

Indian Society of Remote Sensing (ISRS)
IIRS Campus, 4-Kalidas Road, Dehradun

ANNUAL REPORT
(Nov 2019 to Nov 2020)

Presented in 47th Annual General Body (AGM) Meeting
on Dec 18, 2020 (16:30-17:30 Hrs) through Virtual Platform

This year Indian Society of Remote Sensing (ISRS) has completed 51 years of its existence and is promoting remote sensing, geospatial and allied technologies and their applications in societal development at national scale since its inception in 1969.

The major highlights of the ISRS Annual Report in the year 2019-2020 covering period from November 2019 to November 2020 are as follows:

- The society has currently 5610 life members, 43 fellows, 11 honorary fellows, 61 patron members and 26 annual members to date.
- JISRS has gained Impact Factor from 0.869 in 2018 to 0.997 in 2019;
- ISRS and Taylor and Francis published two books viz., *Fuzzy Machine Learning Algorithms for Remote Sensing Image Classification and Geographical Information System and Crime Mapping and Crime Mapping*;
- The Editorial Board of JISRS has been revamped with the inclusion of the New Executive Editor. Associate Managing Editor has been appointed for serving the Journal on a full-time basis;
- ISRS has taken a new initiative to celebrate important days by inviting distinguished speakers for awareness generation;
- Webpages for the local chapters have been created on the ISRS website for updating chapter activity;
- ISRS took a new initiative by organising the 1st ISRS Conclave with Secretaries of Local Chapters on January 18, 2020 at IIRS, Dehradun.
- ISRS Chapters have organised various programs towards promoting Remote Sensing activities taking advantage of the virtual platform.
- Three Executive Council meetings of ISRS have been organised viz., 146th, 147th, and 148th;

Important Activities Undertaken

□ Annual Convention and National Symposium – 2020

The Annual Convention of ISRS and the National Symposium entitled “**Remote Sensing for Environment Monitoring & Climate Change Assessment: Opportunities and Challenges**” is to be organized during December 18 - 19 jointly with the Indian Society of Geomatics, Ahmedabad on an online platform. The symposium will be organized through a virtual platform jointly by the ISRS-Ahmedabad Chapter and ISG-Ahmedabad Chapter.

29th Vikram Sarabhai Memorial Lecture: Dr. K. Radhakrishnan, Former, Chairman of Space Commission, Former, Secretary of the Department of Space and Former, Chairman, ISRO will deliver the 29th Vikram Sarabhai Memorial Lecture – 2020 on the topic “**Changing Paradigms in EO Applications and Services**” on December 18, 2020, through a virtual platform as part of ISRS-ISG National Symposium & Annual Conventions, December, 18-19, 2020.

□ Publications of ISRS

Journal of Indian Society of Remote Sensing (JISRS)

ISRS publishes a journal called, the Journal of ISRS (JISRS) on monthly basis. The journal is published by Springer. The JISRS has become truly international by virtue of its joint publication with the internationally reputed publisher “**Springer**”. A new publication agreement with Springer was signed for

the next five years from 1 January 2020. As per the Thomson Reuters latest Impact Factor, JISRS has gained Impact Factor from **0.869** in 2018 to **0.997** in 2019.

Special Issues of Journal of Indian Society of Remote Sensing (JISRS)

Following special issues of JISRS were planned in the year.

- ❑ “Advanced Geospatial Technologies for Agriculture Monitoring of Farmer’s Fields”, Guest Editors: Dr Shibendu S. Ray, Dr Vinay K. Dadhwal, Dr. R. R. Navalgund
- ❑ “Advances in UAV Remote Sensing”, Guest Editors: Dr. Kamal Jain and Dr. Vishwajit Pradhan
- ❑ “25th Anniversary of Lunch of IRS-IC”, Invited Papers, Guest Editors: Dr. Senthil Kumar and Dr. Shailesh Nayak

ISRS and Taylor and Francis Book Series

MoU signed between Taylor and Francis (T&F) and ISRS on 29th March 2018 for 5 years.

1. Fuzzy Machine Learning Algorithms for Remote Sensing Image Classification, Author: Anil Kumar, P. Upadhyay, A. Senthil Kumar, **Published.**
2. Geographical Information System and Crime Mapping, Author: Monika Kannan & Mehtab Singh, **Published.**
3. Re-envisioning Remote Sensing Applications: Perspectives from Developing Countries, Status: Ripudaman Singh, *Status: In Production.*
4. Sundarbans Mangrove Systems: A Geo-Informatics approach, Author: Anirban Mukhopadhyay, Debashish Mitra, Sugata Hazara, *Status: Manuscript received.*
5. Re-Envisioning Remote Sensing Applications: Perspectives in Urbanization, Disaster Management, and Planning, Ripudaman Singh, *Status: Proposal under review.*



❑ Revamping of JISRS Editorial Board

The current Editorial Board of the Journal of ISRS is comprised of Prof. George Joseph as Editor-in-Chief, Dr. V. K. Dadhwal as Editor, Dr. Prakash Chauhan as Executive Editor, Dr. S.P. Aggarwal as Managing Editor and Dr. George Philip as Associate Managing Editor. ISRS appreciate and acknowledge the efforts of Dr. Senthil Kumar, Former Executive Editor in enhancing JISRS’s Impact Factor and editorial review processes.

