

## EXECUTIVE COMMITTEE: PUNJAB ACADEMY OF SCIENCES

### OFFICE BEARERS :

1. **President** : Prof. I. J. S. Bansal, Pbi. U. Patiala
2. **Vice President** : Prof. S. S. Hundal, PAU Ludhiana
3. **Secretary** : Prof. Tarlok Singh, Pbi. U. Patiala
4. **Treasurer** : Prof. N. R. Dhamiwal, Pbi. U. Patiala

### EXECUTIVE MEMBERS:

1. Prof. Pawan Krishan, Punjabi University, Patiala
2. Prof. M. C. Sidhu, Panjab University, Chandigarh
3. Prof. Harish Kumar Chopra, SLIET, Longowal
4. Dr. Kanwaljit Singh, Punjabi University, Patiala
5. Dr. Sandeep Sharma, GNDU, Amritsar
6. Dr. Manoj Kumar Sharma, TIET, Patiala
7. Dr. Amritpal Singh, Punjabi University, Patiala

For queries/membership pertaining to Punjab Academy of Sciences, please contact: Prof. Tarlok Singh, Union Building, Punjabi University, Patiala 147002, Punjab, India

E-mail: [psciences@gmail.com](mailto:psciences@gmail.com), Mobile No. +91-76961-13505

### ACCOMMODATION:

Accommodation to all registered participants will be provided on first come first served basis, while accompanying members/persons will be accommodated on charged basis. For accommodation please contact Dr. Devinder Singh (8968781688) or Prof. Sandeep Kumar (9888216026).

### WEATHER:

The average daytime temperature is normally in the range of 15-25° C but can go below 10° C during night. Generally, these days are cold so it is advised that participants should carry woollens.

### EXHIBITION:

A tabletop exhibition will run in conjugation with the Congress. Those interested for exhibition space should get in touch with the conference secretaries.

### IMPORTANT DATES:

- Abstract submission deadline : **31<sup>st</sup> December, 2021**  
Submission of full manuscript : **31<sup>st</sup> December, 2021**  
(For Young Scientist Award)  
Intimation of acceptance(of the Papers): **15<sup>th</sup> January, 2022**

Web page link of 25<sup>th</sup> Punjab Science Congress-2022:

<https://www.sgtbcollege.org.in/psc2022/>

**Patron-in-Chief** : Dr. Daljeet Singh Cheema (Honorary Secretary)  
**Patron** : Dr. Jasvir Singh, Principal  
**Chairperson** : Dr. Maninderjeet Kaur, Vice-Principal  
**Convener** : Dr. Vimal Mehta  
**Co-Convener** : Dr. Sangeet Kumar  
**Organizing Secretary:** Dr. Amrit Singh & Dr. Mandeep Kaur

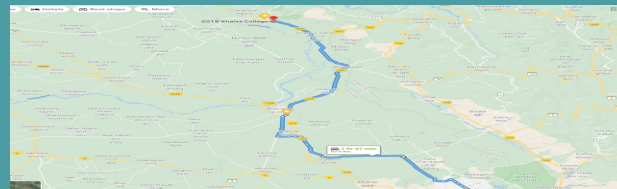
### TECHNICAL COMMITTEE:

Dr. Surender Kumar	Dr. Sartaj Singh
Dr. Randev Singh	Dr. Amandeep Kaur
Dr. Mandeep Kaur	Dr. Amandeep Saroa
Dr. Gagandeep Kaur	Prof. Paramjit Kaur
Dr. Deep Shikha	Prof. Amandeep Kaur
Prof. Darpan Sood	Prof. Sharanjeet Kaur
Prof. Tajinder Kaur	Dr. Talwinder Kaur
Dr. Ravi Kant	Prof. Aditi
Dr. Devinder Singh	Dr. Manpreet Kaur
Prof. Kamal Kumar	Dr. Randeep Kaur

