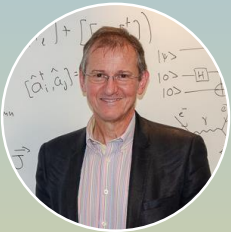




# Quantum Satellite and Fibre Communication (QuSAF) BRICS WORKSHOP 25-27 January 2021

**South Africa  
Quantum Research  
Group**



**Prof Francesco  
Petruccione**



**Dr Yaseera  
Ismail**

**China  
Centre for Excellence  
in Quantum  
Information and  
Quantum Physics**



**Prof Juan  
Yin**

**India  
Department of  
Electronics and  
Communication  
Engineering**



**Prof Manish  
Tiwari**

**Russia  
Department of  
Communication  
Lines**



**Prof Anton  
Bourdine**



Register in advance for this workshop

[https://ukzn.zoom.us/webinar/register/WN\\_Z\\_qThyZqRfO\\_fgukChOrCQ](https://ukzn.zoom.us/webinar/register/WN_Z_qThyZqRfO_fgukChOrCQ)

# Quantum Satellite and Fibre Communication (QuSAF) BRICS WORKSHOP 25-27 January 2021

25 January 2021

SAST	IST	CST	MSK	Topic	Speaker
9:00 - 9:30	12:30 -13:00	15:00-15:30	10:00-10:30		Opening
9:30 - 10:00	13:00-13:30	15:30-16:00	10:30-11:00	Introduction to BRICS Project	Prof Francesco Petruccione
10:00 - 10:45	13:30-14:15	16:00-16:45	11:00-11:45	Research at USTC	Prof Juan Yin
10:45-11:15	14:15-14:45	16:45-17:15	11:45-12:15		Coffee Break
11:15 - 12:00	14:45-15:30	17:15-18:00	12:15-13:15	Research at UKZN	Dr Yaseera Ismail
12:00 - 13:00	15:30-16:30	18:00-19:00	13:15-14:15	Discussion of Satellite QKD Link Development	Prof Francesco Petruccione, Dr Yaseera Ismail, Prof Juan Yin, Prof Manish Tiwari and Prof Anton Bourdine

26 January 2021

SAST	IST	CST	MSK	Topic	Speaker
9:00 - 9:15	12:30-12:45	15:00-15:15	10:00-10:15		Welcome
9:15 - 10:00	12:45-13:30	15:15-16:00	10:15-11:00	Research at University of Manipal	Prof Manish Tiwari
10:00 - 10:30	13:30-14:00	16:00-16:30	11:00-11:30		Coffee Break
10:30 - 11:15	14:00-14:45	16:30-17:15	11:30-12:15	Research at Povolzhskiy State University of Telecommunications and Informatics	Prof Anton Bourdine
11:15 - 12:00	14:45-15:30	17:15-18:00	12:15-13:00	Discussion of PCF Development	Prof Francesco Petruccione, Dr Yaseera Ismail, Prof Juan Yin, Prof Manish Tiwari and Prof Anton Bourdine

27 January 2021

SAST	IST	CST	MSK	Topic	Speaker
9:00 - 10:00	12:30-13:30	15:00-16:00	10:00-11:00		Research Group Presentations
10:00 - 10:30	13:30-14:00	16:00-16:30	11:00-11:30		Coffee Break
10:30 - 11:30	14:00-15:00	16:30-17:30	11:30-12:30		Research Group Presentations
11:30 - 12:00	15:00-15:30	17:30-18:00	12:30-13:00		Discussion of future plans and Concluding Remarks



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# Quantum Satellite and Fibre Communication (QuSAF) BRICS WORKSHOP 25-27 January 2021

27 January 2021

SAST	IST	CST	MSK	Topic	Speaker
9:00 – 9:10	12:30-12:40	15:00-15:10	10:00-10:10	Experimental generation of quantum super oscillation using a spatial light modulator	Ms Marie Louise Umuhire
9:10-9:20	12:40-12:50	15:10-15:20	10:10-10:20	Applications of machine learning techniques to the description of open quantum system dynamics	Ms Kimara Naicker
9:20-9:30	12:50-13:00	15:20-15:30	10:20-10:30	Dispersion properties of Spiral PCF structures	Dr Shruti Kalra
9:30-9:40	13:00-13:10	15:30-15:40	10:30-10:40	Technological aspects of Chiral PCF Manufacturing	Mrs Aleksandra Matrosova
9:40-9:50	13:10-13:20	15:40-15:50	10:40-10:50	Generation of twist Gaussian Schell model beams for SPDC	Ms Samukelisiwe Phehlukwayo
9:50-10:00	13:20-13:30	15:50-16:00	10:50-11:00	NISQ simulation of convex mixtures of Markovian and non-Markovian channels	Mr Ian Joel David
10:00 - 10:30	13:30-14:00	16:00-16:30	11:00-11:30	<b>Coffee Break</b>	
10:30-10:40	14:00-14:10	16:30-16:40	11:30-11:40	Circular Photonic Crystal Fibre support OAM modes	Mr Rohan Gupta
10:40 -10:50	14:10-14:20	16:40:16:50	11:40-11:50	Long-distance free-space measurement-device-independent QKD	Mr Shuang-Lin Li
10:50-11:00	14:20-14:30	16:50-17:00	11:50-12:00	Ring-core and “star”-like chiral PCF measurements	Mr Grigoriy Pchelkin
11:00-11:10	14:30-14:40	17:00-17:10	12:00-12:10	TBA	Ms Shivani Naicker
11:10-11:20	14:40-14:50	17:10-17:20	12:10-12:20	Plasmonic metasurface active tuning in the quantum regime	Dr Solomon Uriri
11:20-11:30	14:50-15:00	17:20-17:30	12:20-12:30	PCF structures for sensing applications	Ms Shweta Mittal
11:30 - 12:00	15:00-15:30	17:30-18:00	12:30-13:00	Discussion of future plans and Concluding Remarks	



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