Program

WEDNESDAY SEPTEMBER 6
Session 1. Chair person: F. Peeters
09:15 - 10:00 Registration
10:00 - 10:10 Welcome by Marc Henneaux (Director of the Solvay Institutes, Brussels)
10:10 - 10:20 Introduction – Philippe Lambin (Univ. Namur)
10:20 - 11:10 Graphene-based heterostructures – Kostya Novoselov (Univ. Manchester)
11:10 - 12:00 The physics of a vacancy in the graphene lattice
Eva Y. Andrei (Rutgers Univ., New Brunswick)
12:00 - 12:20 Graphene for metrology – Klaus von Klitzing (Max Planck Institute, Stuttgart)
12:20 - 14:00 LUNCH (in hall adjacent to the Solvay room)

Session 2. Chair person: G. Van Lier
14:00 - 14:50 Light scattering and emission from hetero-structures
Andrea Ferrari (Univ. Cambridge)
14:50 - 15:40 Ballistic transport and Aharonov-Bohm interference in graphene
Christoph Stampfer (RWTH Aachen)
15:40 - 16:00 COFFEE BREAK (in hall adjacent to the Solvay room)
16:00 - 16:50 Topological defects and topological electronic phases in 2D materials
Oleg Yazyev (EPFL, Lausanne)
16:50 - 17:40 Quantum devices in 2D materials – Klaus Ensslin (ETH Zurich)
18:00 - 19:30 POSTER SESSION - Beer and cheese party for all participants (on the 9th Floor)

THURSDAY SEPTEMBER 7
Session 3. Chair person: C. Van Haesendonck
09:00 - 9:50 Higher-than-ballistic conduction in viscous flows of electrons
Leonid Levitov (MIT, Boston)
09:50 - 10:40 Valley-momentum locking in a graphene superlattice with Y-shaped Kekulé bond texture - Carlo W. J. Beenakker (Univ. Leiden)
10:40 - 11:00 COFFEE BREAK (in hall adjacent to the Solvay room)
11:00 - 11:50 Dirac fermions in confined geometry – Pawel Hawrylak (Ottawa Univ.)
11:50 - 12:40  
*Electron and phonon confinement in graphene nanoribbons*

Vincent Meunier (Rensselaer Polytechnic Institute)

12:40 - 14:00  
**GROUP PHOTO** (before leaving for lunch)  
**LUNCH** (in hall adjacent to the Solvay room)

**Session 4. Chair person: J.C. Charlier**

14:00 - 14:50  
*Spin-orbit-coupling and topology in 2D: topological insulators, interfacial skyrmions, graphene and TMD* - Albert Fert (CNRS/Thales, Palaiseau)

14:50 - 15:40  
*New opportunities for spintronics with graphene and other 2D materials*  
Pierre Seneor (CNRS/Thales, Palaiseau)

15:40 - 16:00  
**COFFEE BREAK** (in hall adjacent to the Solvay room)

16:00 - 16:50  
*Recent theoretical advances in graphene spintronics*  
Stephan Roche (ICN2, Barcelona)

16:50 - 17:40  
*Recent progress in experimental graphene spintronics*  
Sergio Valenzuela (ICN2, Barcelona)

20:00  
Conference dinner, "Maison du Cygne", Brussels' Grand Place

**FRIDAY SEPTEMBER 8**

**Session 5. Chair person: Ph. Lambin**

09:30 - 10:20  
*Graphene hybrid architectures: squeezing the best out of graphene*  
Jurgen Smet (Max Planck Institute, Stuttgart)

10:20 - 11:10  
*Plasmonic properties of graphene* - Nuno M.R. Peres (Univ. Minho)

11:10 - 11:30  
**COFFEE BREAK** (in hall adjacent to the Solvay room)

11:30 - 12:20  
*Graphene (or how to reinvent engineering with extreme materials)*  
Tomas Palacios (MIT, Boston)

12:20 - 13:30  
**LUNCH** (in hall adjacent to the Solvay room)

**Session 6. Chair person: P. Kockaert**

13:30 - 14:20  
*Tuning quantum non-local effects in grapheme plasmonics*  
Frank Koppens (ICFO, Barcelona)

14:20 - 15:10  
*Nonlinearity-induced spectral broadening of laser pulses in graphene-covered waveguides* - Nathalie Vermeulen (Vrije Universiteit Brussel, Brussels)

15:10 - 15:20  
*Concluding remarks* - François Peeters (Univ. Antwerpen)

15:20  
End of the Conference