



JRF Recruitment in DST-SERB Sponsored Project (ECR/2018/000330)

Applications are invited from eligible candidates to work as a Junior Research Fellow (JRF) in a Science and Engineering Research Board (SERB) sponsored project at Mechanical Engineering Department, BITS-Pilani, (Pilani campus), Rajasthan. The details are as follows:

Project Title	Assessment of Indoor Plants for Improving Air Quality in Buildings
Project Duration	3 years
Principal Investigator (PI)	Dr. Aakash Chand Rai
Project Description	Every year over 1 million people in our country die prematurely due to inhaling polluted air containing outdoor PM _{2.5} (particles smaller than 2.5 microns in size). However, a large portion of people's exposure to "outdoor" PM _{2.5} occurs indoors (in buildings) since the PM _{2.5} present outdoors can easily find its way indoors through air ventilation and infiltration. Furthermore, because people spend up to 87% of their time indoors, the majority of PM _{2.5} inhalation occurs indoors. Thus, to combat the adverse health effects of PM _{2.5} , people's indoor exposure should be reduced by filtering PM _{2.5} from the indoor air. Indoor plants can serve as natural air-filters since they are known to remove gaseous and particulate air pollutants from the air through pollutant uptake by their leaves, stems and associated micro-organisms. However, the real-world potential of indoor plants for removing airborne PM _{2.5} is largely unknown. It is also unknown, which plant species would be most effective in removing PM _{2.5} ; and how environmental factors (humidity, lighting, ventilation) impact PM _{2.5} removal. Thus, this research is motivated by the need to protect public from the adverse health effects of PM _{2.5} by using indoor plants for PM _{2.5} removal.
Fellowship	Rs. 25,000/- per month for 2 years and Rs. 28,000/- per month in 3 rd year.
Essential Qualifications	M.E./M.Tech with at least 60% marks in Mechanical Engineering/Civil Engineering/Environmental Engineering.
Desirable Qualification:	GATE-qualified and good knowledge of fundamentals in refrigeration and air-conditioning and a strong desire to help combat air pollution in India.

Application Procedure:

- Candidates should email bio-data to the PI (aakashrai@gmail.com) by **31st March 2019**.
- Shortlisted candidates will be informed through email and called for interview to be held at Mechanical Engineering Department, BITS-Pilani, (Pilani Campus), Rajasthan.

Notes:

1. For any queries regarding the position, please feel free to email the PI.
2. The position mentioned is temporary and for the period of duration of the project (3 years).
3. Selected candidate will be encouraged to join the Ph.D. program of BITS-Pilani as per institute rules.
4. If performance of candidate is found unsatisfactory, the position can be terminated with 1-month notice.
5. No TA/DA will be paid for attending the interview.

Dr. Aakash Chand Rai (PI)