During the year, ISRS Editorial Board was revamped by designating Dr. Prakash Chauhan, Director, IIRS /CSTEAP as the new Executive Editor of JISRS. Considering the increasing popularity of JISRS and the resultant increase in the number of manuscripts being submitted and the challenge in completing timely review of manuscripts, based on the recommendation of JISRS Editorial Board, ISRS recruited Associate Managing Editor to support Executive Editor, JISRS Journal related activities on a full-time basis. JISRS editorial Board is supported by a team of 19 Associate Editors, and recently the new

Associate Editors have been included in the editorial board. ISRS thank all the outgoing Associate Editors for their services towards JISRS.

❑ Participation in the Activities of International Societies

ISPRS Activities

The International Society for Photogrammetry and Remote Sensing (ISPRS) is a non-governmental organization devoted to the development of international cooperation for the advancement of photogrammetry and remote sensing and their applications. Getting the Commission has always been prestigious for the country and society. ISRS is an ordinary member Category 8 of the International Society of Photogrammetry and Remote Sensing (ISPRS).

India has Chairmanship of Technical Commission V: Education and Outreach for the period 2016-2020. ISRS successfully hosted ISPRS TC V (Education and Outreach) Mid Term Symposium during Nov 20 – 23, 2018 at IIRS, Dehradun. XXIV ISPRS Congress is planned 4-10th July 2021 at Nice, France. ISRS has planned for bidding for hosting ISPRS Congress and the Technical Commission III for the period 2021-24.

AARS Activities

ISRS is also a member of the Asian Association on Remote Sensing (AARS). India had the opportunity of hosting the AARS first time in 1985 in Bangalore, the second time in 1994 at Hyderabad, and the third time in 2017 in New Delhi. ISRS has actively participated in the Asian Association of Remote Sensing (AARS) activities. Currently, Dr. Sameer Saran represents as Deputy General Secretary in AARS Executive Council. The 41st Asian Conference on Remote Sensing was organized online during November 9-11, 2020.

❑ Popularization Activities

National Remote Sensing Day (NRSD) Celebration:

NRSD was celebrated on August 12. Dr. Krishnaswamy Kasturirangan, Former Chairman, ISRO, and Former Member, Rajya Sabha, kindly consented to deliver the NRSD message. The video recorded lecture was hosted on the ISRS website and witnessed by members. The program was covered by Doordarshan News (DD News) on 12th August itself, and received wide attention. Chapters also organized online talks on various themes for the benefit of the members.

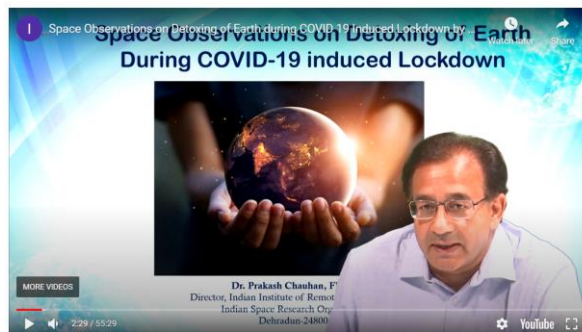




Organization of Important Day Series:

ISRS has taken a new initiative to celebrate important days by inviting distinguished speakers for awareness generation.

- Dr. Prakash Chauhan, Director, IIRS delivered a lecture on the topic “**Space Observations on Detoxing of Earth during COVID 19 Induced Lockdown**” on Earth Day.
- Dr. V. B. Mathur, Chairperson, National Biodiversity Authority (NBA) delivered a lecture on the topic “**Biodiversity Conservation: Outcomes and key Message from Recent assessments**” on World Environment Day.
- Dr. C. P. Singh, Mr. Naveen Tripathi, Mr. Surabh Tripathi, Mr. Vivan Prakash delivered a lecture on the topic “**Indian Scientific Expedition to Antarctica (ISEA-39)**” on National Technology Day.



Earth Day



World Environment Day



World National Technology Day Lecture by ISRO Participants of Indian Scientific Expedition to Antarctica (ISEA-39)

□ ISRS Annual Awards: Recognition of Achievements

Every year ISRS honors eminent Scientists/Engineers/Researchers for their outstanding contributions in the field of Remote Sensing, Geospatial Sciences, Technology, and Applications by conferring several awards. ISRS constituted various committees to select the awardees. Large numbers of nominations were received and the following are the details of awardees:

ISRS Fellow

This year, Dr. K. Sivan, Dr. S. P. S. Kushwaha, Dr. A. S. Rajawat, and Dr. P. K. Garg have been elected as fellows of the society.

