



INASCON 2019

13th international nanoscience student conference

X-idea Workshop

1. Introduction

X-idea workshop is supposed to be a major event on INASCON 2019. In the workshop, students are divided into several groups led by renowned scholars. They will discuss about some significant challenges in nanoscience selected from online proposals before the conference. Instead of polished solutions, the workshop focuses on new and creative ideas, which serve as a link between leading scholars and students.

2. Motivation

“A necessary condition for creativity is to let the mind wander unfettered by the rigidities of accepted knowledge or conventional rules.”

——C.R. Rao

X-idea aims to explore creative ideas on significant challenges in nanoscience through discussions between leading scholars and students.

X stands for the unknown. We believe that every leading scholar has met puzzles so challenging that he or she hesitates to report in traditional conferences or assign to his or her PhDs. We hope to offer them a platform to discuss the puzzles with students of various backgrounds. Because of their “innocence”, the students may not be limited by existing knowledge and may raise some amazing ideas.

X also stands for cross-disciplines. We believe that students with different background knowledge could view the same problem from different perspectives. When they work together, it will be possible for them to raise innovative ideas that have never been thought of.

3. Participants

There will be 6-8 challenges to discuss in total. For each challenge, there will be a leading scholar and around 20 students discussing about it. We will try to ensure that some of the students are familiar with the field and the others are not. Facilitators arranged by the committee will also join the discussion to keep the progress on track.

4. Detailed Plan

4.1 Pre-conference

The challenges are proposed mainly by invited scholars and will be put on the website. All participants could then choose the topic they hope to discuss and join the group accordingly. Ideally, each group contains graduate and undergraduate students both with and without professional background. Each group will be led by one of our invited scholars. They will upload books and articles concerning the challenges on the website. These materials will provide a very basic background for students to join the discussion.

4.2 During conference

First Day: Invited scholars will briefly introduce the challenges to all participants. (10-15 minutes for each challenge)

Second Day: In the first round of discussion, scholars will introduce the challenges thoroughly and participants will focus on previous works concerning





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the challenges. In the second round, students should brainstorm ideas about the challenges. Their ideas may be naïve and even ridiculous, but they should keep trying. At the end of the day, each group will do a brief summary. (The first two rounds will take half a day)

Third Day: In the third round, students should gather their ideas and decide the most creative and the most feasible ones. They will try to assess the advantages and disadvantages of the ideas. In the fourth round, they will prepare for the final presentation. (The last two rounds will take half a day. Other activities will be arranged between the first two rounds and the last two rounds.)

Fourth Day: Different groups will present their ideas in the conference and the most creative ideas will be awarded.

4.3 Post conference

The discussions and ideas will be collected and recorded by committee members for future reference.

5. Leading scholars' responsibility

- 5.1 Propose a significant challenge on nanoscience and nanotechnology (possibly with related articles or books that can help participants understand the background beforehand). The challenge is expected to be an open question and not too difficult to understand.
- 5.2 Give a brief introduction to the challenge on the first day of the conference (10-15min).
- 5.3 Mentor the students and lead the workshop in the following days. (The workshop will take one day in total but the way to do this is quite flexible.)
- 5.4 Give some feedbacks and evaluation to students.

