



The Abdus Salam
International Centre
for Theoretical Physics
Physics Without Frontiers



Building the Path Toward a Physics Research Community in Afghanistan

Baktash Amini

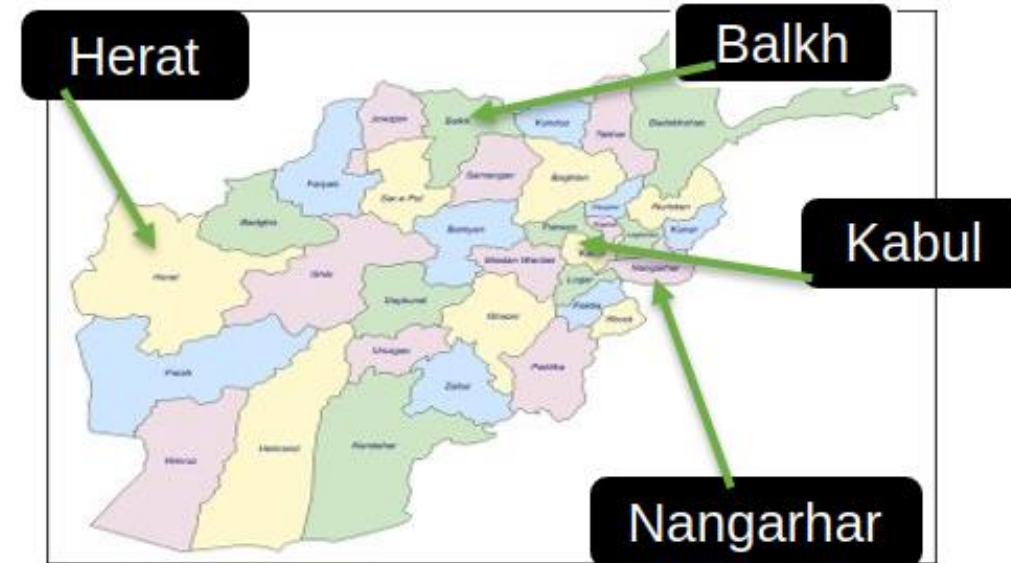
Albert-Ludwigs-Universität Freiburg

Celebrating 10 Years of Physics Without Frontiers

22th November 2022

Introduction

- Four physics departments in Afghanistan (Kabul, Herat, Nangarhar and Balkh)
 - **Undergraduate program**
- Research in physics before PWF-Afghanistan collaboration
 - **Little funding (no research facilities)**
 - **No international physics program**
- PWF-Afghanistan collaboration – **to have a strong community of physicists in AFG**
 - To organize annual intensive physics school
 - To support students and faculty
 - To facilitate international collaborations and networks



How it began?

1st CERN SAHEPI Workshop,
2017, Kathmandu Uni, Nepal



Dr. Archana Sharma
Senior Scientist at CERN



Ms. Abha ELi



Dr. Steven Goldfarb
Physicist at University of
Melbourne



Dr. Kate Shaw
ICTP PWF Coordinator

INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS

PHYSICS WITHOUT FRONTIERS AFGHANISTAN

HIGH ENERGY PHYSICS WORKSHOP

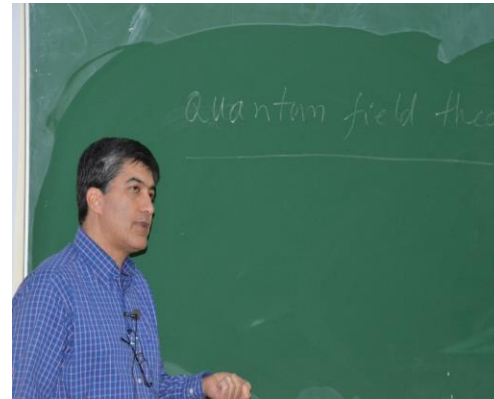
KABUL UNIVERSITY
SATURDAY 31 MARCH - SUNDAY 1 APRIL 2018
PHYSICS FACULTY, LECTURE ROOM 1

PWF is organising a workshop in high-energy physics at Kabul University, Afghanistan. The program is designed for 3rd and 4th year undergraduate physics students throughout the region, to introduce the field and research topics with a focus on cosmology and particle physics.

REGISTER AT: <http://bit.ly/2tHjm3>
DEADLINE 22 MARCH 2018

ORGANISED BY ICTP PWF, WITH:
BAKTASH AMINI (KABUL UNIVERSITY, ICTP PWF AFGHANISTAN COORDINATOR)
KATE SHAW (ICTP PWF COORDINATOR, UNIVERSITY SUSSEX, ATLAS EXPERIMENT AT CERN)
ENGLISH ERFANI (INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES)

ICTP International Centre for Theoretical Physics
Kabul University
Institute for Advanced Studies in Basic Sciences

PHYSICS WITHOUT FRONTIERS: AFGHANISTAN

School on Theoretical and Experimental Concepts in High Energy Physics

21-24 April 2019
Kabul University
indico.ictp.it/event/8915

SPONSORS:
ICTP
Kabul University
University of Sussex
ATLAS Experiment at CERN
ICTP and University of Sussex

LOCAL COORDINATION:
Kabul University
ICTP PWF Afghanistan

ICTP International Centre for Theoretical Physics
Kabul University

ICTP-PWF Workshops in Afghanistan

ICTP-PWF Workshops in Afghanistan: Impact

- Starting point of a revolution in physics in Afghanistan
- Inspired young students to pursue their career in physics
- MSc scholarships
- ICTP-PWF faculty support
- Establishment of a **network of physicists**
- **Next Project:** One Year School for Physics Theories



ICTP-PWF MSc Scholarships

- 2019-2022 20 scholarship holders (15 male, 5 female) at Institute for Advanced Studies in Basic Sciences (IASBS), Iran
- 1 scholarship holders at Ferdowsi University of Mashhad (FUM), Iran
- 5 graduated
- 2 PhD positions in Germany in Condensed Matter Physics – Sharif and Javid
- 1 PhD position in Switzerland in Optics - Maryam



Scholarship for Master's Degree in Physics

Institute for Advanced Studies in Basic Sciences (IASBS) in collaboration with the Abdus Salam International Centre for Theoretical Physics (ICTP) through its Physics Without Frontiers programme offers a limited number of merit-based scholarships to talented students from Afghanistan.