Bhaskara Award:

The recipient of the Bhaskara Award for the year 2019 is Dr. Kailasavadivoo Sivan.

Satish Dhawan Award:

This award for 2019 is jointly conferred jointly on Shri. P. L. N. Raju and Dr. Rashmi Sharma.

National Geo-spatial Award for Excellence:

This award for 2019 is conferred jointly on Shri. Shashikant A. Sharma and Dr. Narayan Panigrahi.

P. R. Pisharoty Memorial Award:

This award for the year 2020 has been conferred jointly on Dr. C. P. Singh and Dr. Subrata Nandy.

Indian National Geospatial Award:

For 2020, the award has been conferred jointly on Shri. Kapil Oberai and Dr. Sanid Chirakkal.

Young Achievers Award

The recipient of the Young Achiever Award for the year 2020 is Dr. Priyanka Singh.

ISRS Best Chapter:

This year ISRS Ludhiana Chapter has been conferred with Best Chapter Award for 2020.

Best paper published in 2020 Issues of JISRS:

ISRS awards Best Paper Published in JISRS each year. Award for the year 2020 has been given to the following 4 authors for their articles published in 2019 Issues of JISRS.

Remote Sensing	Dense DSM and DTM Point Cloud Generation Using CARTOSAT-2E Satellite Images for High-Resolution Applications	Pendyala, V. G. K., Kalluri, H. K., & Rao, C. V.	December 2019 47(12): 2085–2096
Digital Image Processing	Ship classification in SAR images using a new hybrid CNN–MLP classifier	Sharifzadeh, F., Akbarizadeh, G., & Kavian, Y. S.	April 2019 47(4): 551–562
GIS	Application of a Geographic Information System to Analyze Traffic Accidents Using Nantou County, Taiwan, as an Example	Su, J. M., Wang, Y. M., Chang, C. H., & Wu, P. J.	January 2019 47(1): 101–111
RS & GIS Applications	Estimation of leaf chlorophyll concentration in turmeric (<i>Curcuma longa</i>) using high-resolution unmanned aerial vehicle imagery based on Kernel Ridge Regression	Singhal, G., Bansod, B., Mathew, L., Goswami, J., Choudhury, B. U., & Raju, P. L. N.	July 2019 47(7): 1111–1122

❑ Organization of 1st ISRS Conclave of Local Chapters

- To have better a communication with its local chapters, this year ISRS organized 1st ISRS Conclave on January 18, 2020 at IIRS, Dehradun in which secretaries of different local chapters participated where ideas were shared by them about how to achieve the aims and objectives of ISRS with the help of local chapters. A total of 10 local chapters participated in the conclave.



❑ Augmentation of ISRS website: Creation of Webpage of Local Chapters

The local chapters of ISRS organize many popularization activities. To give the activities of local chapters a wide coverage in their activity area, ISRS EC decided to create an independent webpage for the local chapters so that the chapters can update their activities on the ISRS website on time.

Indian Society of Remote Sensing
 Serving Humanity through Space Technology

[Home](#) | [Elements](#) | [Executive Council](#) | [Membership](#) | [Awards](#) | [Conference / Symposium](#) | [Publications](#) | [Gallery](#) | [Contact](#)

About Chapter

View Activities

ABOUT CHAPTER- AHMEDABAD

ISRS - Ahmedabad Chapter is one of oldest chapter of Indian Society of Remote Sensing with the largest number of Life Members. It always works to achieve the Aims and objectives of the Society by advancement, dissemination and application of the knowledge of Remote Sensing technology, which is deemed to include photo interpretation, photogrammetry, aerial photography, image processing, and other related technologies in the field of survey, planning and management of natural resources and other areas of application where the technology is considered to be appropriate.

It also promote interaction among all persons, bodies, institutions (private and/or state-owned) and industries interested in achieving advancement, dissemination and application of the technology by conducting a wide range of activities related to RS & GIS like lectures, workshops, seminars etc.

The Chapter also publishes the newsletter "Signature" which includes the articles related to Remote Sensing and Allied Technology.

□ ISRS Local Chapter Activities

ISRS has now Twenty Seven Local Chapters located at Ahmedabad, Ajmer, Allahabad, Bangalore, Bhopal, Bhubaneshwar, Chandigarh, Chennai, Delhi, Dehradun, Guwahati, Hisar, Hyderabad, Indore, Jaipur, Jodhpur, Kolkata, Lucknow, Ludhiana, Mumbai, Nagpur, Pune, Shillong, Thiruvanthapuram, Tiruchirapalli, Aligarh and Visakhapatnam.

