

## **Minutes of General Body Meeting of The Robotics Society (TRS) held on 27<sup>th</sup> February 2022 (online)**

### **Agenda**

1. Welcome Address
2. Address by the President, TRS
3. Approval of minutes of previous GBM
4. Presentation of report of activities: Secretary
5. Ratification of decisions taken by General Council
6. Presentation of statement of accounts: Treasurer
7. Discussion on
  - a. AIR 2023
  - b. TRS workshops
  - c. Student chapter activities
8. Activities for 2022-23

### **Minutes of Meeting:**

1. Prof. Asokan (Secretary) welcomed the online participants of the Annual GBM, which was earlier scheduled for October 2021 but could not be held.
2. Prof. Santanu Chaudhary (President) welcomed the members and delivered the presidential address and briefly explained the role of the TRS for the collaboration and networking between roboticists in the country and beyond.
3. The minutes of the previous GBM (Sept 19, 2020) were circulated with the members prior hand and were accepted as there were no objections from any members.
4. The report of the TRS activity for the period 2020-21 were read out/presented by Prof. Asokan. The contents of it are in Annexure 1.
5. Governing Council (GC) meetings were held in Jan 2021 and Sept 2021. The points discussed in the GC meetings were taken up for ratification in this GBM. These points are listed below.
  - a. Indo-Japanese workshop during AIR 2021
  - b. AIR 2023 to be hosted by IIT Ropar
  - c. AIR workshops to be hosted by PSG Coimbatore and VNIT, NagpurThese were ratified by the members.
6. The financial statement of TRS was shared and discussed by the Treasurer. A summary of it is in Annexure 2. Specific inputs on utilizing Surplus Amount (accumulated over the years) were discussed and the following were approved.
  - a) A sum of ₹ 5,08,332/- be and hereby set aside out of the funds received during the financial year 2020-21 for the following purposes:
    1. To Meet the expenses for promotion of knowledge in robotics science
    2. To meet the expenses related to student chapter activities
    3. To meet the expenses related to the International Conference on Advances in Robotics 2023

It was further resolved that the said sum shall be utilized within a period of five years from the closure of the financial year 31 March 2021, or such period as may be prescribed under section 11(2) of the Income Tax Act, 1961.

b) Awards for PhD/MTech/B.Tech projects

It was decided that TRS may institute awards for best PhD thesis, MTech project, and B.Tech projects. For the durations between two AIR conferences, nominations for best PhD thesis and best masters thesis can be sought and a TRS committee can do the selection and prize money (and recognition) to few of them, who can also be designated as Keynote Student Speakers in the PhD Symposium during the AIR conference. TRS can call for "Best B.Tech Project" awards (three of them) every year and an amount can be awarded as prize money, in addition to recognition.

c) TRS's role to support DD-Robocon 2022 to be considered as "Knowledge Partner". From TRS side, workshops for the participants will be organized (need not be specific to just student chapters). TRS Award can be constituted for any suitable criteria at the DD-Robocon.

7. AIR2023: As discussed in the GC meetings, IIT Ropar (represented by Dr. Ekta Singla) had applied to host AIR2023 at IIT Ropar. IIT Ropar had organized a TRS workshop in Feb 2020 and hence is eligible to bid for AIR conference and hence their application was considered for further discussions. The members present in the GBM unanimously accepted the request and have agreed in principle for AIR2023 to be organized by IIT Ropar. Dr. Ekta Singla was requested to make necessary arrangements to begin the preparations and follow up with the Secretary on further formalities, terms and conditions, etc. The mode of conduct of AIR2023 was elaborately discussed and Dr. Ekta Singla was requested to explore platforms to allow Hybrid Mode of Conference. Those not possible to attend in person can attend the conference in virtual model, even to present an accepted paper. The members felt that the international participation may improve due to this. The proposed timing of the conference was suggested to be around June end-July 1st week, 2023. Dr. Ekta Singla was requested to consult the academic calendars of many institutes and also look at the dates of renowned Robotics conferences such as IEEE-ICRA, IEEE-IROS, and Indian conferences such as iNaCoMM2023 and propose suitable dates to the Governing Council.
8. TRS Workshops: GBM approved the proposed workshops at PSG Tech Coimbatore (Dr. B. Vinod) and VNIT Nagpur (Dr. Shital Chiddarwar). They must be planned such that they are spaced in the first and second half of the year.
9. Student Chapter Activities: To improve the knowledge of students (and faculty) in the robotics domain, many proposals were made by the members. These are summarised below. The programs need not be restricted just to the student chapters but can also be kept open to others. However, whenever necessary, preference to the student chapters can be given.
  - a. Video Lectures for Student Chapters, similar to Certification Courses. The Student Chapter faculty coordinators can help in the logistics of the courses.

