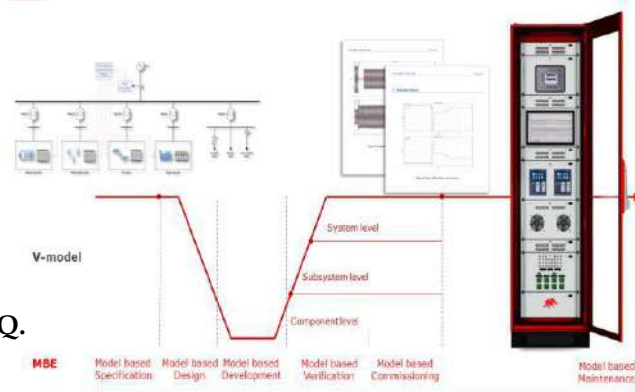


About the Workshop

- Introduction of Typhoon HIL Technology.
- Introduction of Virtual HIL Device software.
- Modelling and Simulation of Boost Closed Loop System.
- Modelling and Simulation of IEEE-4 Node System.
- Modelling and Simulation of MPPT Boost Charger.
- Modelling and Simulation of Wind Plant.
- Modelling and Simulation of Complex Microgrid.
- Application of Python in Power System Studies.
- Real-time Simulation.
- Hardware-in-the-Loop Simulation of Grid Connected Converter PQ.
- Pre-Certification.
- Application of Virtual HIL Device in Class room teaching.

Model-Based Engineering



About Atal Incubation Centre - EMPI (New Delhi)

EMPI - Premier Business School located in South Delhi was founded in 1995 by a team of Power Sector professionals and nation builders including Dr. DV Kapoor ex. Chairman, NTPC, Mr. Gurnam Saran former Director, BHEL, Shri PS Bami ex. CMD NTPC amongst others. Padmabhushan Shri N Vittal who held prestigious positions including Chairman Telecom Commission, Secretary Department of Electronics, GoI and Chief Vigilance Commissioner of India, currently chairs the EMPI Advisory Board.

EMPI has been selected out of thousands of applicants to set up an Atal Incubation Centre (AIC) under the Atal Innovation Mission of NITI Aayog, Govt. of India. We are the only Incubator exclusively focused on Renewable, IoT and Clean Mobility.

AIC - EMPI has set up a Centre of Excellence in technical collaboration with Typhoon HIL GmbH Switzerland, for facilitating and promoting innovation, research, training and projects in the area of Renewable Energy, Smart Grid, Electric Vehicle etc.

About Typhoon HIL GmbH - Switzerland

Typhoon HIL GmbH is the technology leader in the rapidly-growing field of ultra-high-fidelity controller - Hardware - in - the - Loop (C-HIL) simulation for power electronics, micro grids, and distribution networks. Typhoon HIL provides industry-proven, vertically integrated test solutions along with highest-quality customer support. The company was founded in 2008 and since then has been creating products distinguished by the ultimate ease of use, unrivalled performance, leading-edge technology, and affordability...to know more about Typhoon HIL...[Click Here.](#)

About Quarbz Info Systems - Kanpur

Quarbz is a leading supplier of technical computing software and training systems for the last 38 years. Quarbz's head office is in Kanpur, India with operational area being all over India. It is sole authorized distributor of Typhoon HIL GmbH, Switzerland. Quarbz's customer list includes IITs, IIITs, IIMs, NITs, NITTTRs, Govt. & Private Universities and Engineering Colleges Research Centres, Industries etc. Quarbz has already given trainings at more than one thousand institutes and industries to their entire satisfaction...to know more about Quarbz...[Click Here.](#)

Training Schedule for Two Weeks

1st Week (Typhoon HIL : Introduction, Power Electronics, Renewable Energy & Power Quality)

Day	Duration	Description
01 (Mon)	2 Hrs.	Introduction a) Introduction of Typhoon HIL b) Brief introduction of Testing and Development Tool for Power and Energy Systems. <ul style="list-style-type: none"> ▪ Hardware Testing ▪ Simulation ▪ Real-time Simulation ▪ HIL Simulation c) Typhoon HIL Technology <ul style="list-style-type: none"> ▪ Typhoon HIL Real-time Simulator ▪ Software installation ▪ Typhoon HIL Virtual Device Software ▪ Waveform Generator ▪ Script Editor ▪ Test-Suite
02 (Tue)	2 Hrs.	Typhoon HIL Virtual Device Software Continued... <ul style="list-style-type: none"> ▪ Schematic Editor ▪ SCADA Panel
03 (Wed)	2 Hrs.	Power Electronics Hands on Modelling and Simulation of Single-phase inverter Renewable Energy: PV Plant <ul style="list-style-type: none"> ▪ Modelling and Simulation of MPPT Boost Charger
04 (Thu)	2 Hrs.	Renewable Energy: Wind Plant Hands on <ul style="list-style-type: none"> ▪ Modeling of Back-to Back Converter for DFIG Wind application ▪ SCADA Panel design and Simulation of Back-to Back Converter for DFIG Wind application
05 (Fri)	2 Hrs.	Power Quality Hands on <ul style="list-style-type: none"> ▪ Continued from Day 4 ▪ Modelling and Simulation of Grid Connected Converter PQ. ▪ Hands on SCADA panel of Grid Connected Converter PQ. ▪ Queries related to 1st week workshop contents

2nd Week (Typhoon HIL : Electric Vehicle, Power System & Micro Grid)