Amid the Covid-19 pandemic, there has been good progress in activities carried out by various chapters. Continued efforts are being made to re-activate some of the Chapters. A new chapter of ISRS has been recently formed in Aligarh (Uttar Pradesh). There have been initiatives to open a new Chapter at Leh (Ladakh).

ISRS has been encouraging all Chapters to organize popular lectures, the celebration of National Remote Sensing Day and other important days (Science Day, Earth Day, Ozone Day, Environmental Day, National Technology Day, GIS Day, etc.), exhibitions; regional workshops, etc. to generate public awareness on the application of geospatial technology, etc. as annual activities.

ISRS Chapters were active in organizing several activities aimed at spreading the use of remote sensing and GIS technology and their applications at various levels and also in generating public awareness on the role of Geo-spatial technology in sustainable natural resources management and environmental protection etc. This year, due to the worldwide spread of the COVID-19 pandemic, most of the events were organized through online mode.

The glimpses of the ISRS chapter's activities are as follows:

Ahmedabad Chapter

- National Technology Day (11/05/2020): Around 60-70 participants witnessed a video lecture uploaded on the ISRS website on the Indian Antarctica Expedition.
- World Environment Day (05/06/2020): Prof. Amit Garg from IIM, Ahmedabad gave an online talk on "*Time for Rejuvenating Climate Actions to Save Environment*" which was attended by over 60 participants.
- World Oceans Day (14/6/2020): Dr. Meena Kumari, Ex-Chairperson – National Biodiversity Authority, India delivered an on-line lecture on "*Marine Ecosystem: Opportunities and Challenges with Remote Sensing*" which was attended by over 50 participants.
- A special issue of **Signatures** (newsletter of ISRS-AC) on Remote Sensing of Ocean: Developing Blue Economy was released.
- An online webinar on "*Do Forests Attract Rain?*" was delivered by Mr. Rohit Pradhan, Scientist, SAC on 18/07/2020.
- A popular lecture on "*New Approach for Improving Ocean Colour Retrieval*" was held (02/08/2020) by Dr. D. R. M. Samudraiah, former Deputy Director, SEDA, SAC with the participation of over 60 people.
- A popular lecture on "*Environment Watch from Space: Exploring Impacts of COVID-19 Lockdown on Environment*" was presented by Dr. Mehul Pandya, SAC-ISRO. More than 100 people attended.
- As part of Remote Sensing Day Celebrations (AC) 15/8/2020: An online quiz for graduate and post-graduate students was held on the occasion of Remote Sensing Day.
- World Ozone Day (16/09/2020): An online lecture on "*Ozone layer and ozone pollution: Issues, challenges and future ahead*" by Dr. Manish Naja, ARIES) was organized. National webinar on, "*Remote Sensing & GIS for Plant & Environmental Studies*" with M.G. Science Institute, 3 talks by Dr. Prakash Chauhan, Dr. Shibendu Ray, and Dr. C.P. Singh were organized on 19/9/2020.
- World Rivers Day (27/09/2020): Dr. R. P. Singh delivered an online talk on "*Search of the Vedic Saraswati River*" which was attended by over 100 participants.

Chennai Chapter

- National Remote Sensing Day (12/08/20): Shri. M. Arul Raj, Scientist-SF, NRSC delivered an online talk on "*Recent advances in Bhuvan Geoportal and satellite technologies*". Shri. T. S. Viswanadham Scientist SF delivered a lecture on "*Remote Sensing Technologies*".
- Six days virtual program on "*Water Resource Assessment, Modeling, and Management*" and with the resource persons from IIT-Madras, NIT-Calicut, Anna University, and KITS- Coimbatore. A total of 26 participants attended the program.

- Six days Virtual FDP program on “*Disaster Management and Risk Reduction issues and solutions*” was organized and a total of 20 participants attended the program.

Dehradun Chapter

- Remote Sensing Day Celebrations (12/08/2020): An online talk by Prof. Ramesh P. Singh, Professor, Chapman University, USA was delivered on “*Dynamic Nature of Himalaya using ELF to Microwaves and Beyond*” and it was attended by 1870 people.
- One Day National Seminar for Young Researchers on ‘*Recent Advances in Geospatial Technology & Applications*’ was jointly organized with IIRS, Dehradun on March 02, 2020.
- “*Space Exhibition*” was arranged for the benefit of participants of the National Seminar on March 02, 2020 at IIRS, Dehradun. Abstract proceedings were published on the ISRS website.

Delhi Chapter

- Remote Sensing Day Celebrations (12/08/2020): A popular talk by Prof. Orhan Altan, Honorary Member of ISPRS on “*The Changing World under the Corona Virus Threat - from Human Needs to SDGs and what next?*” was delivered.
- An online lecture was organized by ISRS on World Environment Day was attended by more than 100 participants (scientists, researchers & students) attended the lecture.
- Dr. P. K. Bhartiya delivered a lecture on “*History of Ozone Measurement from Space*” and lecture was attended by more than 100 participants.
- World Space Week: The “*Cyclone Man of India*” Dr. M. Mohapatra, DGM, India Meteorological Department (IMD), New Delhi delivered a lecture on “*Chasing the Cyclone*”. More than 110 participants from different parts of the country attended the lecture.

