COMPACT COMPLEX SURFACES
WS 2020/21

D. KOTSCHICK AND J. STELZIG

LIST OF TALKS

(1) D. Kotschick: **Introduction, Part 1**
(2) J. Stelzig: **Introduction, Part 2**
(3) **Curves on a surface**, based on [Fr, Chapter 1], see also [BPV, Chapter II]
(4) **Birational geometry**, based on [Fr, Chapter 3], see also [BPV, Chapter III 1,2,4]
(5) **Rational and ruled surfaces**, based on pp. 113–124 of [Fr, Chapter 5], see also [BPV, Chapter V 1,4]
(6) **Hypersurfaces, complete intersections,** $K3$ **surfaces**, based on [BPV, Chapter V 2] and pp. 125-137 of [Fr, Chapter 5]
(7) **Elliptic surfaces**, based on parts of [Fr, Chapter 7], see also [BPV, Chapter V 7–13]
(8) **Infinite quotients**, based on [BPV, Chapter V 18–21]
(9) **Classification of algebraic surfaces, Part 1**, based on pp. 277–306 of [Fr, Chapter 10], see also [BPV, Chapter VI]
(10) **Classification of algebraic surfaces, Part 2**, based on pp. 277–306 of [Fr, Chapter 10], see also [BPV, Chapter VI]
(11) **Surfaces of general type: examples and basic results**, based on parts of [BPV, Chapters V and VII], including in particular the proof of Noether's inequality, and various examples like Kodaira fibrations and other fiber bundles, finite quotients, etc.

REFERENCES

[BPV] W. Barth, C. Peters and A. Van de Ven, *Compact Complex Surfaces*, Springer Verlag.
[Fr] R. Friedman, *Algebraic Surfaces and Holomorphic Vector Bundles*, Springer Verlag.