtu@gmail.com 9448514207	
5	UBDTCE, Davanagere	Dr.Vijaya Kumar Associate Professor	vijayakumar@ubdtce.org 7353585800	

For more details, please contact:

1. Dr. Ravindra R. Malagi, Chairperson Dept. of Mech. Engg. VTU Belagavi – 9448907847.
2. Dr. V. M. Kulkarni, Coordinator, Dept. of Mech. Engg. VTU Belagavi – 9448014682.

Pre-requisites for Online Training:
1. Participants are to download the Citrix platform
2. Obtain the login credentials from respective regional/nodal coordinators.
3. The internet speed of 5 Mbps to 100 Mbps is preferred.
4. The computer system shall have the following specifications:

Specifications		Basic	Recommended
H/W Spec	CPU	Intel core i3	Intel core i7, 3.0 GHz~
	Memory	2 GB	8GB~
	HDD	100 GB	2TB~
	Graphics	1366 X 768 Geforce GT220	1920 X 1080 Geforce GTX260~
	Monitor	13.3"	21"
	OS	Windows XP/7	Windows 2, 64 bit

The Principals of affiliated Engineering Colleges are requested to depute one or two faculty members for the said training program.

Note:

1. **There is no Registration fees for training,**
2. Registrants need to submit the hard copy of the registration form duly signed by the HOD and the Principal.
3. **Last Date for registration is 6th September 2024.**
4. No TA/DA will be paid.
5. The accommodation for needy may be given at VTU Hostels at Belagavi on request and payment basis based on availability wherever possible (Rs. 200/- per day per participant).
6. Participants can register streamwise and there should not be more than two participants from each institute for each stream at a given point of time.
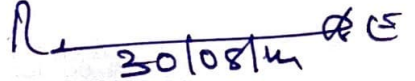
Sd/-
REGISTRAR

To
The Principals of all the Affiliated/Constituent/Autonomous Engineering Colleges VTU.

Copy To:

1. Hon 'ble Vice-Chancellor through the Secretary to VC, VTU, Belagavi for kind information
2. All Nodal coordinators of COE-CAE (DHIO) for necessary action.
3. The Regional Director, VTU Regional Centers, at Bengaluru, Belagavi, Kalaburgi, Mysuru.
4. The Chairperson/Programme Coordinators of all the Departments of VTU's PG centres at Muddenhalli, Belagavi, Kalaburagi and Mysuru.
5. The Director, DHIO for kind information.
6. The Director, ITISMU, VTU Belagavi for uploading of the circular in VTU Web portal.

REGISTRAR

Silver Jubilee Year

Our Vision

To become an outstanding Technological University at the cutting edge of Science and Technology that produces world class Knowledge-delivery, Research, Extension and Leadership in Technology innovation for Industry and Society.

About VTU

VTU is one of the largest Technological Universities in India with 24 years of Tradition of excellence in Engineering & Technical Education, Research and Innovations. It came into existence in the year 1998 to cater the needs of Indian industries for trained technical manpower with practical experience and sound theoretical knowledge.

Some of the accomplishment of VTU in recent-past.

22nd Rank in
State Public University Category pan India

69th Rank in
Engineering Category pan India

75th Rank in
University Category pan India

University has very successfully achieved the tremendous task of bringing various colleges affiliated earlier to different Universities, with different syllabi, different procedures and different traditions under one umbrella.

Affiliated Colleges (Non Autonomous) - 182, Constituent College - 2, Autonomous colleges - 25
UG Programs - 37, PG Programs - 96 specilizations ,
Faculties of Research - 7 with Ph.D. & M.sc(Engg.) programs
Overall Student Strength - over 3 lakhs

Training on Software in CoE-CAE (Computer Aided Engg.) in Department of Mechanical Engineering, VTU Belagavi

STREAM OF TRAINING

10/09/2024 to 14/09/2024
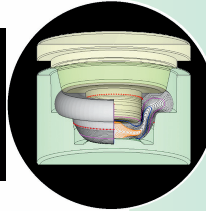
Manufacturing Simulation
Forming, Casting, CNC Simulation
AFDEX, Z-CAST, Z-HEAT, GV-CNC

17/09/2024 to 21/09/2024

Thermal Fluid Engineering
1D & 3D CFD Simulation
FLOWNEX / FLOWVISION

23/09/2024 to 27/09/2024
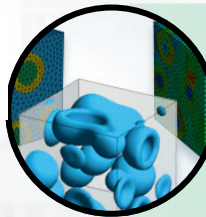
Material Simulation
Material Modelling & Simulation
J-OCTA / KHIMERA

