



**WORKSHOP ON CONTINUOUS-VARIABLE QUANTUM
CORRELATIONS**

SEPTEMBER 6TH - 8TH 2022

**CARLSBERG ACADEMY
COPENHAGEN, DENMARK**



**DANMARKS FRIE
FORSKNINGSFOND**
INDEPENDENT RESEARCH
FUND DENMARK

CARLSBERGFONDET

PROGRAMME

Tuesday Sep. 6 th	Wednesday Sep. 7 th	Thursday Sep. 8 th
08.30 – 08.50 <i>Registration, Light breakfast</i>	08.30 – 09.00 <i>Light breakfast</i>	08.30 – 09.00 <i>Light breakfast</i>
08.50 - 09.00 Welcome		
09.00 – 09.40 Jaromír Fiurášek	09.00 – 09.40 Giulia Ferrini	09.00 – 09.40 Emil Zeuthen
09.40 – 10.00 Carlos Pascual Garcia	09.40 – 10.00 Adnan A. E. Hajomer	09.40 – 10.00 Rishabh Sahu
10.00 – 10.30 <i>Break</i>	10.00 – 10.30 <i>Break</i>	10.00 – 10.30 <i>Break</i>
10.30 – 11.10 Nicolas Treps	10.30 – 11.10 Jonathan Lavoie	10.30 – 11.10 Elizabeth Agudelo
11.10 – 11.50 Rafael Chaves	11.10 – 11.50 Anthony Leverrier	11.10 – 11.50 Carrie Weidner
11.50 – 13.30 <i>Lunch</i>	11.50 – 13.30 <i>Lunch</i>	11.50 – 13.30 <i>Lunch</i>
13.30 – 14.10 Paolo Abiuso	13.30 – 14.10 Jonas Neergaard-Nielsen	13.30 – 14.10 Alessandro Ferraro
14.10 – 14.30 Pooja Jayachandran	14.10 – 14.30 Sheron Blair	14.10 – 14.30 Closing remarks
14.30 – 15.00 <i>Break</i>	14.30 – 15.00 <i>Break</i>	End of CVQC 2022
15.00 – 16.00 Open problems / Discussion time	15.00 – 17.00 Poster session / Discussion time	
16.00 – 16.20 Célia Griffet		
16.20 – 16.40 Niels Tripier-Mondancin		
	19.00 - ... Conference Dinner @ Carl's Øl & -Spisehus	

LONG TALKS

Paolo Abiuso [ICFO]

Measurement-Device-Independent certification of quantum properties

Elizabeth Agudelo [TU Wien]

Phase-space inequalities: Quantum correlations in the phase space

Rafael Chaves [International Institute of Physics - UFRN]

Quantifying quantum causal influences

Alessandro Ferraro [University of Milan & Queen's University Belfast]

Quantifying and converting resources for quantum computation over discrete- and continuous-variable systems

Giulia Ferrini [Chalmers University]

Simulatability and quantum advantage of Gaussian architectures with non-Gaussian input states - 'Nothing' provides quantum advantage

Jaromír Fiurášek [Palacký University Olomouc]

Distillation of squeezed states of light

Jonathan Lavoie [Xanadu Quantum Technologies]

Quantum computational advantage with a programmable photonic processor

Anthony Leverrier [INRIA Paris]

Multimode bosonic cats

Jonas Neergaard-Nielsen [Technical University of Denmark]

Multi-mode squeezing for quantum sensing and computing

Nicolas Treps [Sorbonne Université]

Generating and certifying non-Gaussian states of time-frequency modes

Carrie Weidner [University of Bristol]

Direct measurement of the Wigner function of atoms in an optical trap, and more fun with quantum gas microscopy

Emil Zeuthen [University of Copenhagen]

Engineering quantum protocols between dissimilar continuous-variable systems

SHORT TALKS

Sheron Blair [Queen's University Belfast]

Gate-based quantum computation in photonic platforms via GKP codes

Célia Griffet [Université Libre de Bruxelles]

Multicopy observables for the detection of optically nonclassical states

Adnan A. E. Hajomer [Technical University of Denmark]

Modulation leakage-free continuous-variable quantum key distribution

Pooja Jayachandran [CQT, National University of Singapore]

Witnessing entanglement in two harmonic systems with uniform precessions

Carlos Pascual Garcia [ICFO]

Security of discrete-modulated continuous-variable quantum key distribution

Rishabh Sahu [Institute of Science and Technology Austria]

Entangling microwave with optical photons

Niels Tripier-Mondancin [Université Pierre et Marie Curie]

Engineering and certification of multimode non gaussian states of light

POSTERS

Tummas Napoleon Arge [Technical University of Denmark]

Sources of squeezed light on an integrated lithium niobate on insulator platform

Tulio Brito Brasil [University of Copenhagen]

Towards gravitational wave detection enhancement with negative mass spin oscillators

Renato Domenegueti [Technical University of Denmark]

Broadband squeezing generation on chip with modal phase matching

Johan Henaff [Université Pierre et Marie Curie]

Pulsed approach to reservoir computing and quantum network outlook

Benjamin Larsen [Technical University of Denmark]

Measurement device independent entanglement witness of CV states

Kirill Petrovnin [Aalto University]

Generation and structuring of multipartite entanglement in Josephson parametric system

Carles Roch I Carceller [Technical University of Denmark]

Semi-device independent randomness from sequential measurements

Abhinav Verma [Technical University of Denmark]

Gaussian boson sampling

WORKSHOP AND DINNER VENUES



Workshop venue

Carlsberg Academy

Gamle Carlsberg Vej 15

1799 Copenhagen

Workshop dinner

Carls Øl & Spiseshus

Bag Elefanterne 20

1799 Copenhagen