- b. Prof. Santanu Chaudhary proposed to explore collaboration with NPTEL where TRS members can conduct lectures/tutorials and the evaluations can be done by the TRS faculty members. Prof. Asokan volunteered to check at IIT Madras, where a similar modality was used for a course on Quantum Computing (IBM).
  - c. Prof. Pushparaj Pathak gave example of an NPTEL course (on MATLAB) and proposed the faculty and their research scholars can do the evaluations, as required for certification. He also proposed to call for "Student Internship" under the ambit of TRS which can be coordinated centrally (rather than at individual faculty level) and the selected student can be provided internships under the TRS experts.
  - d. Prof. Subir Saha proposed to build around Flip-class based learning and implement Team-based Online Projects (TOP) to have a better impact. He quoted the example of ROC (RoboAnalyzer-based Online Competition) organized by Tezpur University, which had been a success in the last two years.
  - e. Dr. Ekta Singla proposed to make lab demonstration videos and other resources for the prototypes and systems developed by the TRS members. These can be uploaded to a YouTube channel, to act as a video version of Newsletter. She also proposed to do one such activity before AIR2023 as an attraction to the conference.
  - f. Dr. Debanik Roy shared his experience on the interaction/guidance he has had with the faculty and student groups in the execution of various projects, as a mentor. He proposed that TRS can be nodal point for mentoring TRS Student Chapters to participate in Govt. of India's events such as Toycathon and Smart Hackathon.
  - g. Dr. Saravana Perumaal proposed sessions by TRS experts for "Knowledge Sharing/Experience". He also proposed mentoring of interested faculty (from any institute) by the TRS experts. A symposium can also planned to facilitate the same.
  - h. Mr. Rajeevlochana Chittawadigi extended the idea of Prof. Pathak on Centralised Student Internships. He proposed that in addition to the students, the faculty from the same institute can also apply as a team. This way, the TRS experts can be able to mentor the faculty and student groups, which may result lead to publications and also potential collaborative projects.
10. Prof. Subir Saha proposed that alliances of the similar societies can be explored. Examples being AMM (Association for Machines and Mechanisms), IPRAI (Institute of Pattern Recognition Artificial Intelligence), etc. tHe proposed was supported by Prof. Santanu Chaudhary. A TRS committee can be setup to create MoU for such alliances.
11. The meeting ended with the Vote of Thanks by Prof. Asokan (Secretary, TRS).

**Annexure 1:**  
**Annual Report on the TRS Activities**

**The Robotics Society**

**General Body Meeting February 2022**

**Report on activities for the period 2021-2022**

This report presents the activities of The Robotics Society for the period Oct. 2020 to January 2022. The last GBM was held in Sept. 2020 in online mode.

**Membership**

The total number of members (student as well as lifetime members as on 21<sup>st</sup> February 2022 is 2155. There was an increase of 813 members (life members and student members) during the reporting period. The proactive engagement by the society enabled the increase in membership. Number of student chapters have increased to 22, an increase of 14 student chapters in the reporting period. This clearly shows the increasing acceptance of student chapters.

