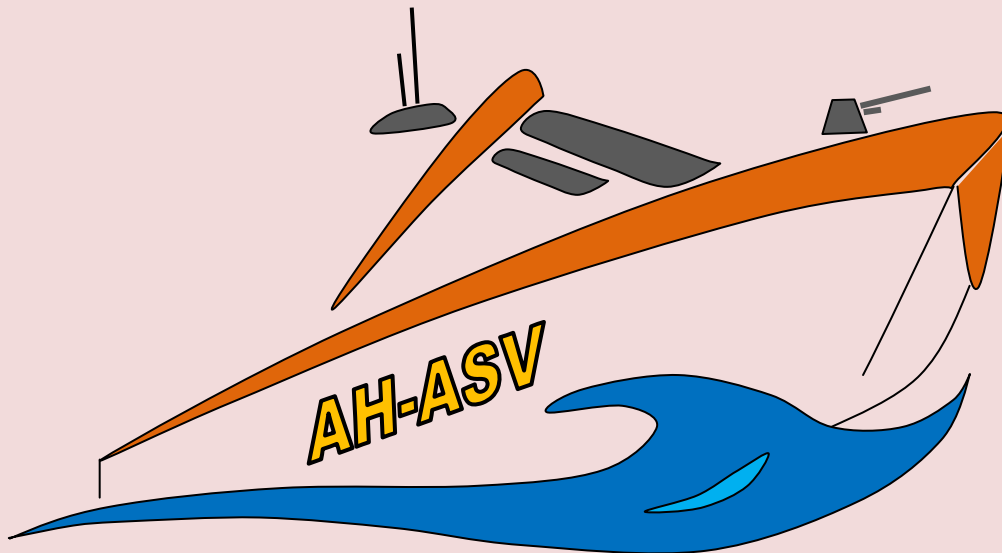




Symposium on
“Advances in Hydrodynamics and
Autonomous Sea Vehicles”
AH-ASV 2022

(20th and 21st January 2022)

Organised by
NSTL- DRDO



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About AH-ASV 2022 Symposium:

With the recent advances in hydrodynamics and increased importance on the autonomous sea vehicles, it is proposed to organize a two day Symposium on “**Advances in Hydrodynamics and Autonomous Sea Vehicles**” on **20th and 21st Jan 2022** at **NSTL**. Experts in the relevant fields from Academia, R&D organizations, Indian Navy (User group) and Industry are being invited to deliver talks on the proposed theme with about 150 participants (online). The Symposium will greatly benefit NSTL’s objective of attaining self reliance in hydrodynamics as well as technical know-how on the recent advances in hydrodynamics and autonomous sea vehicles.

Relevance of the Symposium theme:

In the dynamic scenario of today’s world, there exists an increased demand in autonomous sea systems and related advancements in hydrodynamics. Development of such systems and technologies will help in country’s self reliance and more importantly nation’s security. The onus is therefore upon R&D organizations working in these areas, to constantly strive to provide best solutions to the user, the Indian Navy.

Thrust areas:

- Hydrodynamics and control of marine vehicles
- Recent advances in hydrodynamics
- Autonomous Underwater Vehicles
- Autonomous Sea-surface Vehicles
- Simulation Based Design

Venue: (Online mode)

Naval Science and Technological Laboratory (NSTL)

Govt. of India, Min. of Defence,
Defence Research & Development Organization,
Naval Science & Technological Laboratory,
Vigyan Nagar Post,
VISAKHAPATNAM – 530 027

AH-ASV 2022: Inaugural Session

20th Jan 2022

10:00	Program initiation
10:10	Welcome Address by Dr. Y. Sreenivasa Rao, OS & Director, NSTL
10:20	Inaugural Address by Dr. Sameer V Kamath, DS & DG(NS&M)
10:30 to 10:40	Overview on the Symposium Dr. Manu Korulla, Sc’G, NSTL

Schedule of oration:

Session-1, 20th Jan 2022, Session Chair: Prof. S C Misra, Former Chairman NRB
Email: misra_s_c@yahoo.com

