



गुरुकुल काँगड़ी (समविश्वविद्यालय), हरिद्वार, उत्तराखण्ड  
Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand



# **E-Waste Management: Challenges & Opportunities**

*Two Days National Conference and Exposition*  
*A Prominent Event on **E-Waste** Management*  
*March 24-25, 2022*

*Organized by*

Department of Computer Science

Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand  
(India)

*in*

*Collaboration with*

Uttarakhand State Council for Science and Technology,  
Dehradun, Uttarakhand  
(India)





गुरुकुल काँगड़ी (समविश्वविद्यालय), हरिद्वार, उत्तराखण्ड  
Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand



# ABOUT THE EVENT

A two day's National Conference & Exposition shall be held at the Department of Computer Science, Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand (India) during March 24-25, 2022 as a prominent event on one of the most important topic of present era - the E-waste Management. This event shall provide a platform to the stakeholders for the discussion of methods for the collection, sorting, processing, and reduction of all forms of e-waste.

The significance of the event lies in the fact that E-waste is one of the world's fastest growing waste stream and needs a proper and planned process to get rid off it. We are living in a world which is being enriched with more and more consumer electronics devices and the problem of e-waste management is getting worse day by day.

Several expert speakers from the country will take part in the Conference sessions. Over 200+ participants are expected to take part in this conference to exchange the knowledge on subject domain.

This event shall bring together consumer and industrial electronics manufacturers, suppliers, E-waste recyclers and E-waste management companies, recycling technology manufacturers, electric vehicle battery makers and their valued chain suppliers, critical raw materials experts, precious metal recovery experts, sustainable materials and chemicals suppliers, science and academia, policy-makers, NGOs, research institutions and consultants. The prime objective of the event shall be to build a road map for future E-waste management strategies.

The main topics to be discussed include recycling technologies, materials recovery solutions, green electronics, sustainable materials, non-toxic substitutes, and end-of-life strategies, as well as regulatory and business models to help reduce the environmental impact of all forms of consumer and industrial E-waste.



## Venue

*Department of Computer Science*

*Faculty of Technology*

*Gurukula Kangri (Deemed to be University)*

*P.O. Gurukula Kangri, Haridwar-249404*

*<https://www.gkv.ac.in/>*





## **AIM OF THE CONFERENCE**

- This National Conference on E-Waste Management - Challenges & Opportunities (E-WMCO) is to be held during March 24-25, 2022. Information technologies are advancing at an ever-increasing rate and new technologies, which are transforming not only the computing scenario but also affecting our daily life, are emerging quite frequently. This conference intends to provide a forum to exchange ideas and information related to E-Waste Management.
- The primary goal of the conference is to promote research & development activities in subject areas of E-Waste Management like Energy, Recycling, Reverse Engineering, Material Science, Computer Science, AI, Data Science, etc.
- Another goal is to promote scientific information interchange among researchers, developers, engineers, students, and practitioners. This conference shall be an ideal platform for Stakeholders to share views and experiences in E-Waste Management.

## **WHO SHOULD ATTEND?**

- Researchers and doctoral students who wish to showcase their research work.
- Academicians who wish to enhance their teaching and research skills.
- Young researchers who are looking for expert guidance and collaborations.
- Practitioners from industry to showcase predictive trends, forward-thinking, and emerging perspectives in the industry.
- Industry professionals, who want to get insights from management research to boost performance and share their current business challenges.



## गुरुकुल काँगड़ी (समविश्वविद्यालय), हरिद्वार, उत्तराखण्ड Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand



### ABOUT HARIDWAR

A paradise for nature-lovers, Haridwar presents a kaleidoscope of Indian culture and civilization. Haridwar also termed, as 'Gateway to Gods', is known as Mayapuri, Kapila, and Gangadwar. The followers of Lord Shiva (Har) and followers of Lord Vishnu (Hari) pronounce this place Haridwar and Hardwar respectively as told by some. It is also a point of entry to Dev Bhoomi and Char Dham- Badrinath, Kedarnath, Gangotri, and Yamunotri. Haridwar is also one of the four places; where Kumbh Mela occurs after rotation every twelve years and Ardh Kumbh after every six years. Haridwar has not only remained the abode of the weary in body, mind, and spirit but also served as the center of attraction for many, for learning the arts science, and culture.

Haridwar as today has not only religious importance but also it has another temple of modern civilization, i.e. BHEL, a 'Navratna PSU' to its credit apart from Integrated Industrial Estate (IIE) established at Haridwar under SIIDCUL spread in a total area of about 2034 acres. The IIT Roorkee at Roorkee is one of the oldest and most prestigious institutes of learning in the fields of science and engineering. Another university of the district, i.e. Gurukula Kangri (Deemed to be University) has a vast campus is giving traditional educations of its kind. Dehradun and Rishikesh are two renowned nearby towns of Haridwar.

