



Welcome to YTF20

What is YTF?

- A conference for early career particle physicists
- A chance for PhD students to give talks in a low-pressure, friendly, environment.
- Organised by Durham University PhD students.

Usually..

- Its physically in durham..
- Being online though has lots of fun benefits for this year!
- Our biggest year ever!

What we have planned

- 10 short talks
- 39 long talks
- Dr. Jessica Wade and Prof. David Tong
- A quiz in the evening!
- We have prizes for best talks
- [wonder.me](#) for breakout rooms

What's in each session?

Based on colour of
the box!!!!

Each Stream has its own meeting!!!

<div><div><div>5 Minute Talks</div><div>Break Out Rooms</div><div>Parallel Stream 1</div><div>Parallel Stream 2</div><div>Parallel Stream 3</div><div>Plenary Speaker</div><div>Quiz</div><div>Welcome</div></div><div>less...</div></div>			
13:00	Break Out Rooms: Lunch Time <i>wonder.me</i> 13:00 - 14:00		
14:00	Machine Learning Surrogates for Ra... <i>Dorian Amaral</i>	Synthetic Flux Attachment <i>Gerard Valentí-Rojas</i>	An Introduction to moduli spaces of 3d N=4 SUSY quiver gauge theories <i>Kirsty Gledhill</i>
	Reproductive Freeze-In of Self-Interacting Dark Matter <i>Hannah Tillim</i>	Multi-winding Magnetic Fluxtubes in Colour-superconducting Quark Matter <i>Geraint Evans</i>	Factorised 3d N=4 orthosymplectic quivers <i>Mohammad Akhond</i>
15:00	Break Out Rooms <i>wonder.me</i> 15:00 - 15:30		
	QCD Instantons at hadron colliders <i>Daniel Milne</i>	Towards an M5-Brane Model <i>Dominik Rist</i>	Protected states in AdS3xS3xT4 from integrability <i>Suvajit Majumder</i>
16:00	Soft Anomalous Dimension in QCD <i>Niamh Maher</i>	M2- and D3-branes wrapped on a spindle <i>Pietro Ferrero</i>	Analytical Approximations for Curv... <i>Ayngaran Thavan...</i>
	Break Out Rooms <i>wonder.me</i> 16:30 - 17:00		
17:00	Plenary Speaker: Dr. Jessica Wade <i>Lucy Budge</i> <i>Teams, Centre for Particle Theory, Durham</i> 17:00 - 18:00		
18:00			

In Talks

- Everyone enters the Teams Meetings (as you've probably noticed already) without the ability to share screen, and with your mic off.
- If you want to ask a question (please ask lots!) there is a "raise hand" feature. If you do this at question time the chair will give you the rights to turn mic on. This is the preferred route to asking a Q
- Or, you can ask your question in chat, and we can try ask it for you.

A note for speakers

- There should be a long email with info for speakers
- Please upload your slides
- If you want, you can join your session early to test your equipment
- We're gonna try be strict with timings
- For people who have prerecorded their talk. If you do not have a Windows PC with the teams app installed please contact us asap.

What's a breakout room?

- We have breakout rooms between all our talks
- This will be hosted in [wonder.me](#)
- The last 5 minute talk will explain what this actually is

The Quiz

- We have a quiz! There's still time to sign up!
- “Hopefully, this won't be like the other quizzes you have done in lockdown. It's a collection of fun questions and puzzles that will hopefully be fun to solve as a team.” - YTF20 Quiz Organising Sub-committee
- It will be in wonder.me (not same link as breakout room)
- It is fun
- There are Prizes!!! It has no monetary value.
- Special Surprise Guest!

Dr. Jessica Wade

Dr. Wade is a research fellow at Imperial College studying chiral organic light emitting diodes. Dr. Wade has made huge contributions to campaigns for increased diversity, equality and inclusion within STEM, and in 2019 was awarded a British Empire Medal for her work. She will talk to us about the issues within Physics (and STEM in general) and the work she is doing to change this.



Prof. David Tong

On Wednesday we will be hearing from Professor David Tong, a theoretical physicist at Cambridge studying quantum field theory. His research in QFT is diverse, with results in particle physics, gravity, string theory, cosmology, condensed matter physics and geometry. He is famous amongst students for his engaging lecturing and his thorough and approachable lecture notes.



Prizes!



- There are prizes for best short and long talk
- We will send a link for the short talk voting after the last short talk (worth £30)
- We will send a link for the long talk voting after the last long talk (worth £50)
- Prizes will be announced after the plenary talk on Wednesday.

Some other things

- Most talks will be recorded and available to view later (they will be available on indico)
- Slides, recordings will all be found on indico
- There is a feedback form for speakers (link in chat, indico and in emails). If you fill this in (please do!), and the speaker has requested feedback, we will get it back to them

Code of Conduct

YTF is committed to creating an environment where everyone feels safe, regardless of age, gender, sexual orientation, ethnicity, nationality, disability, physical appearance or religion. We will not tolerate harassment of participants in any form.

For more information, please go to the indico page. There is an anonymous feedback form on indico as well.

Thanks!

- IOP
- Durham University
- You!

**Any
questions?**

What now?

12:00

The Coaction of Feynman Diagrams	<i>Aris Ioannou</i>
<i>Teams, Centre for Particle Theory, Durham</i>	11:50 - 11:55
Vacuum Transitions in Field Theory	<i>Christopher Hughes</i>
<i>Teams, Centre for Particle Theory, Durham</i>	11:55 - 12:00
Chiral Fermions on the Lattice	<i>Kaan Onder</i>
<i>Teams, Centre for Particle Theory, Durham</i>	12:00 - 12:05
On the Lagrangian formulation of the double copy to cubic order	<i>Pietro Ferrero</i>
<i>Teams, Centre for Particle Theory, Durham</i>	12:05 - 12:10
Enhancing the diagnostic performance of Raman spectroscopy based bowel cancer blood test using advanced machin...	
<i>Natalia Sikora</i>	
Higher form symmetries and geometric engineering	<i>Saghar Sophie Hosseini</i>
<i>Teams, Centre for Particle Theory, Durham</i>	12:15 - 12:20
Towards Precision QCD Calculations	<i>Oscar Braun-White</i>
<i>Teams, Centre for Particle Theory, Durham</i>	12:20 - 12:25
Sp(2N) gauge theories on the lattice.	<i>Jack Holligan</i>
<i>Teams, Centre for Particle Theory, Durham</i>	12:25 - 12:30
Dessins d'Enfants and Machine-Learning	<i>Ed Hirst</i>
<i>Teams, Centre for Particle Theory, Durham</i>	12:30 - 12:35
Scheme dependence in pQCD at the four loop level	<i>Robert Mason</i>
<i>Teams, Centre for Particle Theory, Durham</i>	12:35 - 12:40

Then?

5 Minute Talks

Break Out Rooms

Parallel Stream 1

Parallel Stream 2

Parallel Stream 3

Plenary Speaker

Quiz

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less...

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And then?

19:00

Quiz

wonder.me

19:00 - 20:00

20:00

And finally?

- We will send you an email with all the link you will need to continue the fun tomorrow!

YTF Picture/ 5 Minute Talks