30/09/2024 to 05/09/2024

Structural Integrity / Design Analysis
FEA, Optimization, Fatigue Durability
ABAQUS / ISIGHT / FE-Safe
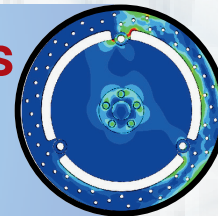
07/09/2024 to 11/10/2024

Combustion Engineering
Chemical Reaction, Kinetics / Mechanism & Optimization
CHEMICAL WORKBENCH / MECHANISM WORKBENCH

https://forms.gle/XhuQFpEu4Jce6v2z6

For more details contact:

Dr. V. M. Kulkarni
Professor & Coordinator
Depratment of Mechanical Engineering,
VTU Belagavi-590018

✉ vmkulkarni1@gmail.com
☎ 9448014682

Register here

Dr. Anil S. Pol
Asst. Professor & Nodal Coordinator
Depratment of Mechanical Engineering,
VTU Belagavi-590018
☎ 9738480136

Dr. Ravindra R. Malagi
Professor & Chairperson
Depratment of Mechanical Engineering,
VTU Belagavi-590018

✉ chairman_mech@gmail.com
☎ 9448907847

CoE in Computer Aided Engg. Dept. of Mechanical Engineering
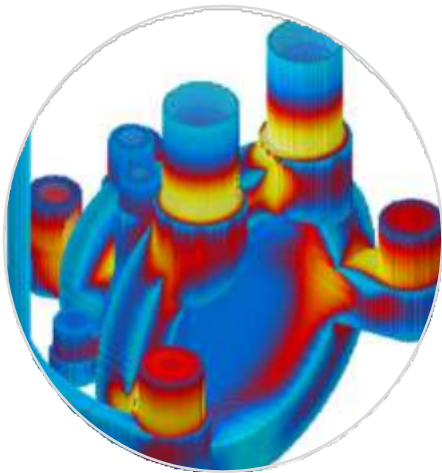
Manufacturing Process Simulation

Computational Thermal Fluid Simulation
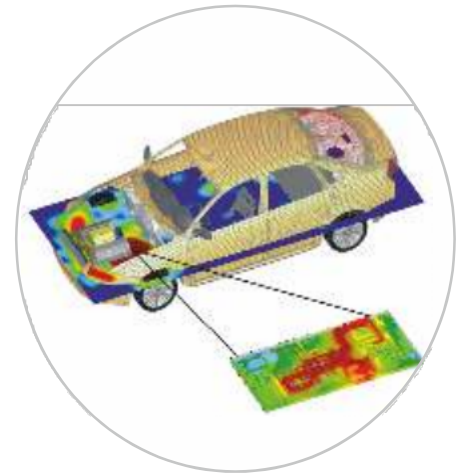
Structural Integrity & Design Simulation
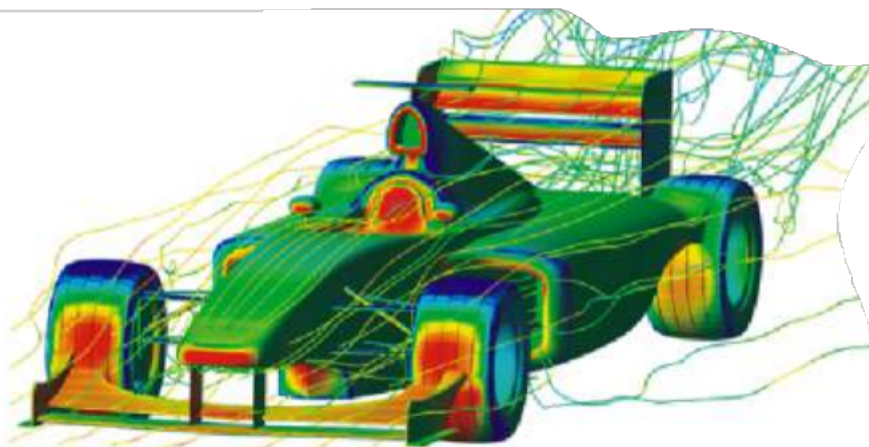
Manufacturing Process Simulation

End-to-End Manufacturing Process Simulation Software

Manufacturing Process Simulation is an important part of the process & product engineering team. This helps the engineers, designers, production experts to

- **evaluate product manufacturability**
- **evaluate process design**
- **predict defect & eliminate**
- **ensure minimum lead time to produce**
- **increase productivity & quality**
- **optimise to save material, time and money**
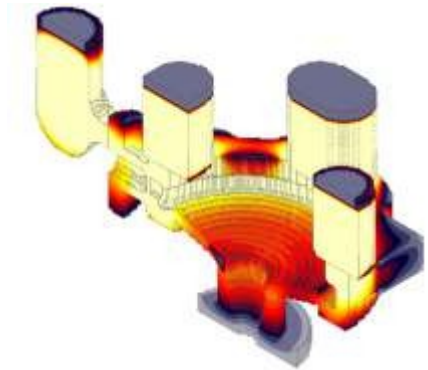
Manufacturing Process Simulation Software covers end-to-end manufacturing process simulation for encouraging advanced engineering study, projects and research on material and manufacturing aspects.