Jodhpur Chapter

- Remote Sensing Day Celebrations (12/08/2020): The online lecture of Dr. K. Kasturirangan organized by ISRS was attended by members of ISRS, Jodhpur Chapter.
- A public lecture on the topic: “*Desert Locust: An Overview*” by Dr. Vipin Chaudhary, Principal Scientist (Agricultural Entomology), Central Arid Zone Research Institute, Jodhpur was conducted on Monday, June 22, 2020.
- Science Day Celebrations: A sensitization program on Coronavirus under the behest of the ISRS chapter of Jodhpur was organized. Dr. Nitin Chouhan, AIIMS-Jodhpur shared the guidelines/cautionary details with respect to the coronavirus on 06-03-2020.
- Other awareness related Programs: ISRS- Jodhpur chapter supported in conduction of “*Vikram Sarabhai Centenary celebrations*” at the following locations: Jodhpur on 14/10/2019; Jaipur during 20-22/11/2019; Kota during 06-08/12/2019; Ajmer during 08-10/01/2020. Besides training programs for the students of BITS campuses were carried out in online mode.

Indore Chapter

- Remote Sensing Day Celebrations (12/08/2020): Dr. Prakash Chauhan, Director, IIRS delivered an online Talk on “*Mysteries of Earth’s Moon Through Indian Lunar Mission*” on 11th August 2020.

Kolkata Chapter

- Remote Sensing Day Celebrations (12/08/2020): Online talk by Mr. P. P. Ghosh, Presales Director: (India), Planet and by Dr. Ashish Sharma, Research Climatologist, Department of Atmospheric Science, Illinois University, USA were organized. Over 75 members attended.
- World GIS Day 2019 was organized in collaboration with Bethune College, Calcutta University and a total of 180 people participated.
- World Space Week 2020 (Oct 4-10, 2020): Virtual competitions were organized on Space Slogan, Space Essay, Space Drawing/Painting, Space Poster, Space PowerPoint Presentation, Space Poem, and Space Quiz. A total of 57 participants attended the program.

Lucknow Chapter

- Remote Sensing Day Celebrations (12/08/2020): A total of 80 participants attended the talk by Dr. K. Kasturirangan organized by ISRS.
- An online poster competition was organized in which 50 students participated.
- On the occasion of World Space Week, a popular lecture was delivered by Mr. Asif Siddique on "*Indian Space Programme: A Journey*". The lecture was attended by 80 participants. The program benefitted 85 students from different colleges and Lucknow University, Awadh Degree College, I.T. College, National P.G. College.
- Programme conducted by the chapters benefitted 40 farmers of two villages.

Ludhiana Chapter

- Remote Sensing Day Celebrations (12/08/2020): Life members as well as students from Universities across Punjab were attended. Dr. S. S. Kukal, Member, Punjab Water Regulation and Development Authority, Government of Punjab, and Prof. (Mrs.) P. K. Kingra, Chairperson, ISRS-Ludhiana Chapter delivered expert lectures and gave their views on how Remote Sensing can be used more efficiently in research and other fields.
- Science Day Celebrations: The ISRS-LC in collaboration with Punjab Remote Sensing Centre (PRSC) celebrated National Science Day. Prof. Reet Kamal Tiwari, IIT, Ropar, delivered a lecture on "*Geomatics Engineering and UAV Application*". More than 200 participants attended the lecture.
- Seminars/ Workshop (16/09/2020): National Webinar on "*Protection of Ozone Layer: Respect to Planet Earth (POPE-2020)*" in collaboration with National Environment Science Academy, New Delhi, and One-day Awareness workshop at DAV College, Jalandhar on 13/02/2020. A keynote address on "*Tropospheric gas concentration affects COVID-19 mortality in Indian Punjab*" delivered by Dr. Brijendra Pateriya, Director, PRSC. Dr. Sushil Kumar Singh, General Secretary, NESI, New Delhi talked about the significance of the "*National Webinar on Protection of Ozone Layer*". More than 120 participants joined the event.
- Other Awareness/related Programs: Dr. Rahul Nigam, Scientist, SAC delivered a lecture on "*Advances in Space Sciences for Agricultural: Applications*" at PRSC on 20/02/2020.
- ISRS-LC along with PRSC scientists have organized one-day workshops in schools, colleges, and universities in two districts in Punjab.
- This year ISRS-LC organised a National Conference on "*Big Geospatial Data: Analytics, Modelling and Applications*" (BiGMAP-2020) in Ludhiana, Punjab in collaboration with PRSC.
- The chapter brought out bi-annual newsletter to circulate among Government, academic, students and general users community to share activities of chapter and popular articles by scientists, faculty and young researchers.
- The chapter has organized several expert lectures by inviting prominent scientists and professors from ISRO, IITs and Universities to update the members and end users of recent developments in the field of RS and GIS.

