

Background

The [Learning Sciences Research \(LSR\) Group](#) at the Homi Bhabha Centre for Science Education, Mumbai, is India's first organised research group investigating the science of human learning. It is part of the [Tata Institute of Fundamental Research \(TIFR\)](#), an internationally recognised basic sciences research institute.

A central research focus of the LSR group is building new computational media to support science and mathematics learning. The group is particularly interested in building embodied interactions that support learning (especially learning of college-level concepts), using multi-touch and other technologies (such as VR). See the link below for an example application:

<https://harshuedu.bitbucket.io/vectors/>

The systems we build are also used as probes for basic research in cognition. In this mode, data from eyetracking and other behavioral studies (based on the built media) are used to develop theoretical models of how embodied interactions support learning.

These studies provide opportunities to develop experimental skills, and the possibility of developing analytics software that help extract patterns from complex behavioral data.

Below is a recent paper based on such a project. It outlines a theoretical model of how doing becomes thinking.

http://lsr.hbcse.tifr.res.in/docs/Papers_pdf/Journal/2017/cogsci_2018.pdf

Postdoctoral Fellow Position

The group is looking for a postdoctoral fellow (1 year term initially, extendable for another three years based on performance). On campus accommodation (suitable for a small family) will be provided as part of the position.

The Ideal Postdoc

A Ph.D. in education/cognition or related fields. Or a Ph.D. in any science/technology/design field. Clear plans to develop an academic career in education. Good writing and analysis skills, and a deep interest in human cognition and learning. Coding skills would be an advantage.

The group's work is very theory-driven, so this position is best suited for candidates planning to move to a faculty position in education or cognition, particularly on topics at the interface between education, design and cognition.

Student Intern Positions

The group is looking for up to 3 interns (3-6 month terms a year), with the possibility of returning another year. Students and recent graduates from any bachelors/masters/doctoral program in science/engineering/design can apply.

Shared accommodation on campus is available for outstation candidates, but only between August and March, both months included.

The Ideal Intern

Someone with good coding skills, and a deep interest in human cognition and learning. A clear understanding of science and mathematics concepts is desirable.

This position is best suited for students who are planning to go for doctoral studies, particularly on topics at the interface between interaction design, education and cognition. Depending on the time of the internship, students can audit some Ph.D.-level cognition courses at the centre.

Contact

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