The current list of student chapters are given below: **TSSC**

1. College of Engg, Pune, MP.
2. N.B.K.R. Institute of Science & Technology, Vidyanagar, NellurDist, AP
3. RCC Institute of Information Technology, Beliaghata, Kolkata.
4. Amrutvahini College of Engineering, Amrutnagar, Sangamnar.
5. JSPM'S Rajarshi Shahu College of Engineering, Pune.
6. Muthayammal Engineering College, Namakkal Dist, Tamilnadu.
7. BVM Engineering College, Vallabh Vidyanagar, Gujarat.
8. Karunya Institute of Technology & Sciences, Coimbatore, Tamilnadu.
9. Govt. Engineering College, Palakkad, Kerala.
10. Kongu Engineering College, Erode, Tamilnadu.
11. Amrita School of Engineering, Kollam, Kerala.
12. Jamia Millia Islamia, Jamia Nagar, New Delhi.
13. Dr. D. Y. Patil Institute of Technology, Pune
14. Muffakham Jah College of Engineering and Technology, Hyderabad, AP.
15. Parul Institute of Technology, Waghodiya, Gujarat.
16. Toc H Institute of Science & Technology, Ernakulam, Kerala.
17. Narayana Engineering College, Nellore AP.
18. Sri Krishna College of Engineering & Technology, Coimbatore.
19. Chennai Institute of Technology, Chennai.

20. J.N.N Institute of Engineering, Chennai.
21. Saintgits College of Engineering, Kottayam, Kerala.
22. Sri Ramakrishna Engineering College, Coimbatore.

#### TSCM

1. AKGEC Skills
2. The Hi-Tech Robotics Systems Ltd
3. Schunk

#### **Workshops/Conferences Organised/supported:**

**Advances in Robotics 2021 (AIR 21)** was successfully conducted in online mode at IIT Kanpur from 30<sup>th</sup> June to 4<sup>th</sup> July 2021. TRS record its appreciations to Prof. Ashish Dutta and Prof. Tomohiro Shibata (Co-Chairs of AIR 202) for organising the conference. The proceedings of the conference has already been published by ACM.

The biennial **TRS workshop on Advances in Robotics** was held at IIT Ropar in online mode from 2<sup>nd</sup> Nov. to 6<sup>th</sup> Nov. 2020. The workshop was sponsored by AICTE. TRS record its appreciations to Prof. Ekta Singla for organising this event. RSJ-TRS Workshop.

#### **Meeting with Japanese Robotics Society:**

An online meeting with the president of the Japanese Robotic Society, Prof. Minoru Asada on 9th March was organized to explore collaboration between TRS and JRS. Prof. Asada, Prof. Shibata (RSJ) and Prof. Asokan T (TRS) attended the meeting. The objective of this meeting was to explore the possibility of better cooperation and collaboration between TRS and RSJ.

Following were the outcome of the meeting:

1. TRS will organise an online Indo-Japanese workshop for TRS and RJS members. This will be primarily to exchange ideas and identify areas for collaboration.
2. The workshop can be arranged during the AIR 2021, before or after the conference.

#### **Indo-Japanese Workshop:**

A joint workshop on “Robotics in Japan and India” was organized jointly by Japanese Robotics Society and TRS on **June 30, 2021 as part of AIR2021.**

#### **Webinars**

TRS organised two webinars as part of the online lecture series.

#### **Webinar 3 Legged Locomotion in Robotics: 30<sup>th</sup> Oct 2020**

1 Biped Locomotion-Design and Control

Prof. Ashish Dutta, IIT Kanpur

2. Quadruped Locomotion

Prof. Pushparaj M.Pathak, IIT Roorkee

#### **Webinar-4 : Robots for Assisted Living: 5<sup>th</sup> March 2021**

-Robots for Assisted Living

Prof. Tomohiro Shibata, Kyushu Institute of Technology, Japan

TRS in association with other institutes organised many workshops and conferences. Technical sponsorship was provided for the following conferences:

1. International Conference on Robotics, Automation and Intelligent Systems 2021, ICRAINS-Nov 2021 at Karunya Institute of Technology and Sciences, Coimbatore.
2. One-week online AICTE Sponsored Short Term Training Programme (STTP) on "Emerging Research Trends on Robotics and its Applications-Phase III" during October 05-10, 2020 at Mepco Schlenk Engineering College, Sivakasi.
3. International Conference on Industrial Instrumentation & Control (I2C-2021), on 20th to 22nd August, 2021 at RCC Institute of Information Technology, Beliaghata, Kolkata.
4. First International conference "Robotics, Intelligent Automation and Control Technologies (RIACT 2020)" on between 2nd & 3rd October 2020 (Virtual) at VIT, Chennai.

