



United Nations
Educational, Scientific and
Cultural Organization



International Centre of Research
and Postgraduate Training in Mathematics
Under the auspices of UNESCO

VIETNAM ACADEMY OF SCIENCE AND TECHNOLOGY
INSTITUTE OF MATHEMATICS

INTERNATIONAL CENTRE OF RESEARCH AND
POSTGRADUATE TRAINING IN MATHEMATICS

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Report from 2020 to 2024

Malaysia, 15-17/05/2024

I. ESTABLISHMENT OF THE CENTRE

1. AGREEMENTS BETWEEN THE GOVERNMENT AND UNESCO

- **2015:** UNESCO General Conference in 2015, decision to establish two Mathematics and Physics Centres in Vietnam (Category 2 Centres).
- **2017:** The Ministry of Science and Technology of Vietnam and the Director-General of UNESCO signed an Agreement to establish two centres
- **2020:** The Prime Minister of Vietnam signed Decision approving the Agreement on the establishment of two centres.



2. OBJECTIVES, FUNCTIONS, AND TASKS OF THE CENTRE

- Research and training in mathematics at the highest international standards;
- Provide an international centre for capacity building in the basic sciences, through schools and workshops;
- Support research in those countries in Southeast Asia, Asia-Pacific and in the least developed countries in Africa, where mathematical research is not yet well-developed; and,
- Provide expertise to decision makers, educators and the general public to strengthen the research and development potential in the region and beyond.

3. ORGANIZATION OF THE CENTRE'S STRUCTURE

Director

Assoc. Prof. Dr. Phan Thi Ha Duong

Scientific Council

07 professor,
Prof. Dr. Dinh Nho Hao, Chairman

Governing Board

- Ms. Le Quynh Lien, VAST, Chairperson
- Ms. Nguyen Thi Thanh Ha, Ministry of Science and Technology
- Mr. Atish Dabholkar, Director of ICTP
- Mr. Shaofeng Hu, IBSP
- Mr. Phung Ho Hai, Institute of Mathematics



II. ACTIVITY REPORT

GENERAL ACHIEVEMENTS

From 2020 to present, the Centre has successfully achieved its objectives:



Completing the organizational structure



Equipping physical facilities



Establishing regulations to ensure the implementation of activities



12

outstanding
research projects



40

training projects
(postdocs, PhDs, masters)



publishing **82**
articles in
SCIE journals



07 international conferences
with over **240** scientists
participating



10 international schools
with **300** students



20 mathematical events and spreading the spirit of UNESCO
with over **2,000** participants, **300,000** online views,
and coverage by **100** media articles

II. ACTIVITY REPORT

ORGANIZATION OF TRAINING IN MATHEMATICS AT THE INTERNATIONAL

Providing postgraduate-level mathematics training through short courses and workshops

- Taught at the CIMPA "Current Trends in Algebra", in Philippines.
- **10** schools with **30** international professors and **300** students from various countries.

Graduate students sponsored partially by the Centre

Year	Total number of students	Vietnamese students	Foreign students
2018	12	8	4
2019	12	7	5
2020	17	15	2
2021	13	12	1
2022	24	21	3
Total	78	63	15



ORGANIZATION OF TRAINING IN MATHEMATICS AT THE INTERNATIONAL

- Organizing Postdoctoral Training in Mathematics through Research Programs, Contributing to Training Young Mathematicians into Experts:

06 projects completed, **17** published papers

11 research projects, **09** outstanding postdoctoral researchers are from other cities

- Financial Support Management for International Master's and PhD-Level Mathematics Education through Research Programs and Scientific Projects

13 PhD. projects: **11** completed, **15** published papers

14 master projects **19** students: **12** projects completed, **05** published papers

ORGANIZATION OF MATHEMATICAL RESEARCH ACTIVITIES AT THE INTERNATIONAL LEVEL

- Establishing research groups and research projects aimed at building strong research teams at both regional and international levels, with a focus on the participation of foreign mathematicians

02 consistent research directions and **12** outstanding research projects (**08** completed)

- Promoting Research Collaboration in Mathematics at Regional and International Levels through

07 international conferences: **240** leading experts and researchers

ORGANIZING CONSULTANCY ACTIVITIES FOR POLICY MAKERS, EDUCATION EXPERTS AND PUBLIC PROPAGANDA IN MATHEMATICS

Public lectures and seminars on the achievements of mathematics and science, following the spirit of UNESCO:

1,000 direct participants and **200,000** online viewers annually.



5. MEETING AND REPORTING MODE

- **2023, 2024 at VAST:** Governing Board meeting of the ICRTM and ICP, approve the activity program for the following year.
- **Each year,** report to the National Commission for UNESCO in Vietnam and to IBSP.
- **Each year,** present in the annual review meeting of VAST and Ministry of Science and Technology.
- **11/2023,** the Centre attended and delivered speeches at the UNESCO General Conference in Paris, followed by discussions with members of the Centre's Governing Board.