Scholarships:

Full scholarship covers tuition fees, living allowance, local accommodation at IASBS and insurance.

Partial scholarship covers up to 50% of tuition cost.

Program Structure:

The program is a two-year full-time master's degree. The first year is coursework, and the second year of the program is strongly research-oriented, and is completed with a Master's thesis. Admitted students have the opportunity to conduct experimental, theoretical or computational research in different branches of physics.

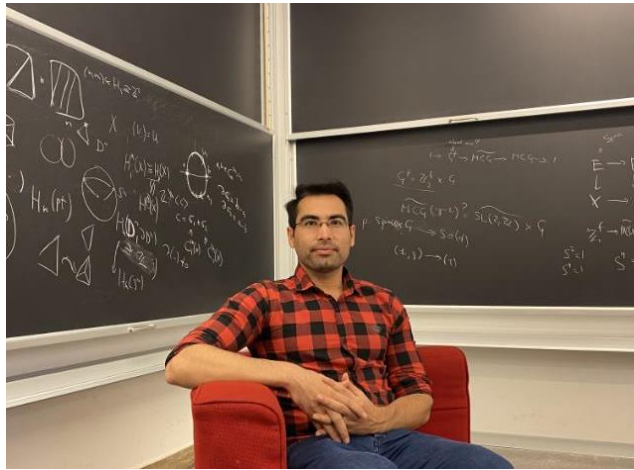
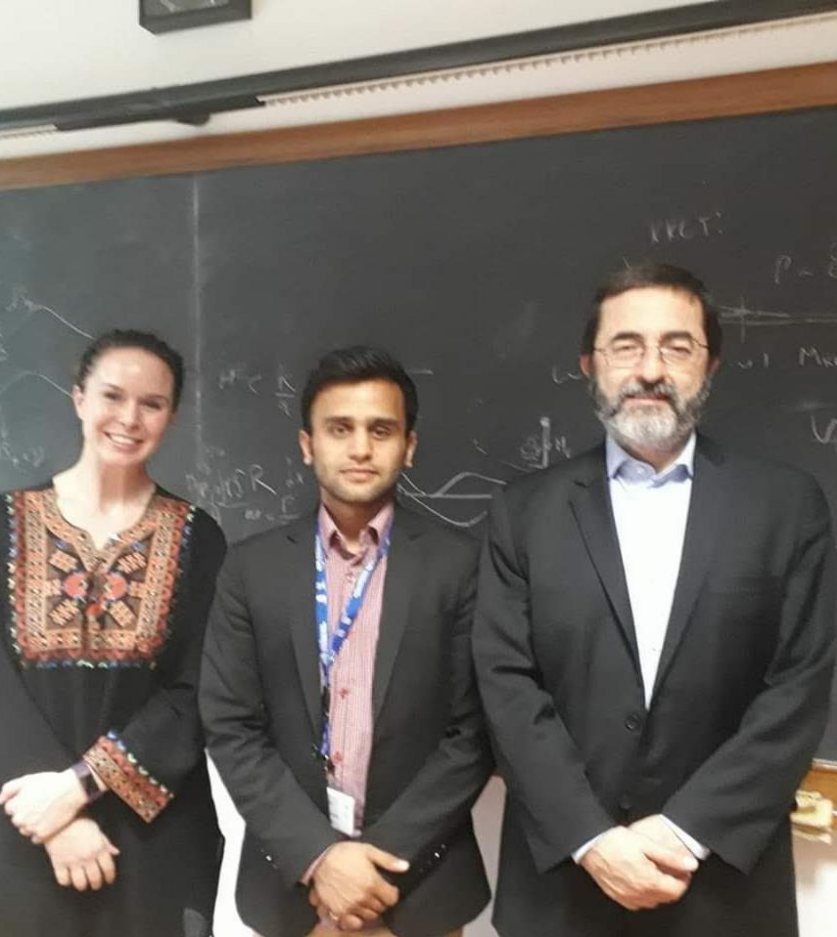
Research Topics:

Condensed Matter, Biophysics, Complex Systems and Neuroscience, Optics and Lasers, Astrophysics.



Submission and Selection Procedures:

1. Filled application form and transcripts must be submitted in PDF format to the IASBS via one email to physics@iasbs.ac.ir, by



ICTP-PWF Faculty Support

- Development of physics faculty curriculum for undergraduate program– Bobby Acharya and Fawad Hassan
- CERN Summer School 2019 – Baktash Amini
- 2 MSc thesis at ICTP-ATLAS group for faculty members – Baktash Amini and Ahmad Sajad Nazari
- 1 ICTP diploma in HECAP – Baktash Amini
- 1 PhD position in Germany (ATLAS Experiment, CERN) - Baktash Amini
- 1 ICPT STEP program for faculty member – Jawad Ahmadi
- 2 research opportunities for female faculty members in Rome, Italy – Freba Ahadyar and Nazia Ahadyar

Thanks to ICTP and ICTP Physics
Without Frontiers program
Especial thanks to **Kate Shaw** and
Bobby Acharya!