Day	Duration	Description
01 (Mon)	2 Hrs.	Electric Vehicle with Charging Station (G2V & V2G) Hands on <ul style="list-style-type: none"> ▪ Continuing from day 5 ▪ Modelling and Simulation of Electric Vehicle with Charging System
02 (Tue)	2 Hrs.	Hands on <ul style="list-style-type: none"> ▪ SCADA Panel design and Simulation of Electric Vehicle
03 (Wed)	2 Hrs.	Power System Hands on <ul style="list-style-type: none"> ▪ Modelling and Simulation of IEEE-4 Node System ▪ SCADA Panel design and simulation of IEEE-4 Node System
04 (Thu)	2 Hrs.	Microgrid Hands on <ul style="list-style-type: none"> ▪ Modelling and Simulation of simple Micro-grid
05 (Fri)	2 Hrs.	Certification Queries related to 2nd week workshop contents Certificate distribution

Purpose of Training

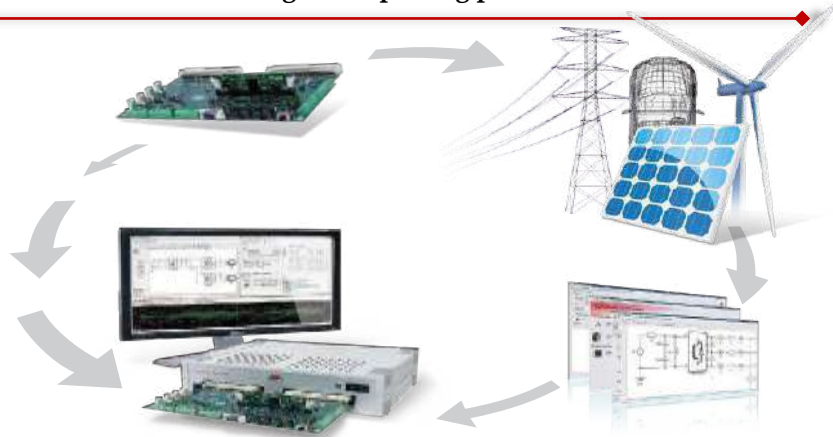
With the day-by-day increasing demand of HIL Simulation in Industries for Controller testing, industries are looking for qualified HIL Trained Specialist engineers to perform the required tasks. But it is difficult to find engineers passing out from their academia having in-depth knowledge of Hardware in Loop Simulation. So, it is good time to register yourself for the program and have the benefit of the opportunity provided by us.

Your knowledge + Our Tool opens channels to thousands of students to learn how to use advanced tools in their research in simple manner with ultra-high fidelity.

The course participants can look forward with Typhoon HIL development engineers in which they will learn more about Typhoon HIL modeling principles, learn simulation technologies, test the system operation in the interactive mode, develop test scripts in Python programming language and build automatic testing and reporting procedures.

Application Scope :-

- Grid connected converters for solar, wind, battery storage and other applications,
- Micro-grid for residential, transportation and marine applications,
- Battery storage systems,
- Motor drives,
- Power Systems,
- Electric Vehicle,
- IDE framework.



Benefits :-

- Virtual HIL Device with original License, lifetime free update for unlimited users.
- Expert level support, interactive Sessions with query solving and doubt clearing.
- Offline Certificate & Online HIL Specialist Certificate.

Requirements :-

- PC with proper internet connection.

Users Include :-

Academics: IIT-Kanpur, IIT-Delhi, IIT-Bombay, IIT-Indore, IIT(ISM)-Dhanbad, NITTTR-Chandigarh, NIT-Patna, NIT-Karnataka, NIT-Uttarakhand, NIT-J&K, AMU-Aligarh, JMI-Delhi, BIT-Mesra, VJTI-Mumbai, KNIT-Sultanpur, RGIT-Kottayam... .. (More than 500).

Industries : ABB, GE, Schneider, Danfoss, Liebherr, Toshiba, Koncar, EPC Power, Honeywell, Powerstar, Woodward, Enerdrive, Flexgen, Renault... ..(More than 100).

Registration Fee, Form & Timing :-

- ❖ Course Fees : INR 4,000 (Rupees Four Thousand only)
Note : Transection details have to be uploaded with registration form.
- ❖ Registration Link : <http://tiny.cc/aic-empil>
- ❖ Session Timing : 3:00pm to 5:00pm

Mode of Payment :-

❖ Online Payment Mode :-

A/C Name	EMPI Business School
Bank Name	Corporation Bank
Branch Name	Satbari, Chattarpur, New Delhi
A/C No.	520141000348658
IFSC Code	CORP0001528

Please Note :-

- ❖ Live Lectures on GOTO MEETING Platform.
- ❖ Link for Recording of live lectures will be provided.
- ❖ An online examination will be conducted and certificate will be awarded to those who have 80% attendance.

Important Dates :-

Last Date of Registration : 24th May, 2020.
Workshop Date : 25th May to 05th June, 2020.

Contact Us :-

For any clarification feel free to contact us on.

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Addresses of Organizations

AIC-EMPI EMPI Business School CSKM Educational Complex, Satbari, Chattarpur, New Delhi - 110074	Typhoon HIL GmbH Technoparkstrasse - 1, CH-8005 Zurich, Switzerland	Quarbz Info Systems 2nd Floor, Skylark Complex, 14/147, Chunniganj, Kanpur - 208001, U.P.
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