ReDySim VI-2022

Virtual summer internship with ReDySim (Recursive Dynamic Simulator)
(July 20, 2022 - Aug 20, 2022)

BRIEF

This programme intends to help participants to solve the basic dynamics of multibody systems using the Recursive Dynamics Simulator (ReDySim). ReDySim is a MATLAB-based recursive solver for the dynamic analysis of robotic and multibody systems. It essentially consists of very efficient recursive inverse and forward dynamics algorithms for simulation and control of open and closed-loop multibody systems. This internship is going to be a self-propelled activity to learn and visualize the dynamic behaviour of some commonly known multibody systems under the mentorship of IIT professors and their graduate students

ELIGIBILITY

Students from any college/university interested in robotics and multibody dynamics.

MODALITY

This online event "**Virtual summer internship with ReDySim (Recursive Dynamic Simulator)**" will be under the guidance of Prof. Subir K. Saha of IIT Delhi, Assoc. Prof. Suril V. Shah of IIT Jodhpur & Dr. Parmanand V. Nandihal of Sister Nivedita University, Kolkata.

BENEFITS TO PARTICIPANTS

- Opportunity to learn ReDySim and MATLAB.
- Leaning to solve multibody dynamics problems.
- Experience of working in a team with members across the country (and possibly the world).
- Skill of making a good presentation.

TEAM

Team of four or five members will be made having one as coordinator, and another one as co-coordinator. Teams will be made by the organizer and will be displayed on the websites http://home.iitj.ac.in/~surilshah/redysim.php/

IMPORTANT DATES

- *Date of Announcement of Call for Participatio*n: June 28, 2022 (Tuesday)
- *Last Date for Registration:* ~~July 7, 2022 (Thursday)~~ July 18, 2022 (Monday)
- *Date of Interaction*: ~~July 9, 2022 (Saturday)~~ July 20, 2022 (Wednesday)
- *Announcement of Formation of the Teams*: ~~July 11, 2022 (Monday)~~ July 22, 2022 (Friday)
- *Date of Mid-term Interaction*: ~~July 19, 2022 (Tuesday)~~ July 30, 2022 (Saturday)
- *Date for Submission of Slides (pdf):* ~~Aug 4, 2022 (Thursday)~~ Aug 16, 2022 (Tuesday)
- *Peer review marks submission:* ~~Aug 6, 2022 (Saturday)~~ Aug 18, 2022 (Thursday)
- *Final Day of Competition:* ~~Aug 8, 2022 (Monday)~~ Aug 20, 2022 (Saturday)

PROGRAM OUTLINE

- The participants will be participating online for a one-day webinar on July 20, 2022. The program schedule will be as follows:

  - 17:00 Hours to 17:20 Hours: Inaugural Speech by Prof. Subir K. Saha, IIT Delhi.
  - 17:20 Hours to 17:40 Hours: Speech by Assoc. Prof. Suril V. Shah, IIT Jodhpur.
  - 17:40 Hours to 18:40 Hours: Introduction to ReDySim by Mr. Alinjar Dan, Ph.D student, IIT Delhi & Mr. Saurabh Chaudhary, Ph.D student, IIT Jodhpur.
  - 18:40 Hours to 19:15 Hours: Briefing of the work and doubt clearing of the participants' by Dr. Parmanand V. Nandihal, Sister Nivedita University, Kolkata.

- Online interaction sessions with the participants will be kept for discussion on their progress and doubt clearing.

- The teams shall be working on problem statements, for which participants may refer to some study materials which will be recommended by us. Following the interaction session, participants (group-wise) will be asked to upload a presentation of six slides. The template for the first slide of the presentation will be provided to the teams.

- The presentation of each group will be provided to other fellow groups for evaluation.

- On the Final day of the competition, the teams will be required to present their prepared slides to a panel for evaluation, remarks and question-answer to the participants.

CERTIFICATION

On successful completion of the competition, the participant names will be recorded on the ReDySim website, along with the slides (presentation) submitted by the teams. This activity follows a strict "No Explicit Certificate policy", i.e., the participants will not be given any certificate. Their work can be claimed by referring to their project details that shall be put on the ReDySim website.

ORGANIZING TEAM

- Prof. Subir K. Saha, IIT Delhi, New Delhi
- Assoc. Prof. Suril V Shah, IIT Jodhpur, Jodhpur
- Dr. Paramanand V. Nandihal, Sister Nivedita University, Kolkata
- Dr. Mohd Zubair, Assistant Professor, Adamas University Kolkata
- Mr. Alinjar Dan, Ph.D Student, IIT Delhi
- Mr. Saurabh Chaudhary, Ph.D Student, IIT Jodhpur
- Mr. Ankur Phukon, B.Tech Student, JIST Assam
- Mr. Alok Dwivedi, B.Tech Student, NIT Meghalaya
- Mr. Sidhartha Kumar, B.Tech Student, NIT Meghalaya

REGISTRATION

Registration Charges: **FREE**
Online Application Link: bit.ly/ReDySimVI-2022
Contact Email: redysim.help@gmail.com

AWARDS

The Winner Team will get an opportunity to participate in **IMSD–ACMD** from Oct 16–20, 2022