### ADVISORY COMMITTEE:

Prof. Jaspal Singh Sandhu, Vice Chancellor, GNDU, Amritsar  
Prof. Raj Kumar, Vice Chancellor, Panjab University, Chandigarh  
Prof. Arvind, Vice Chancellor, Punjabi University, Patiala.  
Dr. Promila Pathak, Panjab University, Chandigarh  
Dr. Dhiraj Rawat, Professor, HP University, Shimla  
Dr. A.S. Dhaliwal, Professor, SLIET, Longowal  
Dr. Balbir Singh Sandhu, Professor, Punjabi University, Patiala  
Dr. Gurpreet Singh Lehal, Professor, Dean C.D.C., Pbi. Uni., Patiala  
Dr. Gurbinder Singh, Professor, GNDU, Amritsar  
Dr. S.K. Tomar, Professor, Panjab University, Chandigarh  
Dr. B.M. Sharma, Professor, SGTB Khalsa College, Sri Anandpur Sahib  
Dr. P.K. Mehta, Professor, SGTB Khalsa College, Sri Anandpur Sahib  
Dr. Gurjaspree Singh, Professor, Panjab University, Chandigarh  
Dr. Narinder Singh, Professor, IIT, Ropar  
Dr. Mandeep Singh, Professor, SLIET, Longowal  
Dr. Satwinder Kaur Dhillon, Professor, GNDU, Amritsar  
Dr. Devinder Singh, Professor, Punjabi University, Patiala

### HOW TO REACH SRI GURU TEG BAHADUR KHALSA COLLEGE SRI ANANDPUR SAHIB



All correspondence related to 25<sup>th</sup> Punjab Science Congress should be addressed to:

Dr. Vimal Mehta Convener 25 <sup>th</sup> Punjab Science Congress P.G. Department of Physics Sri Guru Teg Bahadur Khalsa College Sri Anandpur Sahib Distt : Ropar (Punjab) 140118 Mob: +91-98554-60699	Dr. Sangeet Kumar Co-Convener 25 <sup>th</sup> Punjab Science Congress P.G. Department of Mathematics Sri Guru Teg Bahadur Khalsa College Sri Anandpur Sahib Distt : Ropar (Punjab) 140118 Mob: +91-84278-22077
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Email: [punjabsciencecongress2022@gmail.com](mailto:punjabsciencecongress2022@gmail.com)



# 25<sup>th</sup>

## PUNJAB SCIENCE CONGRESS

### SILVER JUBILEE SESSION

February 7<sup>th</sup>-9<sup>th</sup>, 2022

## Future Endeavours of Science & Technology for Sustainable Growth

Under the aegis of:  
**PUNJAB ACADEMY OF SCIENCES  
PATIALA**



Organized by:

**SRI GURU TEG BAHADUR KHALSA COLLEGE**

**SRI ANANDPUR SAHIB**

(AN AUTONOMOUS COLLEGE)

SRI ANANDPUR SAHIB-140118, PUNJAB

Managed by Shiromani Gurdwara Parbandhak Committee, Sri Amritsar

[www.sgtbcollege.org.in](http://www.sgtbcollege.org.in)

## SRI GURU TEG BAHADUR KHALSA COLLEGE, SRI ANANDPUR SAHIB

Sri Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib, is one of the premiere institutions managed by Shiromani Gurdwara Parbandhak Committee, Sri Amritsar. It is an exceptional place to study and has been progressing each year as a multi-faculty institute of higher education. The college offers a wide variety of undergraduate and postgraduate courses and keeps on adding new courses every year.

The college acquired Autonomous status during the session 2019-20. Re-accredited by NAAC with grade 'A' and recognized by UGC under section 2f & 12b, our college has also to its credit 'College with Potential for Excellence' status and 'Star College Status' of DBT, GOI. The college has secured for itself another prestigious scheme i.e. DST-FIST.

The college has a vibrant Placement and Training Cell which guides, counsels and trains the students to get decent jobs in the volatile job market. Another feature that adds to its uniqueness is its own Community Radio Station which is available at 90.8 MHz. Programmes of educational and religious interest are aired through it. We strive to provide quality education by equipping our students with various skills, self-confidence and a positive approach so that their education is holistic and relevant to a globalized context. Our motivating concern is to maintain academic excellence while encouraging the students to participate in various co-curricular and extra-curricular activities.