### ABOUT GURUKULA KANGRI (DEEMED TO BE UNIVERSITY)

Gurukula Kangri (Deemed to be University) was founded on March 4, 1902, by Swami Shraddhanandaji with the sole aim to revive the ancient Indian Gurukula System of education, on the bank of Ganges at a distance of about 6 km from Haridwar railway station and distance from National Capital is 200 km. This institution was established to provide an indigenous alternative to Lord Macaulay's education policy by imparting education in the areas of Vedic literature, Indian philosophy, Indian culture and modern sciences. It is a deemed to be University fully funded by UGC/Govt. of India. Arya Samaj has been advocating women's education since the day it was founded. As a part of its policies for the upliftment of women in the country, Kanya Gurukula Campus, Dehradun was established in 1922 by Acharya Ramdev Ji as a second campus of women's education. To give real shape to the dreams of Swami Shraddhanandaji, Kanya Gurukula Campus, Haridwar was established in 1993.

### ABOUT DEPARTMENT

Gurukula Kangri (Deemed to be University), Haridwar has emerged as one of the vital institutions for computer education in the country. The Department of Computer Science was established in 1988 with introduction of Post Graduate Diploma in Computer Applications (PGDCA). In the same year, Computer Science was introduced as a subject at the graduate level. After successful completion of five years of PGDCA, U.G.C. accorded the approval of upgrading PGDCA to MCA in 1993 under UGC-DOE joint workforce training program in Computer Science and Technology. The research program leading to Ph.D. in Computer Science was started in the session 1998-99. The department underwent phenomenal growth in the number of students, quality of faculty, research and computational resources.

### ABOUT ACCOMMODATION

Delegates are required to make their own arrangement for stay. However, limited accommodation (on payment ₹ 300/- per bed on a sharable basis) is available in the GK(DU) guesthouse, on first-cum first-serve basis. For accommodation please contact to Guest House Manager Mr. Arvind Sharma - 9045518178

### ABOUT COUNCIL

Uttarakhand State Council for Science and Technology is an autonomous body of the Government of Uttarakhand, Department of Information & Science Technology. UCOST started its activities from last quarter of year 2005, However it was registered under the Registration of Societies Act, 1860 in November 2002.

The apex body of the Council is the General Body which is chaired by the Hon'ble Chief Secretary. This body comprises of the Principal Secretary & Secretaries from various departments, Vice Chancellors, eminent scientists, representatives from Industries and NGO's. The day to day business is held by the Director General. The Secretary of the department is the chairman of its executive committee. The Council plays a catalytic role for the promotion of S&T in the state and supplement /complement the developmental programmers of the state in different sectors. The overall incharge of the Council is the Director General.





## CALL FOR PAPERS

- **E-Waste Management: Challenges & Opportunities (E-WMCO)** is the premier forum for the presentation of new advances and research results in the fields of E-Waste Management. The conference will bring together leading academic scientists, researchers, and scholars in the domain of interest from around the world.
- Best three papers in presentation/ innovative research idea award shall be given to the presenters.
- Quality research papers shall be published in the **Conference Proceedings** with ISBN 978-93-91778-04-0.

## EDITORIAL TEAM

**Dr. Shwetank**

Assistant Professor, DCS, GK(DU)

**Dr. Rajkumar**

Assistant Professor, DCS, GK(DU)

**Dr. M. S. Aswal**

Assistant Professor, DCS, GK(DU)

**Dr. Savita**

Assistant Professor, DCS, KGC

## AREA OF INTEREST ARE AS FOLLOWS

- Advanced Recycling Technologies – Sorting, Screening, Shredding & Separation
- Material Recovery and Closed Loop Solutions
- Extended Producer Responsibility
- Green Electronics and Eco-design
- Bioplastics and Bio-Based Materials
- Precious and Rare Earth Metal Recycling
- Glass Recycling
- Silicon Recycling
- Plastic Recycling
- Bio-Based Chemicals and Feedstocks
- EV & Lithium-ion Battery Recycling
- Local & International Legislation
- Urban Mining Solutions
- More Efficient Use of Critical Materials
- Electronics Reuse (E-Reuse)
- Reverse Supply Chain
- Biodegradable Electronics and Non-Toxic Alternative Materials
- E-Waste to Energy
- Molecular and Organic Electronics
- Future Component Availability
- Raw Material (Rare Earth) Scarcity and Availability
- Treating E-Waste as a Resource
- The Cloud, IoT, and E-Waste
- Moving Beyond Silicon
- Recyclable Materials
- Extending Product Life-Spans
- Blockchain and E-Waste
- Designing Safer, More Durable & Recyclable Products
- Electronics Take-Back Operations
- Closing The Loop and The Circular Economy



गुरुकुल काँगड़ी (समविश्वविद्यालय), हरिद्वार, उत्तराखण्ड  
Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand  
कंप्यूटर विज्ञान विभाग



Department of Computer Science

Two Days National Conference on  
E-Waste Management: Challenges & Opportunities  
March 24-25, 2022

Chief Patron



**Hon'ble Dr. Satya Pal Singh**

Chancellor,  
Gurukula Kangri (Deemed to be University), Haridwar

Patron



**Hon'ble Prof. Roop Kishor Shastri**

Vice-Chancellor,  
Gurukula Kangri (Deemed to be University), Haridwar

GUEST OF HONOR



**Dr. Rajendra Dobhal**

Director General,  
Uttarakhand State Council for Science and  
Technology, Dehradun (U.K.)



