

## Manifolds, V2018

Problem sheet 3, to be discussed on Monday the 12th February 2018.

**Problem 1.** Tu, Problem 8.4.

**Problem 2.** Show that the projection  $\pi : \mathbb{R}^{n+1} \setminus \{0\} \rightarrow \mathbb{R}\mathbb{P}^n$  is a submersion and that  $\pi|_{S^n}$  is a local diffeomorphism.