

AGENDA (as of October 22, 2012)

GeneExpression Systems, Appasani Research Conferences of USA & University of Cambridge Presents:

Quantum Science Syposium-2012-Meeting

Venue: Peterhouse College, University of Cambridge, Cambridge, UK **Date:** November 01 - 02, 2012

Organizer: Krishnarao Appasani, PhD. GeneExpression Systems, Inc. of USA

	November 01, Thursday		November 02, Friday
8:00 AM	REGISTRATION OPEN: Coffee/Tea & Refreshments	7:45 AM	REGISTRATION OPEN: Coffee/Tea & Refreshments
8:45 – 10:55 AM	Session I: Overview of Quantum Science Chair: Glenn Solomon, PhD. USA	8:15 – 10:10 AM	Session V: Quantum Photonics Chair: Jeremy O'Brien, PhD. UK
8:45 – 9:00 AM	Welcome Note & Introduction of Keynote Speaker By Krishnarao Appasani, PhD. GeneExpression Systems, USA	8:15 – 8:40 AM	Robert H. Hadfield, PhD. Heriot-Watt University, UK Title: Photon detectors for quantum information
9:00 – 9:40 AM	Keynote Lecture by: David A. Ritchie, PhD. University of Cambridge, UK Title: Quantum Light Sources for Quantum Information	8:40 – 9:05 AM	Fabio Sciarrino, PhD. Sapienza University of Rome, Italy Title: Quantum simulation with integrated photonics
9:40 – 10:05 AM	Glenn S. Solomon, PhD. NIST & University of Maryland, MD, USA Title: Two-photon interference from disparate quantum sources	9:05 – 9:20 AM	Alejandro Manjavacas Short Presentation Instituto de Química-Física Rocasolano, Spain Title: Graphene plasmons and quantum emitters: from plasmon blockade to temporal control
10:05 – 10:30 AM	Frank Koppens, PhD. ICFO- The Institute of Photonic Sciences, Spain Title: Graphene nano-optoelectronics for capturing and manipulating light at the nanoscale	9:20 – 9:45 AM	Tobias J. Kippenberg, PhD. Ecole Polytechnique Federale de Lausanne, Switzerland Title: Cavity Optomechanics: Exploring the coupling of light and micro- and nanomechanical oscillators
10:30 – 10:55 AM	Iannis Kominis, PhD. University of Crete, Greece Title: Tweeting Quantum Biology: The quantum dynamics of the Avian magnetic compass	9:45 – 10:10 AM	Jeremy O'Brien, PhD. University of Bristol, UK Title: Integrated quantum photonics
10:55 – 11:25 AM	30 Minutes AM Break	10:10 – 10:35 AM	25 Minutes AM Break
11:25 – 12:45 PM	Session II: Quantum Metrology & Qbits Chair: Yuri Pashkin, PhD. Japan	10:35 – 12:30 PM	Session VI: Quantum Coherence Systems Chair: David Vitali, PhD. Italy
11:25 – 11:50 AM	Stephen Giblin, PhD. National Physical Laboratory Teddington, UK Title: Fast and precise transfer of electrons through a semiconductor quantum dot	10:35 – 11:15 AM	Keynote Lecture by: Stephen J. Blundell, PhD. University of Oxford, UK Title: Quantum coherence in chemically engineered molecular nanomagnets
11:50 – 12:15 PM	Yuri Pashkin, PhD. Lancaster University, Lancaster, UK & Japan Title: Superconducting nanostructures for quantum computing and quantum metrology	11:15 – 11:40 AM	Jyrki Piilo, PhD. University of Turku, Finland Title: Quantum decoherence and memory effects in open quantum systems
12:15 – 12:30 PM	Fumiki Yoshihara, PhD. Short Presentation RIKEN-Advanced Science Institute, Japan Title: Rabi oscillation in a strongly driven flux qubit	11:40 – 12:05 PM	David Vitali, PhD. University of Camerino, Italy Title: Entanglement swapping with local certification: Application to remote micromechanical resonators