Our academic staff is very efficient and highly qualified. The members of the non-teaching staff are diligent and work with total commitment towards achievement of our mission and goals.

### PUNJAB ACADEMY OF SCIENCES

The Punjab Academy of Sciences (PAS) came into being during the 83<sup>rd</sup> session of the Indian Science Congress at Punjabi University, Patiala in 1996. It provides a platform where senior scientists and young researchers in the region meet and interact in order to share their expertise in different disciplines of Science & Technology. At present this registered body has more than 1600 life members. The academy has conferred its Honorary Fellowship to a number of distinguished scientists from India and abroad, who have significantly contributed towards latest innovations in Science and Technology. The academy also confer Life-time achievement award to reputed Scientists. The academy is bringing out an annual journal of research namely "Journal of Punjab Academy of Sciences".

#### The main aims of the academy are: -

- ▶ To serve the cause of science in Punjab, with respect to its basic and applied aspects.
- ▶ To encourage original research in general and with reference to Punjab in particular.
- ▶ To create scientific temper and awareness among the masses.
- ▶ To establish interaction among the scientists with particular reference to inter-disciplinary branches.
- ▶ To work out strategies for sustainable use of our natural resources and maintenance of environment.

## HIGHLIGHTS OF THE 25<sup>TH</sup> PUNJAB SCIENCE CONGRESS-2022

<b>Track A</b>	<b>Mathematical Sciences &amp; Computer Science</b>
<b>Track B</b>	<b>Physical Sciences</b>
<b>Track C</b>	<b>Chemical Sciences</b>
<b>Track D</b>	<b>Biology, Agriculture &amp; Environmental Sciences</b>
<b>Track E</b>	<b>Medical, Veterinary and Pharmaceutical Sciences</b>

### CALL FOR ABSTRACTS AND PAPERS

The members/non-members of the Punjab Academy of Sciences are cordially invited to submit their original research contributions from any of the above mentioned tracks. Abstract should not exceed 250 words, Font-Times New Roman, font size-12, single line spacing, paper size-A4 in MS Word. It is essential to send the abstract through electronic mail: [punjabsciencecongress2022@gmail.com](mailto:punjabsciencecongress2022@gmail.com) on or before **31<sup>st</sup> December 2021**.

Not more than two papers, either alone or with co-authors, can be submitted. The name of the presenting author should be marked with an asterisk (\*) sign along with the email ID. The decision for oral/poster presentation will be strictly followed as per approval of the technical review committee. Papers screened by the committee may either be published in **ECS transaction proceedings (h-index 52, SCOPUS indexed)** or selected papers may be published in the special issue of **Journal of Punjab Academy of Sciences** as per norms with the consent of authors.

### PRESENTATIONS (ORAL/POSTER)

There will be parallel technical sessions for oral presentation of papers for each track (A-E), separately both in offline & online\* mode. Ten minutes shall be given for oral presentation (seven minutes for presentation and three minutes for discussion). For poster presentation, each participant will be provided with a space of 100cm X 70cm for mounting the display of written material, diagrams, photographs etc. Best poster in each track will be awarded a medal, certificate and a prize of Rs. 2100/- by the Punjab Academy of Sciences.

### YOUNG SCIENTIST AWARD

A special session for the presentation of papers for the young scientist award will be held on **8<sup>th</sup> February 2022**. Young scientists up to an age of 35 years on **31<sup>st</sup> December 2021** may send their abstracts and full length papers to the **Secretary, Punjab Academy of Sciences, Union Building, Punjabi University, Patiala, separately on or before 31<sup>st</sup> December, 2021. Name of the Track pertaining to the paper should be clearly mentioned on the envelope. The abstract of this paper should be submitted online at [pasciences@gmail.com](mailto:pasciences@gmail.com).**

The Young scientists (proof of age to be furnished) selected for best presentation will be awarded a certificate of honor, medal and cash prize of Rs. 7500/-.

