



Indian Institute of Information Technology, Sri City, Chittoor

Reference No.IIITS/2019/03/Staff

Opening Date: 25rd January 2019

Closing Date: 24nd February 2019

Position : Project Research Fellow

Applications are invited for the post of Project Research Fellow in research project entitled “Smart Village Wells” in reference to the sanction letter File No. **DST/ICPS/CPS-Individual/2018/778(G)** dated: 18.12.2018 by Interdisciplinary Cyber Physical Systems (ICPS), Department of Science & Technology, New Delhi-110070. The **Curriculum Vitae** along with soft copies of **Mark Sheets** and **Certificates** should be sent to hvraman@iiits.in (**PI of the project**).

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|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Title | : Smart Village Wells |
| Name of Position | : Project Research Fellow (MS Research Student) |
| Number of Position | : 03 (Three) |
| Project Duration | : 3 Years |
| Essential Qualifications | : B.E/B.Tech in Computer Science/ IT/ Electronics and Communication Engineering/ Electrical Engineering |
| Desirable Knowledge | : PRF-1: Field Data collection, Routing technique, Analysis, with knowledge in NetLogo, Python. PRF-2: Sensor networking, Wireless Communication, multihop routing, with programming in Matlab, Python, NS PRF-3: Algorithms, Machine Learning, with knowledge in R, OpenCV |
| Fellowship | : Rs. 15,000/- pm(Fixed) from Date of Joining. |

Note:

1. The candidate should be preferably less than 28 years of age.
2. The applicant will be responsible for the authenticity of information, other documents and photographs submitted.
3. The Institute reserves the right to accept application at any time, and consider candidates of exceptional credentials without applications. Qualification and experience may be relaxed at any point of time for exceptional candidates.
4. Mere, possessing the prescribed qualification does not ensure that the candidate would be called for Interview. The shortlisting will be done based on the need of the project.



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5. In case of any doubts regarding the application, please email hvraman@iiits.in and/or yrv.prasad@iiits.in
6. Only shortlisted candidates will be informed by e-mail or phone about the interview date. So, the candidate must provide valid E-mail IDs and Mobile number in their applications.
7. The shortlisted candidates may be called to IIIT Sri City for personal interview. No TA/DA will be paid for the interview.
8. Once selected, the candidate will be taken as Project Research Fellow and will be paid Rs. 15,000 per month.
9. On successful completion of requirements, the Project Research Fellow will be converted as MS student in the next subsequent semester.
10. The association between PI/Co-PI and the Project Research Fellow/MS student can be discontinued at any time by giving three month's notice in writing either by the PI of the project to Project Research Fellow/MS student, or by Project Research Fellow/MS student to the PI of the project. Leaving the project before 18 months of joining is strongly discouraged and candidate will not be entitled for any experience certificate.

Description:

PRF 1:

The researcher (MS 1) will first collect data from field, including water sources, depth, distance between sources, etc. Further, this will involve getting the current piping architecture from the villages, but also considering planning an optimum route taking into account different physical constraints like current location of pipes etc. Importantly, the researcher will carry out simple deployment in IIIT Sricity campus, based on water tanks, level marking, etc.

Deliverable 1: Field Data Collection and Analysis (1 to 18 months)

Deliverable 4: Deployment and Training (19 to 36 months)

PRF 2:

The researcher (MS 2) will work on the basic architecture of sensing, actuation and networking of proposed systems. Particularly, the researcher will investigate the challenges in low-power networking; and also work on proposing a hierarchical wireless and wired network considering multi-hop, heterogeneous and cost effective system. This is a critical task and hence would need a researcher to work on this project for 3 years.

Deliverable 2: Sensors and Multihop network (1 to 36 months)



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PRF 3:

The researcher (MS 3) will work on analyzing the data from the water grid formed by connecting the wells (or simulating a water pipe model) in order to adapt and improve the day-to-day operations from the connected network. The researcher will work on constrained clustering considering the optimal segmentation of the terrain. Notably, the researcher will investigate different data analyzing approaches and will provide a recommendation on optimal ways to turn the water 'on' and 'off' across the piping network

Deliverable 3: Route planning and Optimization (1 to 36 months)

Apply with your detailed resume at hvraman@iiits.in

About IIIT Sri City, Chittoor : For details please logon to www.iiits.ac.in

Sd/-
Dean (Research)