Workshop on vanishing cycles and Swan conductors

2023.05.20—2023.05.21 @ Peking University

Room 1303, Sciences Building No.1 北京大学理科 1 号楼 1303

In this workshop, we aim to study vanishing cycles/topos, local Fourier transform and Gabber-Katz extension in etale cohomology.

Speakers:

Jiangxue Fang(Capital Normal University)

Fangzhou Jin(Tongji University)

Enlin Yang(Peking University)

Yigeng Zhao(Westlake University)

2023/05/20	09:00-10:00	Vanishing cycles and nearby cycles
	10:30-11:30	Vanishing topos
	13:00-14:00	Universally locally acyclicity
	14:15-15:15	Universally locally acyclicity
	15:30-16:30	Local Fourier transform
	16:45-17:45	TBA
2023/05/21	09:00-10:00	Local Fourier transform
	10:30-11:30	Local Fourier transform
	13:00-14:00	Total dimension of vanishing cycles
	14:15-15:15	Gabber-Katz extension

[Abe]T.Abe, Ramification theory from homotopical point of view, I, arXiv: https://arxiv.org/abs/2206.02401

[Lau87]G.Laumon, Transformation de Fourier, constants d'equations fonctionnelles et conjecture de Weil, Publications mathematiques de l'IHES, tome 65 (1987): 131-210.

[LZ19] Q.Lu and W.Zheng, Duality and nearby cycles over general bases, Duke mathematical journal, Vol.168, No.16, 2019.

[Ill06]Luc Illusie, Vanishing cycles over general bases, after P.Deligne, O.Gabber, G.Laumon and F.Orgogozo, https://www.imo.universite-paris-saclay.fr/~luc.illusie/vanishing1b.pdf

[Ill15]Luc Illusie, Grothendieck and vanishing cycles,
 https://www.imo.universite-paris-saclay.fr/~luc.illusie/Illusie-Grothendieck-nearby-cycles12.pdf

[Ill17] Luc Illusie, Around the Thom-Sebastiani theorem, with an appendix by Weizhe Zheng, manuscripat math. 152, 61-125(2017).

[Ka-La]N.M.Katz et G.Laumon, Transformation de Fourier et majoration de sommes exponentielles, Publ.Math.IHES, 62 (1985), 361-418.

[Katz86]N.M.Katz, Local-to-global extensions of representations of fundamental groups, Annales de l'institut Fourier, tome 36, n4(1986):69-106.

[Katz87]N.M.Katz, Travaux de Laumon, Seminaire N.Bourbaki, 1987-1988, exp.691, p.105-132.