



Indian Institute of Technology (Indian School of Mines), Dhanbad

The Office of Dean, Research & Development

Sanction No and Date: 7(11)/2019-AEI (20739) dated Feb.20, 2020	IIT (ISM) Project No. DHI/2020-2021/708/EE	Date: September 04, 2020
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SRF position for the Project funded by Department of Heavy Industries (DHI) in collaboration with Mahindra & Mahindra Ltd.

Applications are invited under the sponsored project. The details of the project are as under:

Position	Senior Research Fellow (SRF)
Number of Position (s)	01
Title of The Project	Development of Energy Efficient Control Scheme for Induction Motor Drive Used in EV and HEV
Principal Investigator	Prof. Sukanta Das, Assistant Professor, Department of Electrical Engineering, Indian Institute of Technology (ISM), Dhanbad, Jharkhand-826004. Email: asksukanta@iitism.ac.in , Mobile: 7667458474, 9471191348
Tenure of Project	02 years.
Job Description (in maximum of 100 words)	The present project proposal intends to address low or light load poor energy efficiency issue of induction motor (IM) drive system. In fact, this remains as one of major challenges of IM operation. The average full load efficiency of IMs is found to be ~86 % and this degrades further to ~60% as the motor is run toward lighter load condition (say less than 25 % of rated load). Thus, substantial saving in electrical energy consumption is crucial and has to be forced into action by introducing suitable energy efficient control scheme for the IM drive system. Hence, the prima-facie objective of the present proposal is to implement a suitable search controller based energy optimization scheme in a standard 15 kW vector controlled induction motor (IM) drive system and demonstrate an efficiency improvement of around 20 % at light load (less than 0.25 pu) condition.
Essential Qualification	B.E./B.Tech. in Electrical Engineering/Electrical & Electronics Engineering with first class, ME/M.Tech. having specialization in Power Electronics and Drives/Electrical Machines/Electrical Drives/Power Electronics with first class.
Desirable Qualification	Minimum two years of research experience. Candidates having prior knowledge in the relevant research area with good experimentation skill will be preferred.
Age and Relaxation (if any)	The upper age limit is 35 years at the time of appointment. Age relaxation for SC/ST/OBC/PH candidates is as per GOI rules.
Fellowship	Rs. 35,000/- per month.
Last Date & Time	Interested and eligible candidates are requested to send signed scanned copies of brief CV, "Adhar" or any Govt. Photo Identity, STD-X & XII: Mark sheets and Certificates, B.Tech & M.Tech.: Mark sheet and Certificate (must depict Class), Proof of Date of Birth, Caste Certificate (if age relaxation is claimed) as a single pdf file to the Principal Investigator on or before September 21, 2020, 5:00 PM by email at asksukanta@iitism.ac.in.

Shortlisted candidates will be informed the date of interview. Mere possession of minimum qualification does not guarantee an invitation to the interview. Candidates will be short listed based on their merit and as per the requirement of the project. All candidates should make their own arrangements for their stay at Dhanbad, if required. No TA/DA will be paid to attend the interview.

(Signature of PI)