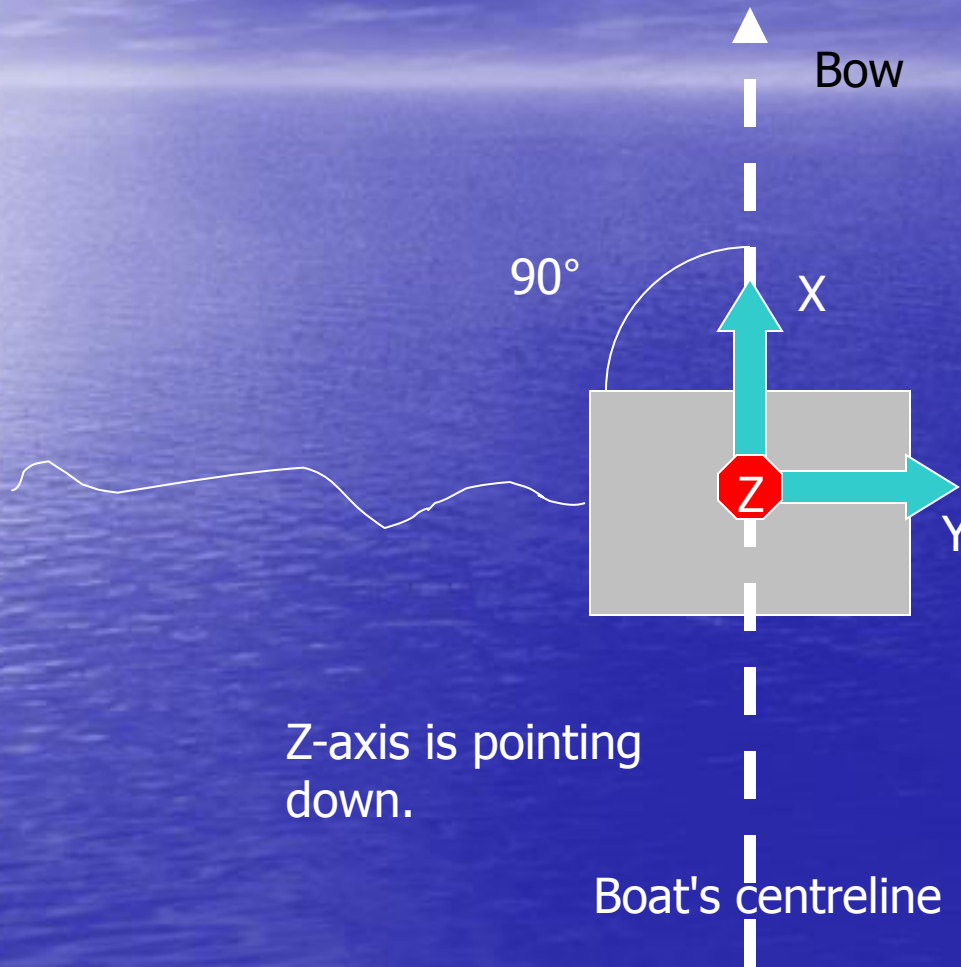


# Using the Phidget 1044 spatial sensor

A quick guide

# Orientation in the boat



Sensor placed on the boat's centreline at the centre of rotation/gravitation. Sensor cable coming out at the left side and electronics facing up.

# Induced errors due to movements of the masthead sensor

- Roll and/or Heel
  - Dynamic moving/rolling toward/away from the wind means the measured wind will be higher/lower than the real wind
  - Due to more or less static heel the measured wind value and angle are not correct
- Pitch
  - Going upwind resp. downwind and pitching down/up will result in an increase resp. decrease in measured wind speed and vice versa.
- Yaw
  - Rotation left resp. right will increase resp. decrease measured wind speed.

# The Phidget sensor

- Gyro is used for measuring angular velocity in 3 axes
- Accelerometer is used for measuring pitch /roll
- Magnetic field in 3 axes coupled with 3 axes accelerometer info provides heading info compensated for boat movement.

# One time manual input needed

- Vertical offset (height) of the wind sensor above the centre of rotation in meter
- Longitudinal offset (horizontal distance) of the wind sensor in meter

