

# ICTP PWF; Physics for Bangladesh School on Quantum Field Theory

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- We hope to tackle some of these issues by following the dream of Prof. Abdus Salam.

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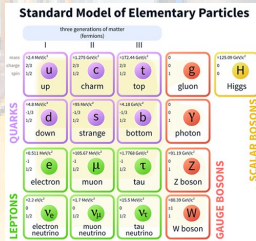
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- Thus, students barely get to witness the beauty of physics at the most fundamental level.

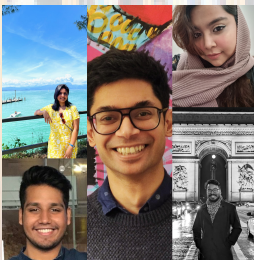


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- Helpful bunch of TAs : Sayeda Jahan (BRAC University), Noshin Shamma (University of Bologna), Mishaal Hai (University of Bologna), S.M Masruk Uddin (PSL), Aviral Aggarwal (Masaryk University) and Shafakat Arifeen (University of Alberta).

# Schedule

- Our month long schedule included main lectures followed by lectures on advanced topics.

>Welcome session and a short speech Prof. Iqbal on 25/08/2024.

Date and time (Bangladesh Standard Time)	Lecture	Lecturer/Speaker
25/08/2024, 7pm-9pm	Introduction to Scalar Fields	Dr. Ratul Mahanta and Dr. Tousik Samui
26/08/2024, 7pm-9pm	Quantization of Scalar Fields	
28/08/2024, 7pm-9pm	Introduction to Fermionic Fields	
30/08/2024, 7pm-9pm	Quantization of Fermionic Fields	
2/09/2024, 7pm-9pm	Introduction to Vector Fields	
3/09/2024, 7pm-9pm	Quantization of Vector Fields	
5/09/2024, 7pm-9pm	Interaction Picture and Feynman Diagrams 1	
7/09/2024, 7pm-9pm	Interaction Picture and Feynman Diagrams 2	
10/09/2024, 7pm-9pm	Path Integral Quantization	Prof. Nabil Iqbal
11/09/2024, 7pm-9pm	Basics of Gauge Theories	Prof. Nabil Iqbal
13/09/2024, 7pm-9pm	Brief Sketch Of Standard Model 1	Gonzalo Villa
16/09/2024, 7pm-9pm	Brief Sketch Of Standard Model 2	Gonzalo Villa
18/09/2024, 7pm-8pm	<i>From Physics Beyond the Standard Model To Strings</i>	Prof. Fernando Quevedo
20/09/2024, 4pm-5pm	<i>Flavors of Spacetime</i>	Prof. Dionysios Anninos
23/09/2024, 7pm-8pm	<i>Entanglement Entropy and Von-Neumann Algebras</i>	Dr. Onirban Islam
24/09/2024, 7pm-8pm	<i>Quantum field theory for phase transitions: of magnets and boiling water</i>	Prof. Nabil Iqbal

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- A comprehensive introduction to QFT.
- We received around 350 applications from all around the world and around 250 students were admitted.
- Happy to inform that around 120 students received a certificate and completed the course.

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The homework was quite good. The best part of the school was how well it was managed, especially considering everything was done online. The lectures were amazing, and the homework was fun (although I made a lot of typos and errors—sorry for that!). Overall, considering it was an online school, everything was perfect.

What I enjoyed the most about the ICTP PWF Bangladesh: School on Quantum Field Theory was the cooperative nature of the instructors in explaining complex problems. Their approach made even the most challenging concepts in quantum field theory accessible and engaging. Rather than merely presenting solutions, the instructors actively involved us in the problem-solving process, fostering an environment where we could freely ask questions and explore different perspectives. This collaborative approach not only deepened my understanding of the subject but also encouraged critical thinking and a shared enthusiasm for the material.

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- Future plans are also inspired by our participants.

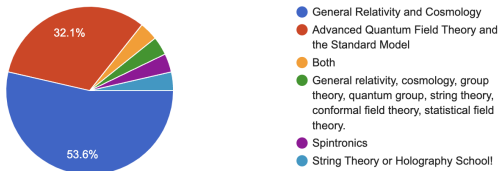


Figure: Whats next?

# Conclusion

- Hope to develop the physics scene in Bangladesh!

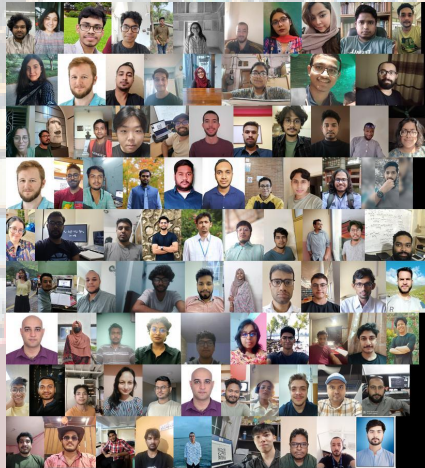


Figure: Some of us from the school