

NATIONAL CENTRE FOR PHYSICS

AN OVERVIEW

VISION & AIM OF NCP – AS STATED IN THE CHARTER

VISION

The Centre will evolve into a Centre of Excellence in the area of Physics and would establish itself on the lines of The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.

AIM

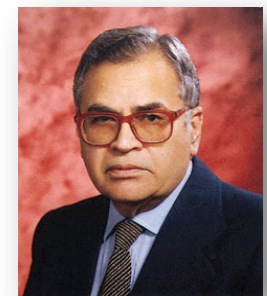
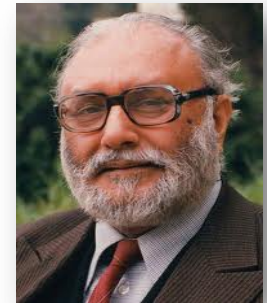
To foster, through training and research, the progress of all branches of physics, paying special attention to the needs of Pakistani universities and R&D organizations.

MAIN FUNCTIONS

- **R&D at the frontiers of Science and Technology**
- **Breaking the scientific isolation – through scientific and training events**
- **Establishing User's Oriented Research Facilities that can be used at national level**
- **Human Resource Development**
- **Supervising Postgraduate Students**
- **Physics Outreach and Education**
- **International Scientific Collaboration**

HISTORY OF CREATION OF NCP

- Creation of the NCP is in fact a dream of **Prof. Dr. Abdus Salam** who visualized establishment of this institute **in 1951**.
- Prof. Salam submitted a proposal to GoP to establish such a Centre but it could not be materialized at that time.
- Established ICTP at Trieste, Italy in **1964**.
- At the **1986 INSC**, the proposal for an ICTP type Science Centre in Pakistan was again voiced.
- Many top ranking scientists specially **Dr. Ishfaq Ahmad (Chairman PAEC)** and **Prof. Dr. Riazuddin** worked very hard to convince the Pakistan Government to establish an ICTP type Centre in Pakistan (Meeting with **Mr. Farooq Ahmed Khan Laghari**, President of Pakistan on July 26th, 1994).
- Nucleating Centre for NCP was created at Quaid-i-Azam University in **1999** and Dr. Riazuddin joined as its **first Director**.



HISTORY OF CREATION OF NCP - 1999

- The Nucleating Centre for NCP was initially housed at the First Floor of the **Old Earth Sciences Department** building of QAU, Islamabad.
- The nucleating Centre for NCP **marked its scientific start on January 27, 1999**, when Prof. Dr. Riazuddin organized a one-day **Symposium on Frontiers of Fundamental Physics** at the Institute of Physics, Quaid-i-Azam University.
- Some scientists/researchers from CERN attended this symposium

