TU Braunschweig
Institut *"Computational Mathematics"*
Prof. Dr. R. Hempel

Wintersemester 2017/18

Literatur zur Funktionalanalysis

[C] J.B. Conway: *A first course in Functional Analysis.* 2nd. ed. Springer, Berlin 1996.

[DeV] C.L. DeVito, *Functional Analysis.* Academic Press, New York 1978

[Dieu1] J. Dieudonné: *Foundations of modern analysis.* Academic Press, New York, 1960

[Dieu1] J. Dieudonné: *History of Functional Analysis.* North Holland, Amsterdam 1981.

[Du] J.E. Dugundji: *Topology.* Allyn and Bacon, Boston 1966.

[DS-I] N. Dunford, J.T. Schwartz: *Linear operators, part I: general theory.* Interscience Publ., New York, 1958

[DS-II] N. Dunford, J.T. Schwartz: *Linear operators, part II: Spectral theory, self-adjoint operators in Hilbert space.* Interscience Publ., New York, 1963

($*$) [Heu] H. Heuser: *Funktionalanalysis.* 3. Aufl. Teubner, Stuttgart 1992.

[Hi] E. Hille, *Methods in classical and functional analysis.* Addison-Wesley, Reading, MA, 1972.

(L) [HiSch] F. Hirzebruch und W. Scharlau: *Einführung in die Funktionalanalysis.* BI, Mannheim 1991

[J] K. Jörgens: *Lineare Integraloperatoren.* Stuttgart 1970

($*$)(L)[K] W. Kaballo, *Grundkurs Funktionalanalysis.* Spektrum Akad. Verlag, 2011

($**$) (L) [KF] A.N. Kolmogoroff and S.V. Fomin, *Elements of the Theory of Functions and Functional Analysis.* Graylock, Rochester 1957 (gibt's auch in Deutsch und Französisch)

($*$) [La] P. Lax, *Functional Analysis.* Wiley, New York 2002

($*$) [LL] M. Loss and E. Lieb, *Analysis.* Graduate Studies in Mathematics, vol. 14. Amer. Math. Soc., Providence 1997.

[LT] J. Lindenstrauss and L. Tzafriri: *Classical Banach Spaces I, II.* Springer, Berlin 1996.

($*$) [RS-I] M. Reed, B. Simon: *Methods of modern mathematical physics. I. Functional Analyis. Revised and enlarged edition.* Academic Press, New York 1980.

($*$) [RS-II] M. Reed, B. Simon: *Methods of modern mathematical physics. II. Fourier analysis, self-adjointness.* New York 1975.

($**$) (L) [RN] F. Riesz and B. Sz.-Nagy: *Vorlesungen über Funktionalanalysis.* Dt. Verlag d. Wiss., Berlin 1956.

($*$) [Ru] W. Rudin: *Functional Analysis.* McGraw-Hill, New York 1973.

[Sch-2] M. Schechter: *Principles of functional analysis.* New York – London 1971.

[Schr] H. Schröder: *Funktionalanalysis.* Akademie Verlag, Berlin 1997.

[So] S.L. Sobolev: *Applications of functional analysis in mathematical physics.* Providence 1963.

[tD] T. tom Dieck: *Topologie.* De Gruyter, Berlin 1991.

($*$) [We] D. Werner: *Funktionalanalysis.* Springer, Berlin 1995.

($*$) [Wlo] J. Wloka: *Funktionalanalysis und Anwendungen.* Berlin 1971.

($**$) [Y] K. Yosida: *Functional analysis.* Springer, Berlin etc., 1965

1. Einführende Lehrbücher

[C] J.B. Conway: *A first course in Functional Analysis.* 2nd. ed. Springer, Berlin 1996.

(∗) [Heu] H. Heuser: *Funktionalanalysis.* 3. Aufl. Teubner, Stuttgart 1992.

(L) [HiSch] F. Hirzebruch und W. Scharlau: *Einführung in die Funktionalanalysis.* BI, Mannheim 1991

(∗)(L)[K] W. Kaballo, *Grundkurs Funktionalanalysis.* Spektrum Akad. Verlag, 2011

(∗∗) (L) [KF] A.N. Kolmogoroff and S.V. Fomin, *Elements of the Theory of Functions and Functional Analysis.* Graylock, Rochester 1957 (gibt's auch in Deutsch und Französisch)

(∗) [RS-I] M. Reed, B. Simon: *Methods of modern mathematical physics. I. Functional Analyis. Revised and enlarged edition.* Academic Press, New York 1980.

(∗) [RS-II] M. Reed, B. Simon: *Methods of modern mathematical physics. II. Fourier analysis, self-adjointness.* New York 1975.

(∗∗) (L) [RN] F. Riesz and B. Sz.-Nagy: *Vorlesungen über Funktionalanalysis.* Dt. Verlag d. Wiss., Berlin 1956.

[Sch-2] M. Schechter: *Principles of functional analysis.* New York – London 1971.

[Schr] H. Schröder: *Funktionalanalysis.* Akademie Verlag, Berlin 1997.

(∗) [We] D. Werner: *Funktionalanalysis.* Springer, Berlin 1995.

(∗) [Wlo] J. Wloka: *Funktionalanalysis und Anwendungen.* Berlin 1971.

2. Vertiefende Literatur.

[DeV] C.L. DeVito, *Functional Analysis.* Academic Press, New York 1978

[Dieu1] J. Dieudonné: *Foundations of modern analysis.* Academic Press, New York, 1960

[Dieu1] J. Dieudonné: *History of Functional Analysis.* North Holland, Amsterdam 1981.

[DS-I] N. Dunford, J.T. Schwartz: *Linear operators, part I: general theory.* Interscience Publ., New York, 1958

[DS-II] N. Dunford, J.T. Schwartz: *Linear operators, part II: Spectral theory, self-adjoint operators in Hilbert space.* Interscience Publ., New York, 1963

[E] R. E. Edwards, *Functional Analysis.* Holt, Rinehart, and Winston. New York 1965

[Hi] E. Hille, *Methods in classical and functional analysis.* Addison-Wesley, Reading, MA, 1972.

[J] K. Jörgens: *Lineare Integraloperatoren.* Stuttgart 1970

(∗) [La] P. Lax, *Functional Analysis.* Wiley, New York 2002

(∗) [LL] E. Lieb and M. Loss, *Analysis.* Graduate Studies in Mathematics, vol. 14. Amer. Math. Soc., Providence 1997.

[LT] J. Lindenstrauss and L. Tzafriri: *Classical Banach Spaces I, II.* Springer, Berlin 1996.

(∗) [RS-I] M. Reed, B. Simon: *Methods of modern mathematical physics. I. Functional Analyis. Revised and enlarged edition.* Academic Press, New York 1980.

(∗) [Ru] W. Rudin: *Functional Analysis.* McGraw-Hill, New York 1973.

[So] S.L. Sobolev: *Applications of functional analysis in mathematical physics.* Providence 1963.

(∗∗) [Y] K. Yosida: *Functional analysis.* Springer, Berlin etc., 1965

3. Grundlagen der Topologie.

[tD] T. tom Dieck: *Topologie.* De Gruyter, Berlin 1991.

[Du] J.E. Dugundji: *Topology.* Allyn and Bacon, Boston 1966.