#### **Newsletter**

**With the active support of the members and student chapters, TRS published three volumes of news letter during the reporting period.**

- [TRS Newsletter Vol8 No1 2020](#)
- [TRS Newsletter Vol9 No1 2021](#)
- [TRS Newsletter Vol9 No2 2021](#)

Thanks to Dr Sudheer and his team for making this possible.

#### **Governing Council Meetings.**

TRS governing council met twice during this period in January 2021 and Sep. 2021. The decisions of the GC will be presented to the general body for ratification.

Inspite of the Covid related uncertainties and travel restrictions, TRS could carry out its activities and make a good impact amongst the students, faculty and researchers. TRS aims to achieve better heights in the years to come and seek the support of all the members.

(Asokan T)

#### **Annexure 2:**

Financial Statements of TRS (Financial Year 2020-21)

**THE ROBOTIC SOCIETY****Computation of Total Income for AY 2021-22**

Particulars		Amount	TDS
<b>INCOME FROM OTHER SOURCES</b>			
Membership Fees	2,97,360		Nil
Other Reciepts	3,01,349	5,98,709	
Less: 15% as per section 11		89,806	
<b>Receipts available for Application</b>		<b>5,08,903</b>	
Less :			
Application of Income			
Administrative Expenses			
Establishment Expenses			
Expenses as per I & E Account	65,570		
Less: Depreciation for the year	-		
	65,570		
Add: Purchase of Fixed Assets	-		
	65,570		
Less: Amount utilised from b/f surplus of FY 2019-20	(65,570)		
Receipts applied during the year	-	-	
Less:			
<b>Option excercised u/s 11(1)(2)</b>		<b>5,08,903</b>	
<b>TOTAL INCOME</b>		<b>-</b>	
Tax on Total Inocme			
Tax Paid			
Tax Payable/Refundable		-	

Note: The Society is Registered Under Section 12A wef A.Y 2020-21 UNDER CATEGORY Advancement of any other object of general public utility VIDE Reg. No: CIT(EXEMPTION) DELHI/12AA/2019-20/A/10578, Order No: ITBA/EXM/S/12AA/2019-20/1023433194(1), dated 30/12/2019

THE ROBOTIC SOCIETY					
BALANCE SHEET AS AT 31ST MARCH, 2021					
Laibilities	As At 31/03/2021 Amount (Rs.)	As At 31/03/2020 Amount (Rs.)	Assets	As At 31/03/2021 Amount (Rs.)	As At 31/03/2020 Amount (Rs.)
Reserve & Surplus:			Fixed Assets:	Nil	Nil
Opening Balance	5,27,370.43	3,56,435.00			
Add: Surplus Trf. from I & E A/c	5,33,138.79	1,70,935.43	Current Assets:		
Sub- Total	10,60,509.22	5,27,370.43	Bank Balance- SBI	11,20,839.22	6,79,909.43
			Cash in Hand	-	-
Current Liabilities:					
Audit Fee Payable	15,000.00	15,000.00			
Sundry Creditors	43,170.00	1,35,559.00			
GST Payable	2,160.00	1,980.00			
TOTAL	11,20,839.22	6,79,909.43	TOTAL	11,20,839.22	6,79,909.43
Subject to our Audit Report of Even Date				-	-
For K.S. GUPTA & CO.,					
CHARTERED ACCOUNTANTS,					
P. K. GUPTA					
Partner			(Vice President)		(Treasurer)
M. NO. 085506					
FRN. 001180N					
DATE: 10/02/2022					
PLACE : NEW DELHI					
UDIN:					

THE ROBOTIC SOCIETY					
INCOME & EXPENDURE ACCOUNT FOR THE YEAR ENDING 31ST MARCH, 2021					
EXPENDITURE	For the Year ended 31/03/2021 Amount (Rs.)	For the Year ended 31/03/2020 Amount (Rs.)	INCOME	For the Year ended 31/03/2021 Amount (Rs.)	For the Year ended 31/03/2020 Amount (Rs.)
To Bank Charges	649.00	649.00	By Membership Fees	2,97,360.00	3,06,237.00