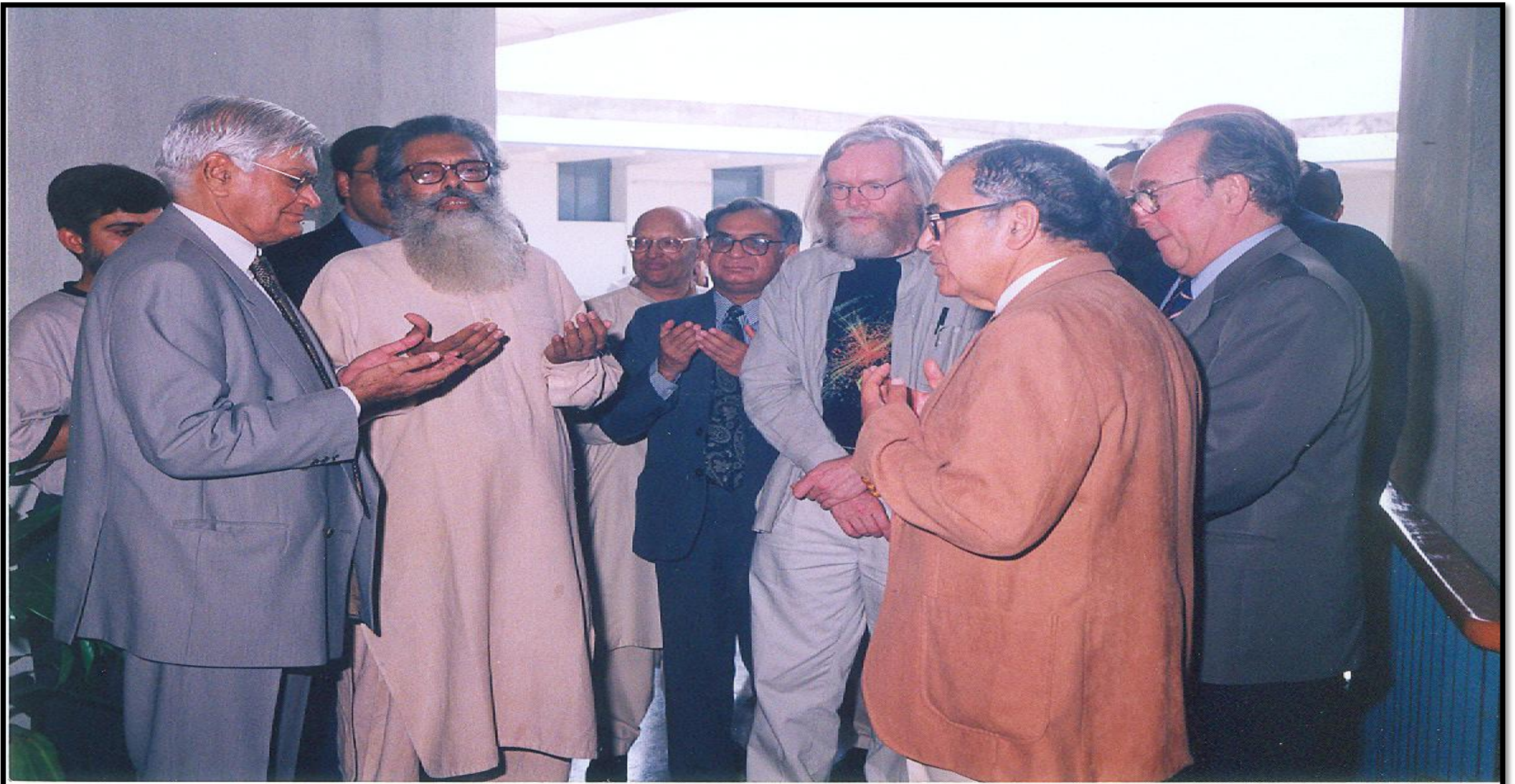


HISTORY OF CREATION OF NCP (YEAR 2000)

- The Nucleating Centre for NCP was formally inaugurated on May 16, 2000, by Dr. Ishfaq Ahmad N.I., H.I., S.I., Chairman, PAEC.
- The Director General of the European Organization for Nuclear Research (CERN), Dr. Luciano Maiani and members of his delegation, the Vice Chancellor of QAU, Dr. Tariq Saddiqui and many other dignitaries, witnessed the inauguration.
- Since then, several scientists from abroad visited the Nucleating Centre for NCP from time to time to attend conferences, workshops and to deliver lectures.



INAUGURATION OF NCP – MAY 16, 2000



NCP – CERN RELATIONS

- **Signing of MoU between NCP and CERN – RPC Project**
- **NCP becomes full member of CMS Collaboration**
- **Appointment of National Contact Physicist from Pakistan**



HISTORY OF CREATION OF NCP - 2007



- NCP was formally established in 2004 when its Charter was signed & approved by the Prime Minister of Pakistan, **Chaudhry Shujaat Hussain**
- **Building Construction completed in 2007**

NCP DEPARTMENTS

▪ Research Departments (Total Researchers = 68, Ph.D=35)

- | | |
|---|---------------|
| – Experimental High Energy Physics (EHEP) | Ashfaq Ahmad |
| – Nano Sciences and Materials | Sara Qaisar |
| – Theoretical Physics (TPD) | Mohsin Siddiq |
| – Ion Beam Physics (IBP) | Ishaq Ahmad |
| – Earthquake Studies (CES) | Muhammad Ali |
| – Vacuum Science and Technology (NINVAST) | Tahir Hashmi |
| – Atomic & Molecular Physics Lab | Aslam Baig |

