

## Report for the GIANT research internship at IISER TVM

Duration of stay: 04.01.2026 – 28.02.2026

Research project: Single molecule fluorescence in the group of Prof. Mahesh Hariharan

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### International conference

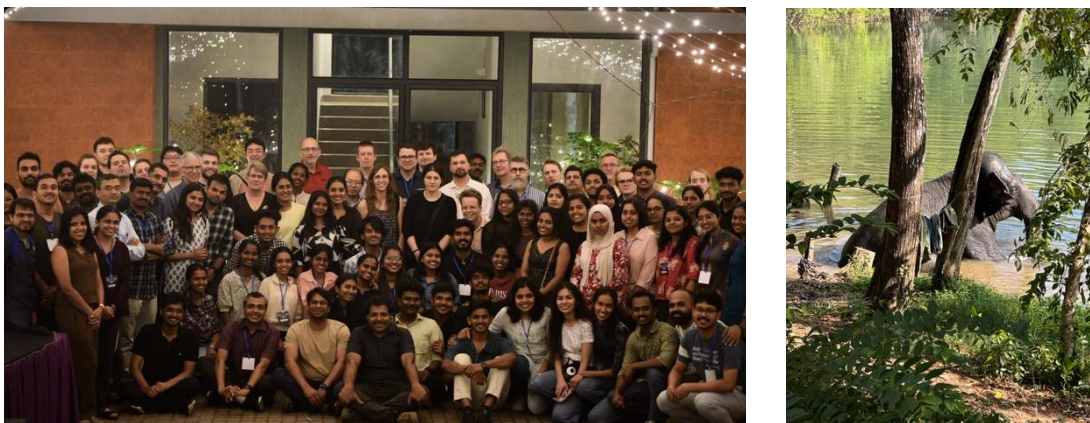


Figure 1: Group picture of the attendees taken during the conference closing dinner (left) and an elephant being bathed at the elephant sanctuary (right).

During the first week of my internship, the 4th International Conference on Excited State Aromaticity and Antiaromaticity took place at IISER TVM. Speakers from all corners of the world came to the institute to discuss the concept of aromaticity and present their own research on excited state aromaticity and related topics.

One special activity during the conference was a trip to an elephant sanctuary. This facility takes feral elephants that are no longer able to survive on their own in the wild due to old age or injury and provides them with a safe haven. Other elephants in the sanctuary are trained from a young age to work at festive parades and to help calm other elephants when they become agitated. During our visit, we were able to observe the bathing of two elephants by their caretakers (Figure 1, right). It was truly interesting to watch these massive creatures calmly sit and lie down while being scrubbed clean.

The conference concluded with a closing dinner, where delicious Indian food was served at an outdoor venue. For entertainment, Indian students and international participants performed choreographed group dances and musical performances. The excellent food, alongside the impressive performances, created a relaxed atmosphere that encouraged multicultural interaction.

## Cultural festivals and celebrations



Figure 2: Sand mandala created by students as part of the Pongal festivities.

During my stay at IISER TVM, several cultural events were organized by the students. One of these was the Pongal festival, a Tamil harvest festival, which is typically celebrated for three to four days. During the celebration, students participated in a game similar to a pinata, but using flower pots instead of cardboard animals. Each participant was given a long stick and their vision was obstructed by a face mask. Other students spun the participant ten times and then released them five meters from the target. Fellow students either guided or distracted the participant while they attempted to find orientation. Participants took turns trying to break the pots, while others stayed outside the range of the swings. In addition, a tug-of-war tournament was held, with teams of eight students competing for the championship.

Apart from the sports activities, there were artistic performances. Students created mandalas from colored sand (Figure 2). Musical performances were presented either solo or in duets. Group dance performances were also part of the program, with ten to twenty students performing coordinated routines. Each group executed different dance patterns, resulting in unique choreographies.

These types of cultural celebrations provided valuable insights into the traditions and customs of Indian students.

### Weekend excursion to Varkala beach

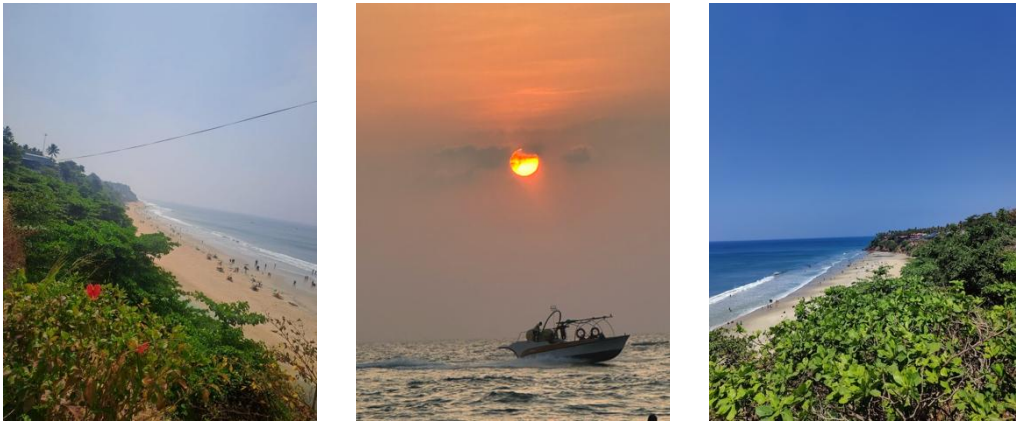


Figure 3: Varkala beach at noon (left & right) and sunset over the arabian sea (center).

The stay at IISER TVM presents great opportunities to experience the beautiful beaches of Kerala. After a two-and-a-half-hour journey, we, a group of six students, reached the popular tourist destination of Varkala. The town is situated on top of a cliff, with a great number of restaurants providing an amazing view over the ocean and the sandy beach below. Unfriendly encounters or scams are relatively rare, which allows for a safe stay. The beach and the ocean themselves are relatively clean, especially when compared to beaches in Goa or Mumbai. The strong waves that reach the shore create a fun environment for capable swimmers to jump into the water and enjoy the surf.

The most mesmerizing scenes appear in the evening, when the sun slowly vanishes behind the horizon. The sunsets we observed over the ocean were truly magical, painting the sky in beautiful red and orange colours.

One particularly memorable experience was our visit to a local seafood restaurant on top of the cliff. After choosing our own fish directly from a fresh display of locally caught seafood, the staff explained the different preparation methods. The lively atmosphere of the restaurant allowed for interesting interactions with Indian tourists and locals, which made the evening truly unforgettable.