Mumbai Chapter

- World Environmental Programme Day (5th- 31st June 2020): National Level Essay Competition was organized and Mr. Gaurav Tripathi from Central University of Jharkhand won among 56 participants. National Level Poster Competition was organized in which Dr. P. R. Konka from Shri. Bankatswami Mahavidyalaya, Beed stood first among 47 participants. National Level Photo Competition was organized in which Mr. Saurabh Shanu from the University of Petroleum and Energy Studies, Dehradun stood first among 185 participants. E- quiz was also organized in which 205 students participated.
- Short Term Training Program on "*Post Covid Challenges in Infrastructural Engineering and Environmental Engineering*" was organized in which during 06/2020-12/06/2020 in which Dr. Sunil Kute, Dean, KK Wagh Institute of Engineering, Vikas Ramgude, PWD, Maharashtra, Prejith P Dilip Buildcon, Dr. S G. Venkatsubramaniam, Anna University, & Dr. R. Gujjar, Pandit Deen Dayal Petroleum University, Gujarat, and Mr. S. Mandal, University of Queensland, Brisbane delivered talks.

Shillong Chapter

- Remote Sensing Day Celebrations (12/08/2020): All members attended the NRSD talk by Dr. K. Kasturirangan, former Chairman, ISRO through virtual mode.

- ISRS Shillong Chapter was the local host in organizing the National Symposium on “*Innovations in Geospatial Technology for Sustainable Development with Special Emphasis on NER*” which was held at North Eastern Space Applications Centre during 18 – 22 November 2019. The National Symposium on “*Innovations in Geospatial Technology for Sustainable Development with special emphasis on NER*” and annual conventions of ISG & ISRS was organized 20-22 Nov 2019 at Shillong, Meghalaya. The event was jointly hosted by ISG, Shillong Chapter (ISG-SC), ISRS, Shillong Chapter (ISRS-SC), NESAC & North Eastern Hill University, Shillong. The Symposium focused on recent advancements made in the satellite payloads, data processing techniques, Web GIS, Mobile App., Geospatial Technology, and applications in various key areas defined under different key programs of the Government of India. The symposium was attended by more than 350 delegates representing a large number of researchers, professionals, academia, students, and geospatial industry from different parts of the country.
- Two days of pre-symposium tutorials were conducted during November, 18-19, 2019 under the four broad themes, 1) UAV Remote Sensing– Acquisition, processing and derivatives, 2) SAR Data Processing and Applications, 3) Artificial Intelligence (AI) and Machine Learning (ML) for Remote Sensing Data Analysis, 4) Hyperspectral Remote Sensing.
- As a part of the awareness program, Secretary, ISRS Shillong Chapter has given an online popular talk on Remote Sensing applications in different academic institutions on topics like “*Geospatial technology and Natural Resource Mapping*” for PG & UG Students of B. Barooah College, Guwahati on 03.07.2020, “*Remote Sensing and Natural Resource Management*” for PG & undergraduate Students of Gauhati College, Guwahati on 13.07.2020, “*Remote Sensing and its Application in Biological sciences*” for PG & Undergraduate Students of BN College, Dhubri on 24.07.2020. More than 500 college students benefited.
- ISRS Shillong Chapter members have been acting as a resource person in various training programs imparted for line departments of NER by NESAC. More than 2000 officials have been attended the training program during the last one year.
- ISRS Shillong Chapter recognized the best chapter for 2018-19 by ISRS.

Thiruvananthapuram Chapter

- Remote Sensing Day Celebrations: Quiz and Drawing Competition was organized on August 30, 2020.
- Two annual awards for geospatial professionals in Kerala; the ISRS Kerala Geospatial Young Scientist Award and ISRS Kerala Geospatial Professional of the Year Award have been instituted.
- Chapter along with IEEE Geoscience and Remote Sensing Society Kerala Chapter Organized a virtual pair of conferences, aiming at discussing the opportunities and challenges in geospatial startups and career suggestions for Indian graduates and working professionals. Event 1: Geospatial start-ups - Academia: Seeding, Nurturing, and Growing (11th September 2020) and Event 2: Network and Training- Geospatial start-ups, Students, and Freelancers (25th September 2020). Over 100 participants attended each conference.

Tiruchirappalli Chapter

- Remote Sensing Day Celebrations: On 11/08/2020 Remote Sensing Day was celebrated in the Department of Geography, Bharathidasan University, Tiruchirappalli; 60 students participated.
- Earth Day (April 22, 2020) was celebrated online during the initial lockdown period of Covid19.
- World Ozone Day (16 September 2020) national level online event, around 100 participants attended.
- World Space Week (October 4 - 10, 2020) Quiz program was organized and 1200 participants participated from school and college students, researchers, faculty members, and other professionals.

