



# Quantum and neuromorphic technologies meet

27 November 2019 at C2N (Palaiseau), France



<b>PROGRAM</b>	
<b>9h30-9h35</b> <b>9h35-10h15</b>	Giancarlo Faini, Head of C2N - <i>Welcome Speech</i> Danijela Marković and Damien Querlioz - <i>A very brief overview of quantum and neuromorphic technologies</i>
<b>SESSION I</b>	
<b>10h15-10h50</b>	Christian Gamrat (CEA LIST, Saclay) - <i>The Neuro Quantum Entanglement</i>
<b>COFFEE BREAK</b>	
<b>11h15-11h50</b>	Iordanis Kerenidis (IRIF, Paris) - <i>Quantum machine learning</i>
<b>SESSION II – NANO-ELECTRONICS</b>	
<b>11h50-12h15</b>	Laurent Cario (IMJR, Nantes) - <i>Artificial neurons and synapses made with Mott insulators: an example of quantum materials used for neuromorphics</i>
<b>12h15-12h40</b>	Matias Urdampilleta (Institut Néel, Grenoble) - <i>Silicon quantum technologies</i>
<b>LUNCH</b>	
<b>SESSION III – OPTICS</b>	
<b>13h40-14h05</b>	Pascale Senellart (C2N, Palaiseau) - <i>Optical quantum computing building blocks</i> Daniel Brunner (FEMTO-ST, Besançon) - <i>General considerations for neural networks implemented in (optical) hardware</i> Virginia D'Auria (Institut de Physique de Nice) - <i>Discrete and continuous variable approaches to quantum technologies</i>
<b>14h05-14h30</b>	
<b>14h30-14h55</b>	
<b>COFFEE BREAK</b>	
<b>SESSION IV - DEALING WITH ERRORS</b>	
<b>15h20-15h45</b>	Ioanna Vatajelu (TIMA, Grenoble) - <i>Reliability of neuromorphic computing</i> Zaki Leghtas (QUANTIC, Paris) - <i>Quantum computing with Schrodinger cat states</i>
<b>15h45-16h10</b>	
<b>SESSION V – STARTUPS</b>	
<b>16h10-16h35</b>	Laurent Daudet (LightOn, Paris) - <i>Large-scale machine learning based on a (random) connexion between neuromorphic and quantum</i> Bruno Maisonnier (AnotherBrain, Paris) - <i>The story of Anotherbrain</i> 100% Startups panel: Quandela, Alice&Bob, hawaii.tech, LightOn, Anotherbrain. Moderator: Alice Mizrahi (Thales Research and Technology)
<b>16h35-17h</b>	
<b>17h-17h30</b>	
<b>COCKTAIL</b>	

**Organizing committee:**

Danijela Marković (UMPHY) & Damien Querlioz (C2N)

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