

Topics for presentations

1. Eberlein-Smuljan (about sequential compactness versus compactness).
2. Krein-Smuljan I (Conway).
3. Krein-Smuljan II (Conway).
4. Norm convergence of martingales bounded in L_p for $1 < p < \infty$.
5. Schauder fixpoint theorem.
6. Ryll-Narzewski fixpoint theorem.
7. Existence of a Haar measure on compact groups.
8. Uniform convexity of $L_p(X)$.
9. Herglotz theorem (Hahn-Banach proof).
10. Characterization of operator monotone matrix valued functions (see Bhatia, Matrix analysis, Graduate Text Springer, New York 1977)
11. Introduction to semigroups of linear operators
12. Analytic functions in Banach space