III. CONTRIBUTION TO THEMATIC AREAS OR UNESCO C/5 RELEVANT EXPECTED RESULT

CONTRIBUTION TO THE 17 SUSTAINABLE DEVELOPMENT GOALS (SDGS) AND OTHER INTERNATIONAL DEVELOPMENT AGANDAS

- **20** major events, attracting about **2000** direct participants, over **300,000** online views, and coverage in **100** articles and television broadcasts.
- **17** Sustainable Development Goals (SDGs).
 - o Quality education
 - o Gender equality
 - o Climate change adaptation
 - o Knowledge dissemination
 - o Access to clean energy



List of events organized by the Centre

	Event Name	Attendees in-person/Online view)	Year Organized
1	Exhibition "Agent Orange Disaster - 60 Years in Retrospect" at the Military History Museum, Hanoi. with the Chemical Corps - Ministry of National Defense	500 participants, more than 20 news	2021
2	Science and Technology Day for Environmental Protection, with the IPC and the UNESCO Biosphere Centre Vietnam. May 18, 2021	150 participants, 20 000 online views	2021
3	Vietnam Book Day, April 20, 2021: with social and humanitarian sectors	100 participants/ 5000 online views	2021
4	"Innovation for Future Building Day": with former Minister of Science and Technology	100 participants/ 70.000 online, 10 news	2021
5	"Sustainable Development Science Day"	200 participants, 20.000 online	2022
6	Vietnam Science and Technology Day (May 18) - ENVIRONMENTAL SCIENCE AND TECHNOLOGY, with IPC , UNESCO Biosphere Center in Vietnam..	100 participants, 10.000 online	2022
7	with the French Embassy, French Institute, Institute of Research and Development (IRD): Sustainable City Program: a series of public lectures on Sustainable Cities, in November 2021	200 participants, 100.000 online	2021, 2022
8	Science and Technology Day: "Science from Different Perspectives"		2023
9	Participation in the establishment of the Asian-Pacific Women in Mathematics Association (AOWM), 2023	50 participants from 10 countries	2023
10	Presented a lecture at the gender equality workshop organized by the French Embassy 50th anniversary of Franco-Vietnamese relations. March 8, 2023	100 participants / 5.000 online	2023
11	"OPEN SCIENCE - from different perspectives" with the Ministry of Science and Technology, the Ministry of Information and Communications, and the IPC. May 18, 2023	200 participants / 7.000 online	2023
12	UNESCO Sustainable Development Goals Day - August 24, 2023	200 participants / 10.000 online	2023
13	Participation in the workshop "20 years of intangible cultural heritage protection in Vietnam: from UNESCO to the community" (December 2023)		2023
14	Guest speaker at the roundtable discussion "International Women's Day-Dialogue between Inspiring Women," French Institute in Ho Chi Minh City. March 8.2024	300 participants / 5.000 online	2024

GENDER CONSIDERATIONS

- Female researchers or trainees are always encouraged at the Centre.
- Gender equality factors have been considered in the centre's regulations, such as prioritizing age for women in some young scientific topics.
 - Writing articles on gender equality and gender equity in Vnexpress newspaper.
 - Attending the "Opening meeting of Asian-Pacific Women in Mathematics (AOWM), 2023".
- Invited speaker at the Workshop on Gender Equality organized by the French Embassy to commemorate 50 years of France-Vietnam relations. March 8, 2023., 2024
 - Successfully proposed with the Vietnam Mathematical Society to implement special regulations for women, such as granting 30 scholarships to female mathematics lecturers to attend the 10th National Mathematics Conference in August 2024.

Beneficiaries (disaggregated by sex)	Category	Number (estimate)
	Projects for outstanding research	Male: 12
	Projects for PhD students	Female students: 9 Male students: 4
	Projects for Postdoctoral researchers	Female researchers: 3 Male researchers: 8
	Projects for young students in mathematics	Female students: 4 Male students: 15



1. Research

- Thematic projects led by prominent mathematicians through collaborative efforts, and inviting researchers to undertake them.
- Postdoctoral, PhD, and master scholarships for international students: available for both short-term and long-term durations.
- Providing guidance for doctoral and master's thesis research.
- Offering research internship guidance for students at all levels.

2. Conferences and school

- Organizing international conferences.
- Establishing specialized schools for theoretical mathematics and applied mathematics: sponsoring students from foreign countries and covering expenses for foreign lecturers.
- Send professors of Institute of Mathematics for teaching in the master's programs of other countries, or scientific departments at other centers.
- Collaborate with other centers to organize events to promote UNESCO's values.