Visakhapatnam Chapter

- The chapter participated in International Webinar “Challenges and Strategies towards Sustainable Water Resources Management” was organized in Visakhapatnam District, India

□ ISRS Meetings

- 46th Annual General Body Meeting (AGM) of ISRS was held as part of the National Symposium on “*Innovations in Geospatial Technology for Sustainable Development with Special Emphasis on NER*” on November 18, 2019, at North Eastern Application Centre (NESAC), Shillong. A total of 42 members attended the AGM. The salient points of the meetings are:
 - Dr. Tapan Misra, President, ISRS, chaired the 46th General Body Meeting and welcomed all ISRS members present during the AGM and thanked them for their continued support and contributions towards achieving the objectives of ISRS. He appreciated the progress made by ISRS during the last 1 year. He informed the AGM that ISRS EC has decided to bid for ISPRS Congress-2024.
 - The Proceedings of the 45th General Body Meeting of the ISRS held on December 06, 2018, during ISRS-ISG Annual Conventions 2018, Ahmedabad was published in Journal of ISRS, Vol. No. 47 Issue No. 1 January 2019. The Proceedings of the 45th AGM have been approved by the 46th AGM.
 - MoU signed between Taylor and Francis (T&F) and ISRS to publish book/monograph on March 29, 2018, for 5 years (21 proposals received from life members). The committee is constituted and further screening of proposals is ongoing. Some of the proposals shall be considered for publication under the ISRS logo.
 - Re-organization of the JISRS Editorial Board is under process and will be further discussed during the upcoming EC meeting.
 - ISRS website (www.isrs-india.org) is operational and substantially improved in professional quality. Life members are accessing JISRS online through our website. A provision has been made on the website for inviting Proposals for Books / Monographs.
- ISRS took a new initiative by organizing the 1st ISRS Conclave with Secretaries of Local Chapters on January 18, 2020, at IIRS, Dehradun. A total of 10 local chapters participated in the conclave. The salient outcomes of the meeting are:
 - Dr. Prakash Chauhan, 1st Vice President, ISRS (2018-2020) proposed that the ISRS conclave should be an annual activity. He urged the chapter to initiate a membership drive to increase life memberships. He also said that ISRS should strive to become a society like IEEE.
 - Elections of ISRS Local chapters EC should be done along with ISRS main body EC i.e. by 31st March of the year in which the election is due.
 - Chapters’ Annual Activities: Local chapters seeking financial support from ISRS should plan the activities at the beginning of the year.
 - The financial support will be given only for two events per year, namely the “*Popularization Program on themes*” as decided by the ISRS main body and one more event that may be decided by the local chapter.
 - Conduct Regional Conferences: It is informed to all the chapter representatives that local chapters are allowed to conduct only Regional conferences and not National and International conferences as National and International conferences are in the jurisdiction of the ISRS main body.
 - Regular Updation through the website: A webpage for each chapter should be created on the ISRS website so that the chapter can update their activities on the website of their own.
 - Encourage Life Members to participate in ISRS Events: Chapters should encourage the life members to participate in the Conventions and National Symposium jointly organized by ISRS & ISG.
 - Provide Book of Accounts: Guidelines for managing local chapter's account and submission of an annual book of account should be circulated to the local chapters.
 - Financial assistance from other organizations: It should be done through ISRS main body as the PAN of ISRS main body is used in these types of transactions.
- 146th Executive Council Meeting held on April 28, 2020 (through online mode). The salient outcome of the meeting are:

- The new EC of ISRS took charge from 1st April 2020. Outgoing EC thanked for their contribution towards the society activities. On behalf of outgoing EC, he thanked Dr. S. P. Aggarwal, Returning Officer, for the efficient and smooth conduct of ISRS-EC (2020-2022) elections.
- Shri. Nilesh Desai, President, ISRS, outlined some of the major priorities of the society in coming times, namely (i) improved involvement of local chapters in ISRS activities; (ii) identifying a pool of senior scientists, academia and other experts as resource persons of the council to help, assist and guide the local chapters to run the activities; (iii) strengthening of ISRS by inducting professionals & academia from the niche domains of navigation, communication, computer science, geospatial industry, etc.; (iv) organizing ISRS Golden Jubilee Celebrations; (v) bid for organizing ISPRS Congress-2024 in India and (vi) strengthening the editorial board for improving the impact factor of JISRS journal.
- Editor-in-Chief, JISRS proposal for EC's financial approval for hiring a Professional to assist Editorial Board of JISRS was discussed. It was observed that publishing of JISRS issue every month on time is a challenging job. So far, the activities like reviews of papers, selection of papers, proof-checking, editing, etc. are being carried out voluntarily by the editorial board members. However, it was suggested that the work can be done more efficiently and on time with the help of dedicated manpower.
- Review Meeting of JISRS: A review meeting related to the Society's Journal held on 26th June 2020 through online mode. The salient outcome of the meeting are:
 - Presentation on history, evolution, current status, and paper reviewing process of JISRS by Dr. S. P. Aggarwal, Managing Editor. Apprised on renewal of the agreement with publisher, M/s. Springer up to 31st December 2024.
 - Discussion on the proposal from Springer for "open access" publication model and decision for implementation in future on a step by step basis in a hybrid model.
 - Recommendations for appointment of a professional for supporting the journal, Reward (e.g. Certificate of Appreciation) to Reviewers, Assessment of Associate Editor (AE) performance and identification of more AEs from different regions of the globe; Addition of AEs for new themes and encouragement to more review papers in JISRS.
- 147th Executive Council meeting held on September 23, 2020 (through online mode). The salient outcome of the meeting are:
 - Appraised on the appointment of Dr. George Philip, a retired senior scientist from the Wadia Institute of Himalayan Geology (WIHG) for professional support to JISRS editorial board;
 - Apprised on selection status of chapters and EC decision to constitute a committee to suggest measures for revival of dormant chapters;
 - Celebration of NRSD and other important days activities, demo on a webpage created for the local chapters, discussion on IEEE GRS proposal for collaboration with ISRS, and decision on constitution of a committee on the nomination of the zonal representative to the national executive council.
- 148th Executive Council Meeting will be held on December 17, 2020 (through online mode).

□ Financial Status

The audited account for the year FY 2019-20 is given in Annexure-II. The financial position of the society is improved further due to interest received from fixed deposits and royalty received from Springer for JISRS journal. In addition to this, the life membership is also increasing regularly. At the end of March 2020, the total assets of the Society was Rs. 54,446,540. In the financial year 2019-20, the total income was Rs. 10,859,368. Rs. 11,500,000 have been kept for overall ISRS activities to be utilized till 31.3.2023. As per the current FY 2019-20, the total investments available with bank are Rs. 45,015,088.

□ Future Plans and Activities

To increase national and global outreach of ISRS, the Society aims to emphasize on following activities in the future:

- Continuing to encouraging all the members for online-access to the e-journal of ISRS.
- Sensitization of chapters of ISRS for regular conduct of popular RS & GIS-related technical programs in schools/colleges/institutions/ communities.
- Identifying a pool of senior scientists, academia and other experts as resource persons of the council to help, assist and guide the local chapters to run the activities
- Popularize remote sensing-based maps and spatial information available under SIS-DP and Bhuvan.
- Strengthening of ISRS by inducting professionals & academia from the niche domains of navigation, communication, computer science, geospatial industry, etc.
- Continuing improving the quality of Journal of ISRS as an international standard by adopting stringent peer reviewing; printing and publication by Springer India.
- Publishing more than books under different themes under ISRS-T&F Book Series.
- Encouraging all members for a contribution towards publishing monographs/ textbooks/ other books of current importance etc.
- Supporting ISPRS TC V and AARS activities.
- Revival of inactive Chapters of ISRS.

□ **Acknowledgment**

ISRS expresses its gratitude to all its members viz. Honorary Fellows, Fellows, Patron Members, Sustaining Members, Life Members and also Annual Members, Executive Council Members and dignitaries, who have participated in various meets as special invitees for their support and guidance towards fulfillment of the objective of the Society. ISRS also acknowledges the support and help in terms of manpower, facility and financial resources from various organisations; as given below:

- Department of Space (DOS), GOI;
- Indian Institute of Remote Sensing, ISRS, Dehradun;
- Space Application Centre, ISRO, Ahmedabad;
- National Remote Sensing Centre, NRSC, Hyderabad;
- North-East Space Application Centre (NESA), Shillong;
- Ministry of Earth Sciences, New Delhi;
- National Institute of Advanced Studies (NIAS), Bengaluru;
- All Award Committees, Chapter ECs; JISRS Editorial Board, Journal Referees; Symposium Organizing Committees and Scrutineer committee, ISRS HQ staff;
- Springer (India) Private Ltd;
- Shiva Offset Press, Dehradun;
- Gupta Sawheny and Associates, Dehradun;
- Evon Technologies Pvt. Ltd, Dehradun;
- MM Activ Sci-Tech Communications Pvt. Ltd;
- All the institutions supporting local chapters of the society;
- National Advisory Committee, Symposium Steering Committee and Symposium Organizing Committee of ISRSNS-2020.

ISRS thanks industry personal who have provided support. ISRS also thanks various other societies like ISG, ISF, ASI, ISAP, IMS and INCA who partenered in conducting various activities. Many others who have directly or indirectly supported society's activities are thanked.

(Dr. Hitendra Padalia)
Secretary, ISRS