▪ Other Departments

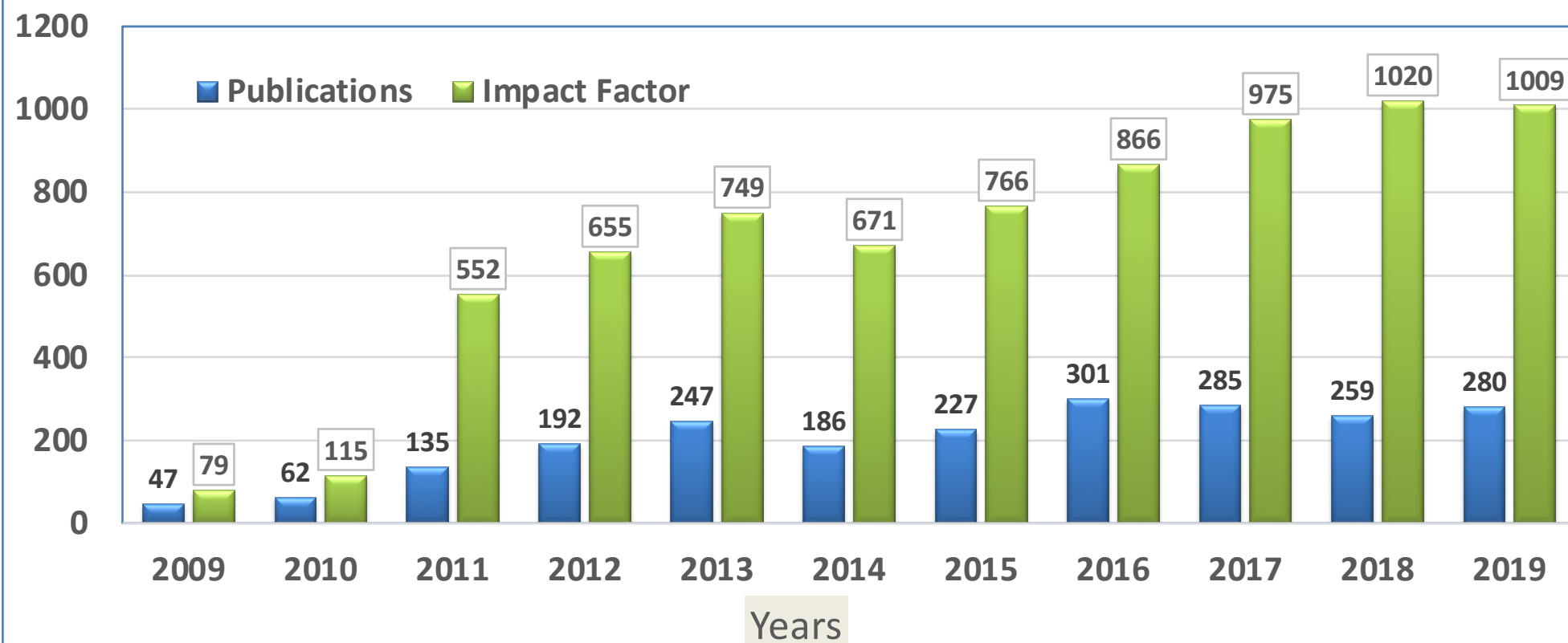
- | | |
|--|-----------------|
| – Collaborations and Academic Activities | Rabia Rasheed |
| – Administration | Rizwan Ali Khan |
| – Finance | Kashif Sarfaraz |

FOCUS AREAS FOR R&D

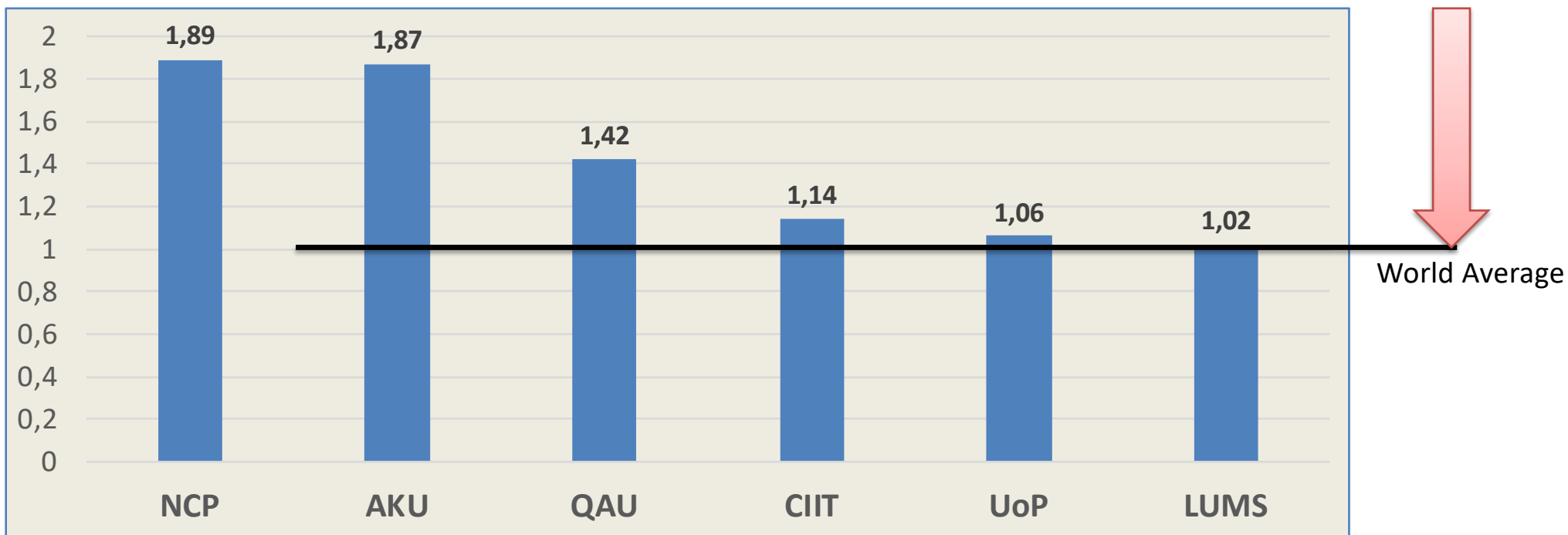
THEORY	Astrophysics and Cosmology
	Condensed Matter Physics
	Mathematical Modeling and Simulation
	Particle Physics
	Plasma Physics
	Quantum Information and Computing
EXPERIMENT	Advanced Computing for Scientific Research
	Atomic and Laser Physics
	Experimental High Energy Physics
	Ion Beam Physics and Applications
	Nanoscience and Technology