\*The online mode will not be allowed for participants from Punjab, Haryana, Himachal Pradesh, Chandigarh & Delhi.

## REGISTRATION FEE:

Categories of Participants	Registration Fees without Publication	Registration Fees with Publication in ECS transactions
Academicians / R & D Delegates	Rs. 2000/-	Rs. 6000/-
Research Scholar	Rs. 1500/-	Rs. 3000/-
Students	Rs. 500/-	N.A.
Corporate Delegates	Rs. 4000/-	Rs. 10000/-

●The registration fee can be sent through various modes (RTGS, IMPS, Google Pay, Paytm etc. to Account No: 0973000100129725, Punjab National Bank, Anandpur Sahib, IFSC: PUNB0097300) or through Demand Draft in favour of Principal, Sri Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib, Distt: Ropar, Punjab, 140118.

●Participants who are not members of Punjab Academy of Sciences will have to pay an additional membership fee by Demand Draft/Cheque in favour of Punjab Academy of Sciences, Patiala as following:

<b>Life Membership:</b>	<b>Rs. 2000/-</b>
<b>Ordinary Membership:</b>	<b>Rs. 500/-</b>

### ONLINE REGISTRATION LINK:

<https://forms.gle/KYB3Zo9EJCbtA2AP7>

### NOMINATIONS

The Punjab Academy of Sciences invites nominations/ applications for the following awards (to reach the Secretary, PAS on or before **31<sup>st</sup> December 2021**):

- ▶ Life-time Achievement Award
- ▶ Nominations for Honorary Fellowship of the Academy
- ▶ Research paper for Young Scientist Award
- ▶ Applications for Research Award for a rural woman working in the area of Pharmaceutical Sciences
- ▶ Applications for the Best Science Teacher (Colleges) Award
- ▶ Applications for the Best Rural Science Teacher (School) Award
- ▶ Applications for rural students (One girl and One boy) who topped the PSEB Matriculation Examination, 2021
- ▶ S. Jawahar Singh & Mrs. Satbachan Kaur Young Scientist Award for a person who presents his/her original research findings in Punjabi language
- ▶ Desh Bhagat S. Lal Singh Oration Award (Desh Bhagat University, Gobindgarh)
- ▶ Er. Gurcharan Singh Oration Award (I.E.T. Bhaddal)

**Registration Form**  
**25<sup>th</sup> Punjab Science Congress, 7<sup>th</sup>-9<sup>th</sup>, February, 2022**

1. Name of the participant: \_\_\_\_\_
2. Designation: \_\_\_\_\_
3. Date of Birth: \_\_\_\_\_
4. Gender: Male/ Female
5. Postal Address: \_\_\_\_\_  
\_\_\_\_\_
6. Telephone (Resi./Mobile/Office) and Email: \_\_\_\_\_  
\_\_\_\_\_
7. Are you a life member of PAS? Yes/ No
8. Title of the research paper: \_\_\_\_\_  
\_\_\_\_\_
9. a) Name of the author(s): \_\_\_\_\_  
\_\_\_\_\_
- b) Presenting author: \_\_\_\_\_
10. Name of the technical session (Tick): Track- A / B / C / D / E
11. Type of presentation: Oral/ Poster
12. Do you Want to publish research paper in ECS transaction proceedings? Yes/ No
13. Mode of Participation: Offline/Online \_\_\_\_\_  
(Online Mode will not be allowed for participants from Punjab, Haryana, Himachal Pradesh, Chandigarh & Delhi.
14. Are you competing for Young Scientist Award (Age below 35 years)? Yes/ No
15. Number of accompanying person(s): \_\_\_\_\_
16. Is accommodation required? Yes or No  
    Period From: \_\_\_\_\_ to \_\_\_\_\_
17. Details of registration fee (DD No./ Transaction ID): \_\_\_\_\_

**Account details:**

For offline payment, Demand Draft should be sent in favour of Principal, Sri Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib. Distt : Ropar, Punjab, 140118  
Account No- **0973000100129725**, **IFSC Code: PUNB0097300**  
Punjab National Bank, Anandpur Sahib

Date:

Signature: