**Titile slide**

Thank you for the introduction.

Good morning everyone. As Ruediger said, I will talk about landfast ice OR simply fast ice in the Siberian Arctic.

**Outline**

First I will give some general information about arctic sea ice and particulary fast ice. Which will lead you to the main objectives of my PhD thesis.

The second and the third part of the the talk are devoted to the main obtained results. In the second part of of the talk, I will describe the annual (or seasonal) fast ice cycle and changes in fast ice regime occuring in the recent 15 years.

The in the third part I will present some mechanisms responsible for development extensive fast ice cover in the Laptev and East Siberian Seas.

After this, I will summ up th main findings and put it into the general context.

**Arctic Sea ice**

The Arctic ocean is permanently covered by sea ice. A bigger area is covered with se ice in winter (when temeratures is cold), like on the left map (for March 2015). Positive temerature is summer lead to sea ice melt, and sea ice cover remains mainly oin the cneral part of the ocean (ruight figure).

**The importance of Arctic sea ice**

Presence of sea ice is imortant for numerous reasons. For example,

Sea ice is an important componemt of the global climate system. Sea ice reflects about 80% of incoming solar radiation, threfore it help to keep the arctic region cold.   
  
Sea ice is also important as a part of ecosystem. Marine mammals use it as aplatform for hunting and breeding, miroorganisms live inside the sea. Sea ice also affect live in the water colomn as it limits light penetration.

Sea ice has an influence on human activity. It restricts naviatiion and exploration in the Arctic.

**Arctic fast ice**

Most of the ice (pack ice) moves in response to the wind and currents action. There are 2 major ocean current which drive sea ice drift: Beaufort Gyre - antycyclonic (clockwise circulation) in the central and Canadian Arctic and Transpolar drift — cross Arctic drift from Sinerian seas to the Fram Strait.

There is also ice, which does not move. It is fast ice or landfast ice. According to my rough estimate there are about This map represents a typical winter. Fast ice here comprises about 13 % of the total sea ice area.

There are 2 main characteristics which define fast ice : it has to be motionless and adjacent to the shore. However there is no specified time interval over which the ice need to stay immobile to be called fast ice.

There is no ambigous