

References for the Beijing lectures, novembre 2015

For first lecture (3rd November) :

[GSz], Chapters 1 to 4.
[SLF], Chap. 7 and 8, Chap. X §1 to §5.
[SGC], Chap. I.

For second lecture (10th november) :

Same as for lecture 1, and :
For residues : [GSz], Chap. 6. [SCI], §6 to 10.
Rationality and unramified Brauer group : [AM], [CTO], [CTS], [GSz, §. 6.6 and 6.7]

For third lecture (17th november) :

Milne, Étale Cohomology, Chap. 1 to 4.
Grothendieck, talks II and III on the Brauer group.
Reference [CT] below.

[AM] M. Artin and D. Mumford, Some elementary examples of unirational varieties which are not rational, Proc. London Math. Soc. 25 (1972) 75-95.

[AW] Atiyah and Wall, Cohomology of groups, Chap. 4 in Algebraic Number Theory, Cassels and Fröhlich. (Errata for the book available on Kevin Buzzard's homepage.)

[CT] J.-L. Colliot-Thélène, Notes sur le groupe de Brauer
<http://www.math.u-psud.fr/~colliot/CTnotesBrauer.pdf>

[CTO] Colliot-Thélène and Ojanguren, Variétés unirationnelles non rationnelles : au-delà de l'exemple d'Artin et Mumford, Invent. math. 97 (1989) 141-158.

[CTS] Colliot-Thélène and Sansuc, The rationality problem for fields of invariants under linear algebraic groups (with special regards to the rationality problem), in Proceedings of the International Colloquium on Algebraic groups and Homogeneous Spaces (Mumbai 2004), ed. V. Mehta, TIFR Mumbai, Narosa Publishing House (2007), 113–186.

[GSz] P. Gille and T. Szamuely, Central simple algebras and Galois cohomology, in Cambridge Studies in Advanced Mathematics 101.

[GB I, GB II, GB III] A. Grothendieck, Le groupe de Brauer I, II, III, in Dix exposés sur la cohomologie des schémas, Masson and North Holland, 1968.

I and III are available at
<http://www.numdam.org/numdam-bin/qrech>
Also :

<https://eudml.org/doc/109691>
<https://eudml.org/doc/109698>

The three talks GBI, GBII, GBIII, are available in the volume “Dix exposés sur la cohomologie des schémas ” available at:

webusers.imj-prg.fr/~leila.schneps/grothendieckcircle/DixExp.pdf

[Milne] J. S. Milne, Étale Cohomology, Princeton University Press, 1980.

[SLF] J.-P. Serre, Local fields, Springer-Verlag.

[SGC] J.-P. Serre, Galois cohomology, Springer-Verlag.

[SCI] J.-P. Serre, in Cohomological Invariants in Galois Cohomology, Garibaldi, Merkurjev, Serre, University Lecture Series 28, AMS.

On Wednesday 18th at 2pm I shall speak at BICMR on “Birational invariants”

On Saturday 21st at 11:30 I shall talk in the Beijing Algebraic Geometry Colloquium (at BICMR) on “Chow groups of codimensions 2 and the third unramified cohomology”

On Wednesday 25th I shall speak at the number theory seminar at Capital Normal University . Title : “The complement of n-th powers is a diophantine set”