CNC Simulation
with V-MACHINE any machine ! any controller !

Casting Simulation
with Z-CAST for ferrous & non-ferrous material
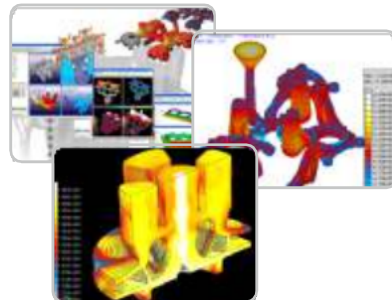
Forging Simulation
with AFDEX for hot, warm, cold, forging
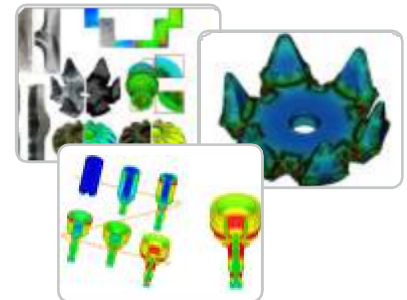
Extrusion & Drawing Simulation
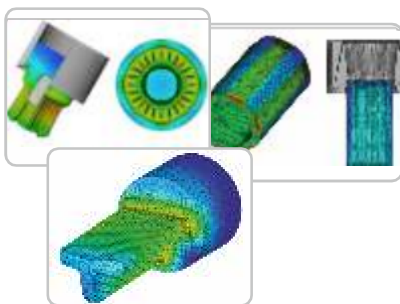
Rolling Simulation
with AFDEX -Roll for Rolling simulation
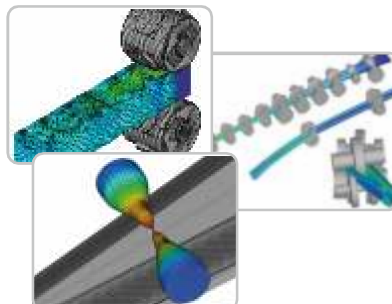
Welding Simulation
with VIRFAC for fusion and friction welding process
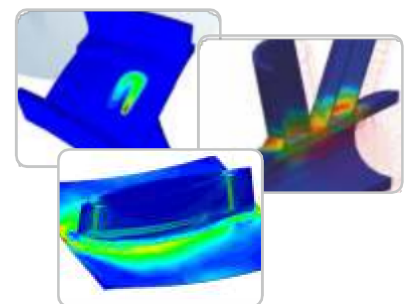
PM Simulation
with AFDEX-PM Simulation

Heat Treatment Simulation

(a) Ferrite
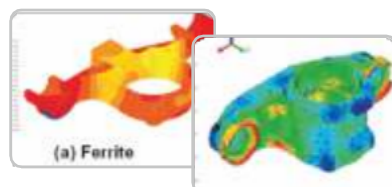
Sheet Metal Simulation
with AFDEX Sheet/Form Advisor
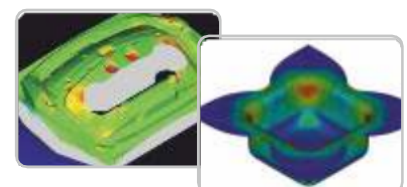
Computation Thermal Fluid Simulation

End-to-End Thermal-Fluid Simulation Software

Thermal Fluid Simulation Kit that enables you to study how systems/product will behave in the real world, where fluid is the driving factor along with temperature and structural aspect taken in to account. Thermal Fluid Simulation Kit is based on 1D, 2D & 3D Simulation at System, Subsystem and Component Level relays the overall effect of changing specific properties on components, allowing clients to examine extensively all possible variations in the design and optimization of systems with study on the following simple/complex systems simulation.

Simulate System, Sub-System and Components from various Thermal-Fluid Systems

- Energy – Fossil, Thermal and Nuclear Energy
- Renewable Energy – Solar, Biomass, Wind and Geothermal
- Oil and Gas – Downstream & Upstream
- Carbon Transportation
- Simulator Development – Full Scope, Operation & Training Simulators
- Mining Systems
- Automotive Systems
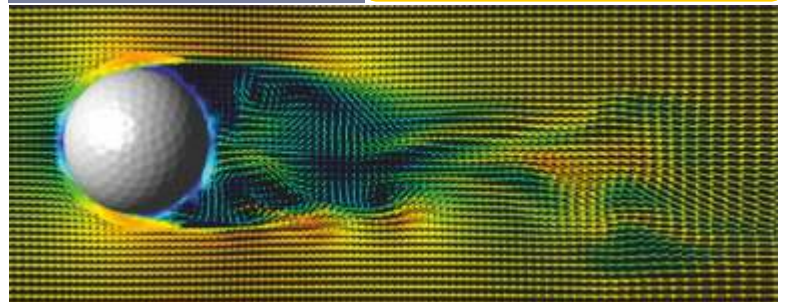- Aerospace Systems
- General Engineering Systems & Many More

