

内容の予定 (変更の可能性あり)

- I. Introduction : motivation from Weil conjecture,
- II. cohomological dimension of Galois cohomology, Tsen's theorem, and Brauer group,
- III. étale morphism, and étale cohomology,
- IV. descent theory, and Čech cohomology,
- V. constructible sheaves, and compatibility of cohomology with limits,
- VI. cohomology of curves,
- VII. proper base change theorem,
- VIII. smooth base change theorem,
- IX. higher direct image with proper support,
- X. finiteness theorem,
- XI. cohomological dimension,
- XII. Künneth formula,
- XIII. cohomological dimension of affine schemes, and weak Lefschetz theorem,
- XIV. cohomological relative purity,
- XV. comparison with singular cohomology,
- XVI. Poincaré duality,
- XVII. cycle classes,
- XVIII. Lefschetz trace formulae,
- XIX. Lefschetz pencil,
- XX. Picard-Lefschetz formula,
- XXI. proof of Weil conjecture and hard Lefschetz theorem.