SONATA
SONATA SOFTWARE

Encourage and Support the Study of Computer Sciences

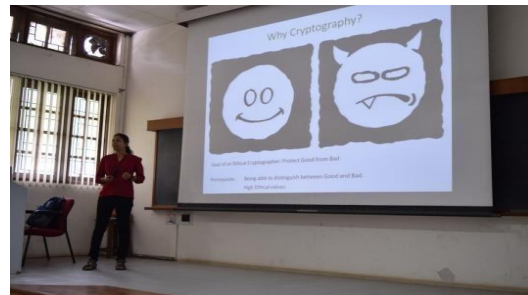**Partner:** **CSA, IISc (Indian Institute of Science)**

Since its founding in 1909, the Indian Institute of Science, Bangalore (IISc) has emerged as India's premier destination for higher education and advanced research in all science and engineering disciplines.
IISC's Computer Science & Automation (CSA) Department was set up in 1969 with a mission to "advance the frontiers of research in computer science and automation and offer world-class pedagogical and research experience to its students". CSA is considered a Centre of Excellence by both the University Grants Commission (UGC) and the Department of Science and Technology (DST). It has been ranked #71in the Times Higher Education (THE) 2016 rankings of the 'Top 100 CS Departments Worldwide'.

CSA researchers contribute to cutting-edge research in topical areas of computer science and are actively engaged in many high impact collaborative projects. Its research programs are funded by generous research grants from multinational companies. CSA alumni are at the forefront of research and development in computer science and related fields both within India and internationally. Several successful start-ups in the fields of pure sciences and technology have been incubated in IISc or by its alumni.

About the Program:

We have committed to CSA a grant of INR 107 lakhs over a 3-year period beginning March 2017. The grant is aimed at supporting CSA's efforts to attract the brightest minds and offer them the best classroom facilities and research challenges. Specifically, the grant will support the following initiatives –

- Outreach Programs: CSA conducts three distinct outreach programs each summer for high school and undergraduate students, covering about 125 students.

  - o Swagatham – to encourage some of the best and brightest high school students to consider IISc for their graduate studies.
  - o Summer Internships – for students interested in computer science. Students are mentored individually by faculty, and the program has resulted in several students enrolling in research programs.
  - o Summer School for Undergraduates –a week-long program covering a range of topics in mathematics and computer science. The program has received very positive feedback.

- Support new research initiatives at the department: CSA is working on cutting edge research conducted by both faculty as well as doctoral students, including machine learning and data analytics, neuromorphic computing, AI approaches for social good, big data engineering and testing.
- Materially upgrade the department's pedagogical infrastructure: CSA has the largest number of students in IISc and is hence in the process of enhancing classroom and library capacities and capabilities.

  The Sonata-CSA partnership also encompasses regular interactions between personnel from both organizations in the form of calendarized campus visits, expert talks and research dialogues.

Expected Outcome:

While our grant will assist CSA in supporting its above-mentioned initiatives, the industry-academia collaboration is also expected to provide a fillip to both partners in their pursuit of excellence. CSA research scholars and faculty would benefit from our knowledge of market and technology trends and in turn, we would get access to cutting edge research in some of our chosen areas.

According to *Prof. Jayant Haritsa, Chair of the Dept. of CSA at IISc*,

"We conducted a range of outreach programs in the summer of 2017, including a three-day program, Swagatham for Gate high-rankers in the GATE exam, two-month Narendra internship program for talented senior undergraduate students, and one-week Summer School for a diverse group of undergraduate students from all over the country. These programs were all supported by the Sonata CSR initiative at IISc, and proved to be extremely popular with the student community at large. For instance, we had close to 2000 applicants for the Narendra internship program, from which we chose around 1% to spend the summer with us. Similarly, the Summer School had over 500 applicants, from which around 80 were selected, including over 40% women students.