

Department of Electrical Engineering, RIT, Kottayam

Details of Items to be Procured under TEQIP

<i>Sl. No.</i>	<i>Items with brief description</i>	<i>Contact details</i>
1	<p>Vector Control drive unit consisting of</p> <p>a) 1.5 HP, PMSM motor with sinusoidal back emf and speed sensor</p> <p>b) IGBT based IPM (Intelligent Power Module)</p> <p>c) DSP controller and control software for monitoring</p> <p>d) Loading facility and other basic accessories</p>	<p>Dr. Dinesh Pai A 9446101858 adpai@yahoo.com</p>
2	<p>Vector Control drive unit consisting of</p> <p>a) 3 phase, fractional HP, squirrel cage induction motor with speed sensor</p> <p>b) IGBT based IPM (Intelligent Power Module)</p> <p>c) DSP controller and control software for monitoring</p> <p>d) Loading facility and other basic accessories</p>	<p>Prof. Abhilash T Vijayan 9447007895 abhilashtv@rediffmail.com</p>
3	<p>Sensor less Vector Control drive unit consisting of</p> <p>a) 3 phase, fractional HP, squirrel cage induction motor</p> <p>b) IGBT based IPM (Intelligent Power Module)</p> <p>c) DSP controller and control software for monitoring</p> <p>d) Loading facility and other basic accessories</p>	<p>abhilashtv@rediffmail.com</p>
4	<p>Switched Reluctance Motor drive unit consisting of</p> <p>a) SRM motor (fractional HP)</p> <p>b) IGBT based IPM (Intelligent Power Module)</p> <p>c) FPGA controller and control software for monitoring</p> <p>d) Loading facility and other basic accessories</p>	<p>Prof. C K Vijayakumari 9495636816 vijayakumari@rit.ac.in</p>
5	<p>Brushless DC Motor drive unit consisting of</p> <p>a) BLDC motor (fractional HP)</p> <p>b) IGBT based IPM (Intelligent Power Module)</p> <p>c) FPGA controller and control software for monitoring</p> <p>d) Loading facility and other basic accessories</p>	<p>vijayakumari@rit.ac.in</p>

6	DC motor driven brushless alternator with harmonic excitation winding (Three phase, 415V, 15 kVA)	Prof. Jiji K S 9446897218 jiji.sajeev@rit.ac.in
7	DC motor driven Brushless Alternator (Three phase, 415V, 10 kVA)	
8	High Power Electronic Load Single phase, 1200 VA, 300V with CC/CV/CP modes	Prof. K D Joseph 9496291322 josephmtech@gmail.com
9	Harmonic Generator Single phase, 1500 VA, 300 V , upto 1kHz.	
10	DC Variable Power Supply (0-30 V, 3 A)	
11	Virtual Instrumentation setup using LabVIEW a) USB based DAQ cards b) NI Compact RIO with modules c) Sensors (both wired and wireless) d) Accessories e) Up gradation of LabVIEW 8.2 software to latest version - Proprietary Hardware' s of National Instruments, USA	Prof. Johnson Mathew 9495081149 johnson@rit.ac.in
12	dSPACE (5 user license) A software-hardware environment (control desk) for electric drives control with interfacing to Matlab/Simulink software platform - A proprietary item of dSPACE GmbH, Germany	Prof. K D Joseph 9496291322 josephmtech@gmail.com
13	Software for Low-frequency electromagnetic field simulation and analysis using FEM for 3D/2D structures capable of - <ul style="list-style-type: none"> • Solving static, frequency domain and time-varying electromagnetic and electric fields including quasi static parameters. • Modeling Electric motors and generators, transformers, bus bars, relays, solenoids, power electronics both individually and as a complete system. • Modeling rotating electrical machines using design templates for Induction machines, Single-phase motors, Three-phase motors, Wound-rotor motors and 	Prof. Jiji K S 9446897218 jiji.sajeev@rit.ac.in

generators, Synchronous machines, DC motors and generators, Permanent magnet DC motors, Universal motors, Electronically commutated machines, Brushless DC motors, Adjustable-speed PM motors and generators, Switched reluctance motors, Claw-pole generators etc.

- Modeling, simulation, analysis and optimization of complex systems including electromechanical, electromagnetic, and electrical drives with integrated power electronics.
- Third party software co-simulation with SIMULINK, MATHCAD for closed loop control
- Single User License