**Prof. Rajive Kumar**

Member Secretary,  
All India Council for Technical Education,  
New Delhi.

KEYNOTE SPEAKER



**Dr. Ashok Kumar**

Chief Managing Director  
Greenscape Eco Management,  
Delhi



**Dr. B. M. Sharma**

Chief Functionary  
Society of Pollution and Environmental  
Conservation Scientists, Dehradun (U.K.)



**Dr. Priyank Arya**

Founder,  
Environment Health & Safety  
Services, Ghaziabad (U.P.)

MOTIVATORS



**Co-Convenor**  
**Prof. L.P. Purohit**  
Dean, FOS, GK(DU)



**Registrar**  
**Dr. Sunil Kumar**  
GK(DU)



**Director IQAC**  
**Prof. R.C. Dubey**  
GK(DU)



**Finance Officer**  
**Prof. V.K. Singh**  
GK(DU)

CONFERENCE CONVENOR & ORGANIZING SECRETARY



**Co-Organizing Secretary**  
**Dr. Krishan Kumar**  
Assistant Professor  
Department of Computer Sc.



**Organizing Secretary**  
**Dr. Shwetank**  
Assistant Professor  
Department of Computer Sc.



**Convenor**  
**Dr. Karamjit Bhatia**  
Prof. & Head  
Department of Computer Sc.



**Co-Convenor**  
**Dr. Nipur Singh**  
Professor  
Department of Computer Sc., KGC





# गुरुकुल काँगड़ी (समविश्वविद्यालय), हरिद्वार, उत्तराखण्ड Gurukul Kangri (Deemed to be University), Haridwar, Uttarakhand



## NATIONAL ADVISORY COMMITTEE

- Prof. Shishir, Babasaheb Bhimrao Ambedkar University, Lucknow (U.P.)
- Prof. M. M. S. Rauthan, H.N.B. Garhwal University, Srinagar (U.K.)
- Prof. Amarjeet Singh, Himachal Pradesh University, Shimla
- Prof. S. S. Bedi, MJP Rohilkhand University, Bareilly (U.P.)
- Prof. R. K. Sharma, Thapar University, Punjab
- Prof. Vinod Sharma, Jammu University, Jammu & Kashmir
- Prof. Manu Pratap Singh, Bhim Rao Ambedkar University, Agra (U.P.)
- Prof. Mamta Rajshree, Shobhit University Meerut, Meerut (U.P.)
- Prof. Poonam Sharma, Department of Mathematics, DAV Jalandhar, Punjab
- Prof. Ramanm Chadha, Chandigarh University, Punjab
- Prof. Vijay Anant Athavale, Panipat Institute Of Engineering & Technology, Panipat (Haryana)
- Prof. Satyendra Kumar Rajput, Head, Department of Pharmaceutical Sciences, GK(DU), Haridwar (U.K.)
- Prof. Vinod Yadav, Delhi Technological University, Delhi
- Dr. Ashish Mehta, Kumaon University, Nanital
- Dr. Ashutosh Bhatt, Uttarakhand Open University (U.K.)
- Dr. Vishal Kaushik, University of Petroleum and Energy Studies (U.K.)
- Dr. Neeraj Pratap Singh, Meerut Institute of Engineering and Technology, Meerut (U.P.)
- Dr. Suhas, Department of Chemistry, GK(DU), Haridwar (U.K.)
- Dr. Ajay Indian, Central University of Rajasthan, Rajasthan
- Dr. Ashok Kumar, Chandigarh University, Chandigarh
- Dr. Annu Sharma, Department of Computer Science, Bangalore University, Bengaluru (Karnataka)
- Mr. Jitendra Kumar Chaudhary, Invertis University, (U.P.)

## ORGANIZING COMMITTEE

- Dr. Heman Pathak
- Dr. Praveena Chaturvedi
- Dr. Rajkumar
- Dr. Neena Gupta
- Dr. M. S. Aswal
- Dr. Krishan Kumar
- Dr. Savita

## OFFICE SUPPORT

- Mr. Ajay Kumar
- Mr. Gopal Singh Rana
- Mr. Manoj Negi

## TECHNICAL SUPPORT COMMITTEE

- Mr. Manish Agarwal
- Mr. Sanjay Kumar
- Mr. Amrith
- Mr. Sheetal
- Mr. Satyender Singh
- Mr. Vipin Kumar
- Mr. Gaurav

## IMPORTANT DATES

Last Date of Abstract/Paper Submission: **March 15, 2022**

Acceptance Notification Date: **March 20, 2022**

Conference Date: **March 24-25, 2022**

## REGISTRATION FEE

Category	National Authors (INR)	
Industry Person	1000	
Faculty	800	
Research Scholars	500	
Students	500	
Listeners	200	

## OUR COLLABORATORS



## OUR SPONSORED