Software's for R&D in

- Computational Fluid Dynamics
- Thermo Dynamics Simulation
- Heat Transfer
- Combustion
- Two Phase
- Nuclear Systems and Reactors
- Gasification
- Slurry
- Fluid Structure Interaction
- HVAC
- Turbo Machineries
- Control Systems
- Automation of Structural, Fluid, Control, Electrical & Mechanical System under **Steady State and Transient Conditions**

What is Flownex ® SE

Flownex International is a global software company providing engineers with system simulation software for **Process Flow & Thermal Engineering**.

Flownex Simulation Environment enables engineers to predict, design and optimise for;
- **flow rates,**
- **pressures,**
- **temperatures**,
- and **heat transfer** rates in fluid systems.

Such systems include anything from **ventilation** systems, **water** and **gas** distribution systems up to **boiler** designs and complete **power generation cycles**.

The ability to simulate systems with any **combination** of **liquid**, **gas, two phase, oil, slurry** and **mixture flows** in both steady state and dynamic cases makes Flownex the most powerful simulation tool of its kind.

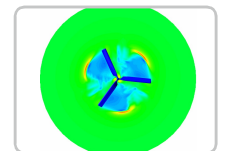**FlowVision** — Computational Fluid Dynamics & Multi Physics Simulation

Realistic CFD Solution with ADVANCED AUTOMATIC NEW **MESHING TECHNOLOGY** based on **SGGR Method** from Russia
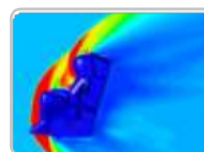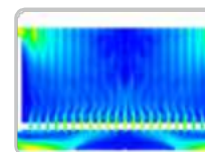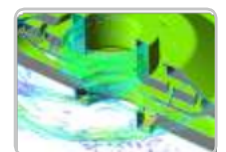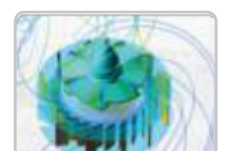

Aerospace

Automotive

Green Technology

Defence

Construction

Oil & Gas

Electronics

Metallurgy
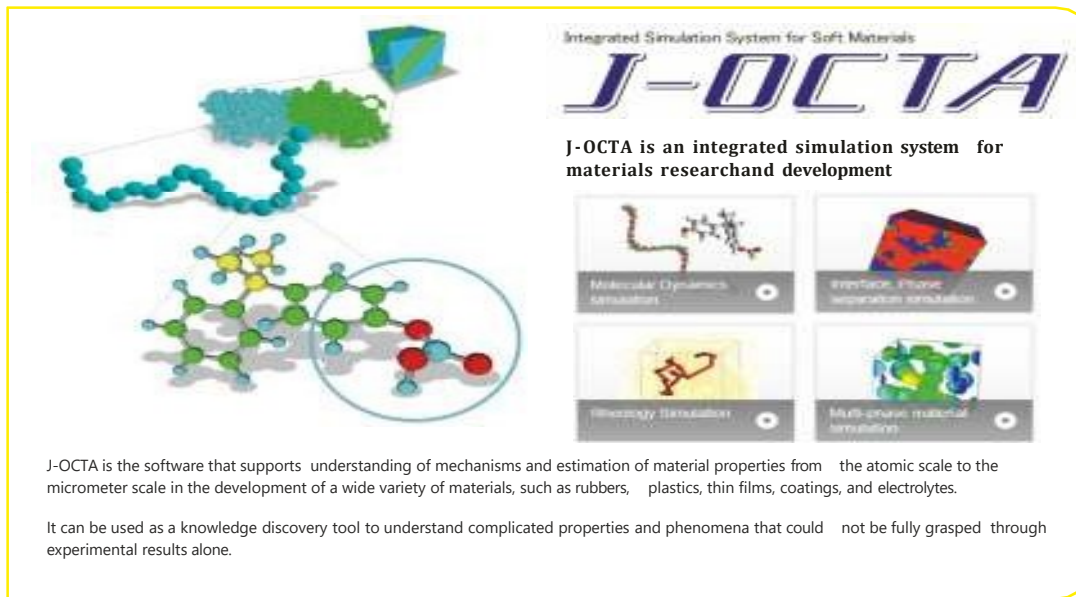
Turbo Machinary

Computational Electronics Simulation