Date

November 22th - November 28th, 2015

Organizers

Damien Calaque, Montpellier

Tony Pantev, Philadelphia

Gabriele Vezzosi, Firenze

ID

1548a

Programme

The talks by the organizers will cover the basics of the following topics:

- Introduction to derived geometry.
- Differential forms on derived algebraic stacks and shifted symplectic structures, the basic existence theorems, examples.
- Shifted Poisson structures, n-quantization problems, n-quantizations induced by shifted Poisson structures, examples and applications.

More details as well as closely related topics (e.g. derived symplectic reduction, derived sympletcic groupoids, etc...) will be addressed in the afternoon talks/sessions.

Preparatory reading

We expect participants to be familiar both with algebraic geometry (schemes) and homotopy theory (model categories and perhaps infinity categories).

Useful references are :

- Any short introduction to infinity categories, e.g. Groth, *A short course on ∞-categories*.
     Available online : http://arxiv.org/abs/1007.2925
- Any short introduction to model categories, e.g. Dwyer, Spalinski, *Homotopy theory and model categories.*
     available online : http://hopf.math.purdue.edu/Dwyer-Spalinski/theories.pdf
- Toën, *Derived algebraic geometry*, EMS surveys in Mathematical Sciences 1 (2014), no. 2, 153-240.
     available online : http://arxiv.org/abs/1401.1044
- Notes from the *Séminaire Autour de la géometrie algébrique dérivee* (Paris 2013).
     available online : http://webusers.imj-prg.fr/~gabriele.vezzosi/seminar/NotesAutourGAD.pdf
- Notes from the *Derived Algebraic Geometry winter school* in Flumsberg (2013).
     available online : http://www2.math.ethz.ch/mathphysics/news/DAG_School

Deadline for applications

September 27th, 2015

The seminars take place at the Mathematisches Forschungsinstitut Oberwolfach. The number of participants is restricted to 25. The Institute covers accommodation and food. We are pleased that the Carl Friedrich von Siemens Foundation has decided to support the Oberwolfach Seminars. By this support, travel expenses can be reimbursed up to 150 Euro in average per person. Participants can ask for travel support during their stay in Oberwolfach at the guest office against copy of travel receipts.

Applications including

- full name and address, including e-mail address
- present position, university
- name of supervisor of Ph.D. thesis
- a short summary of previous work and interest

should be sent preferably by e-mail (.ps or .pdf file) to:

seminars@mfo.de