To Website Renewal Charges	3,868.21	12,348.57	By Surplus of AIR Program	2,99,579.00	
To Journal Printing Expenses	10,903.00	26,130.00	By Other Income	1,770.00	
To Program Support	-	25,000.00			
To Provision for Audit fees	15,000.00	15,000.00			
To Professional Charges for Webinar	5,900.00	53,000.00			
To Fee & Taxes Paid	29,250.00	3,174.00			
To Excess of Income over Expenditure	5,33,138.79	1,70,935.43			
<b>TOTAL</b>	<b>5,98,709.00</b>	<b>3,06,237.00</b>	<b>TOTAL</b>	<b>5,98,709.00</b>	<b>3,06,237.00</b>
					-
Subject to our Audit Report of Even Date					
For K.S. GUPTA & CO., CHARTERED ACCOUNTANTS,					
P. K. GUPTA Partner			( Vice President)		(Treasurer)
M. NO. 085506 FRN. 001180N					
DATE: 10/02/2022 PLACE : NEW DELHI					
UDIN:					

THE ROBOTIC SOCIETY					
RECEIPT & PAYMENT ACCOUNT FOR THE YEAR ENDING 31ST MARCH, 2021					
Receipts	For the Year ended 31/03/2021 Amount (Rs.)	For the Year ended 31/03/2020 Amount (Rs.)	Payments	For the Year ended 31/03/2021 Amount (Rs.)	For the Year ended 31/03/2020 Amount (Rs.)

Op. Balance on 01.04.2020			Bank Charges	649.00	649.00
- Bank Account	6,79,909.43	3,82,677.00	Website Renewal Charges	3,868.21	12,348.57
- Cash in Hand	-	-	Journal Expenses	-	26,130.00
Sub Total	6,79,909.43	3,82,677.00	Support Expenses	-	25,000.00
			Webinar Expenses	5,900.00	-
Add: Receipts during the year			Payment of GST	66,839.00	-
-Membership Fees	2,52,000.00	3,06,237.29	Professional Charges	69,620.00	-
-GST On Membership Received	45,360.00	55,122.71	Printing Charges	10,903.00	-
-Other income	1,770.00	-	Sub Total	1,57,779.21	64,127.57
Surplus of AIR Conference	2,99,579.00	-			
			Closing Balances on 31.03.2021:		
			- Bank Account	11,20,839.22	6,79,909.43
			- Cash in Hand	-	-
<b>TOTAL</b>	<b>12,78,618.43</b>	<b>7,44,037.00</b>	<b>TOTAL</b>	<b>12,78,618.43</b>	<b>7,44,037.00</b>
				-	-
Subject to our Audit Report of Even Date					
For K.S. GUPTA & CO.,					
CHARTERED ACCOUNTANTS,					
P. K. GUPTA					
Partner		(Vice President)		(Treasurer)	
M. NO. 085506					
FRN. 001180N					
DATE: 10/02/2022					
PLACE : NEW DELHI					
UDIN:					

**Annexure 3:**  
**Attendees of TRS GBM on Feb 27, 2022**

Prof. Santanu Chaudhary, President  
Prof. Subir K. Saha, Vice-President (Academic)  
Dr. Debanik Roy, Vice-President (R&D and Industry)  
Prof. Asokan T., Secretary  
Prof. Mohd. Suhaib, Treasurer  
Dr. Sudheer A. P., Newsletter Editor  
Prof. Pushparaj M. Pathak, Student Activity Coordinator  
Mr. Rajeevlochana G. Chittawadigi, Web Coordinator  
Prof. Ashish Dutta, Governing Council Member  
Prof. G. C. Nandi, Governing Council Member  
Dr. Ekta Singla, Governing Council Member  
Mr. Amudhan A. N., Governing Council Member

Dr. Ashish Singla  
Mr. Rajashekhar V. S.  
Dr. Srijan Bhattacharya  
Dr. Saravana Perumaal  
Mr. Manohar Sambandam  
Dr. Vinay Patel  
Ms. Khushi  
Mr. Kanagaraj Ganesan  
Mr. Ashish Thakkar  
Mr. Sudhakar  
Mr. Balaji Arunachalam  
Dr. Sivasnkar G.  
Ms. Anuja Shelar  
Mr. Neeraj Patel  
Mr. Srikanth Kavirayani