Time	Orator	Topic	Affiliation/email
10:45 to 11:10	Prof. O P Sha	Simulation Based Design for Marine Vehicles	IIT, Kharagpur ops@naval.iitkgp.ernet.in
11:15 to 11:40	Prof. Vishwanath Nagarajan	Design optimisation of an AUV for station keeping and maneuvering	IIT, Kharagpur Vishwanath_n@naval.iitkgp.ernet.in
11:45 to 12:10	Prof. P Krishnankutty	Bio-mimetically propelled Autonomous Underwater Vehicle development	IIT, Madras pkrishnankutty@iitm.ac.in

12:10 to 12:30 Conclusion of session -1 (Questions and Answers)

12:30 to 13:30 Lunch Break

Session-2, 20th Jan 2022, Session Chair: RAdm Srivastava (Retd.), DRDO Fellow
Email: sanjeev_shrivastav@rediffmail.com

13:30 to 13:55	Capt. Amit Ray	AUV Technologies and requirements	DND (SDG), IN Amit.rays@navy.gov.in
14:00 to 14:25	Prof. Sheeja Janardhanan	CFD methods in the studies on AUVs- A Review	IMU, Visakhapatnam sheeja@imu.ac.in
14:30 to 14:55	Dr. HN Das, Sc'G	Application of CFD	NSTL das.hn@nstl.drdo.in
15:00 to 15:15	Shri. Kushal Bhattacharya, Sc'F	Swarm Technologies	NSTL kushal.bhattacharya@nstl.drdo.in
15:20 to 15:45	Shri. P Shiva Prasad, Sc'E, Director DYSL-AT and Mr Soumya Ranhan Mohanty, Sc-C	AI for Swarm AUV	DYSL-AT, DRDO director@dysl-at.drdo.in

15:45 to 16:30 Conclusion of session -2 (Questions and Answers)

Schedule of oration:

Session-3, 21st Jan 2022, Session Chair: RAdm G K Harish, VSM, DGND
Email: gkharish.64@navy.gov.in

Time	Orator	Topic	Affiliation/email
09:30 to 09:55	Dr. G V Krishna Kumar, Sc'G	Hydrodynamic flow noise	NSTL krishnakumar.gv@nstl.drdo.in
10:00 to 10:25	Shri Anish S, DGM C-SAS and S Krishna Prasad, Manager C-SAS	CSL- A Shipyard's view point on Autonomous Technology	M/s Cochin Shipyard Ltd. anish.s@cochinshipyard.in krishnaprasads@cochinshipyard.in
10:30 to 10:55	Dr. VBS Ayyangar, Sc'F	Full scale sea Trials	NSTL bharatwaja.srinivasan@nstl.drdo.in
11:00 to 11:25	Shri Arasu Venkatesh/Reps.	Simulation Based Design	M/s Larsen & Toubro. Jayesh.NamJoshi@larsentoubro.com VENKATESH.ARASU@larsentoubro.com
11:30 to 11:55	Shri M Nageswara Rao, Sc'F	Marine propellers	NSTL nageswararao.m@nstl.drdo.in
12:00 to 12:30	Shri Shiju John, Sc'E	Autonomous Underwater Vehicles	NSTL shiju.john@nstl.drdo.in
12:40 to 13:00 Conclusion of session -3 (Questions and Answers)			
13:00 to 13:10 Valedictory event and Vote of Thanks			

General Information

Mode of Symposium:

In view of present Covid restrictions, the Symposium on “**Advances in Hydrodynamics and Autonomous Sea Vehicles**” during **20th and 21st Jan 2022** at **NSTL** is being organised in online mode. Online links will be shared with the respective speakers as well as participants via communication email on 19th Jan 2022.

Speaker information:

A brief introduction of the speaker along with a copy of presentation may be forwarded by respective speakers (by 19th Jan 2022) to contact email: kareemkhan@nstl.drdo.in

Participation:

Academia, R&D organizations, Indian Navy (User group) and Industry may forward list of interested participants (Research scholars, M.Tech students, Professionals etc. restricted upto 10 Nos.) along with their respective email IDs for participation and issue of certificates during the symposium. The online link will be shared with the respective participant.

Azadi Ka Amrit Mahotsav

Meeting link :

Date- 20/01/2022

<https://drdo.webex.com/drdo/j.php?MTID=me259b46a63326964a25c972a5387488a>

Azadi Ka Amrit Mahotsav

Meeting link :

Date- 21/01/2022

<https://drdo.webex.com/drdo/j.php?MTID=m1d21a01f4ebf3eb02a3992a89c9ae69d>