RESEARCH PUBLICATIONS & HOSTED RESEARCHERS

PROGRESS IN RESEARCH PUBLICATIONS



NCP RANKING BY CATEGORY NORMALIZED CITATION IMPACT (CNCI) 2020 - WEB OF SCIENCE



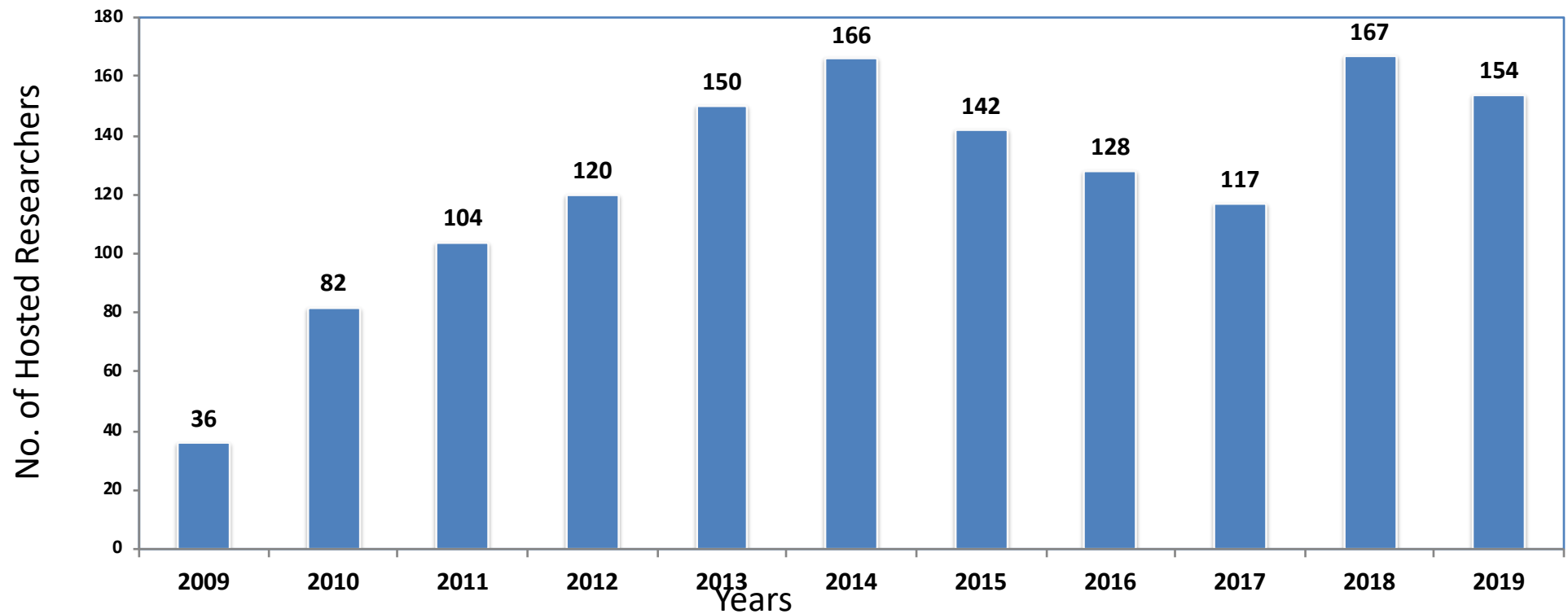
Source: Pakistan Research and Innovation Landscape Report (2010-2020)
<https://discover.clarivate.com/pakistanresearchreport2020>

HOSTED RESEARCHERS PROGRAM AT NCP

NCP is the hub of research activities for researchers and students working in the field of Physics and allied disciplines. Following are the categories of Hosted Researchers:

- **Adjunct Faculty:** Distinguished Foreign and Local Scientists from Academia
- **Visiting Scientists and Research Scholars:** Foreign and Local PhD Scholars visiting NCP up to 1 Year
- **NCP Associates:** Researchers join NCP for up to 3 years
- **Post-Doctoral Fellows:** Fresh PhDs join NCP for 6 to 12 months
- **Postgraduate Students:** MPhil for 01 year and PhD for 02 years
- **Internees:** 6 to 12 months

NUMBER OF HOSTED RESEARCHERS



Thanks