

Seminar: Morse Theory
Schedule of Talks

(Summer Semester 2022, Friday 10–12, M102)

PART I. MORSE FUNCTIONS ON A MANIFOLD

Talk 1 (29.04.2022): **G. Raptis**. *Morse functions.*

Talk 2 (06.05.2022): **L. Götzfried**. *CW-complexes.*

Talk 3 (13.05.2022): **F. Lohberger**. *The Morse lemma.*

Talk 4 (20.05.2022): **L. Götzfried**. *Topology of the sublevel sets.*

Talk 5 (27.05.2022): **U. Steindl**. *Some applications.*

PART II. MORSE THEORY FOR THE PATH SPACE OF A MANIFOLD

Talk 6 (03.06.2022): **F. Lohberger (?)**. *Smooth paths and the energy functional.*

Talk 7 (10.06.2022): (—). *The second variation of the energy functional.*

Talk 8 (17.06.2022): (—). *The Morse index theorem.*

Talk 9 (24.06.2022): (—). *Bounded energy path spaces.*

Talk 10 (01.07.2022): (—). *Topology of the full path space.*

PART III. MORSE HOMOLOGY

Talk 11 (08.07.2022): **M. Luoni**. *The Smale condition.*

Talk 12 (15.07.2022): **B. Dünzinger**. *The Morse complex.*

Talk 13 (22.07.2022): (—). *Invariance of Morse homology.*