12:30 – 12:45 PM	Francesco Massel, PhD. Short Presentation University School of Science, Finland Title: Circuit optomechanics: amplification and collective properties in the quantum regime	12:05 – 12:30 PM	Masato Koashi, PhD. University of Tokyo, Japan Title: Security of differential-phase-shift QKD with coherent-state pulse train
12:45 – 1:45 PM	Lunch Break One hour (Will be provided)	12:30 – 1:45 PM	Lunch Break One hour 15 min (on your own)
1:45 – 3:30 PM	Session III: Quantum Information & Quantum Computers Chair: Jonathan Home, PhD. Switzerland	1:45 – 3:30 PM	Session VII: Super/Semiconductors & Graphene Nanoribbons Chair: Masato Koashi, PhD. Japan
1:45 – 2:10 PM	Jonathan Home, PhD. ETH Zurich, Switzerland Title: Fast transport of trapped-ion qubits in multi-zone ion traps	1:45 – 2:10 PM	Yuzo Ohno, PhD. University of Tsukuba, Japan Title: Coherent manipulation of nuclear spins in semiconductors with an electric field
2:10 – 2:35 PM	Koji Azuma, PhD. NTT Corporation, Basic Research Labs, Japan Title: Entanglement shared via coherent-state transmission	2:10 – 2:25 PM	Georgy Astakhov, PhD. Short Presentation University of Wurzburg, Germany Title: Optical control of silicon vacancy qubits in silicon carbide
2:35 – 3:00 PM	Jiri Vaia, PhD. National University of Ireland, Ireland Title: Topological phases and quantum computation	2:25 – 2:50 PM	Shun-ichiro Kittaka, PhD. University of Tokyo, Japan Title: Angle-resolved specific heat measurements on anisotropic superconductors
3:00 – 3:15 PM	Laszlo Gyongyosi Short Presentation Budapest Univ. of Tech & Economics, Hungary Title: Polaractivation of quantum channels	2:50 – 3:15 PM	Jing Guo, PhD. University of Florida, USA Title: Quantum transport in carbon-based nanoelectronic devices
3:15 – 3:30 PM	Joel Bellessa, PhD. Short Presentation University of Lyon 1 & CNRS-UMR, France Title: Molecular coupling induced by plasmons in strong coupling regime	3:15 – 3:30 PM	Swee K. Goh, PhD. Short Presentation University of Cambridge, UK & Kyoto University, Japan Title: Anomalous Upper Critical Field in CeCoIn ₅ /YbCoIn ₅ Superlattices with Rashba-type Heavy Fermion Interface
3:30 – 4:00 PM	PM Break 30 min - Visit of Posters	3:30 – 4:00 PM	PM Break 20 min - Visit of Posters
4:00 – 6:20 PM	Session IV: Graphene Research & Young Scientist Forum Chair: David Horsell, PhD. UK	4:00 – 5:45 PM	Session VIII: Quantum Magnetism, Plasmonics & Spintronics Chair: Roez Ozeri, PhD. Israel
4:00 – 4:25 PM	Andrew C. Ferrari, PhD. University of Cambridge, UK Title: Nanotubes and graphenes	4:00 – 4:25 PM	François Mallet, PhD. ENS, CNRS & Université Pierre et Marie Curie, France Title: Stabilizing a superconducting qubit trajectory with projective quantum feedback
4:25 – 4:50 PM	Owen J. Guy, PhD. Swansea University, UK Title: Graphene biosensors	4:25 – 4:50 PM	Francis L. Pratt, PhD. Rutherford Appleton Laboratory, UK Title: Probing a quantum spin liquid with muons
4:50 – 5:05 PM	Leonid Ponomarenko, PhD. Short Presentation University of Manchester, UK Title: Graphene tunneling field effect transistor	4:50 – 5:15 PM	Roez Ozeri, PhD. Weizmann Institute of Science, Israel Title: Single spin quantum manipulation
5:05 – 5:30 PM	Gang Ruan, PhD. The Ohio State University, USA Title: Development of a new generation of quantum dots for biological imaging	5:15 – 5:40 PM	Michel P. de Jong, PhD. University of Twente, The Netherlands Title: Spin dependent conduction in C ₆₀ -based spintronic devices

5:30 – 5:55 PM	Nicola Bonini, PhD. King's College London, UK Title: Transport in graphene from first-principles	5:40 – 5:45 PM	Closing Remarks
5:55 – 6:20 PM	David Horsell, PhD. University of Exeter, UK Title: Mechanisms of electron cooling in graphene	—	—
6:20 PM End of 1st day session		5:45 PM	End of 2nd day session