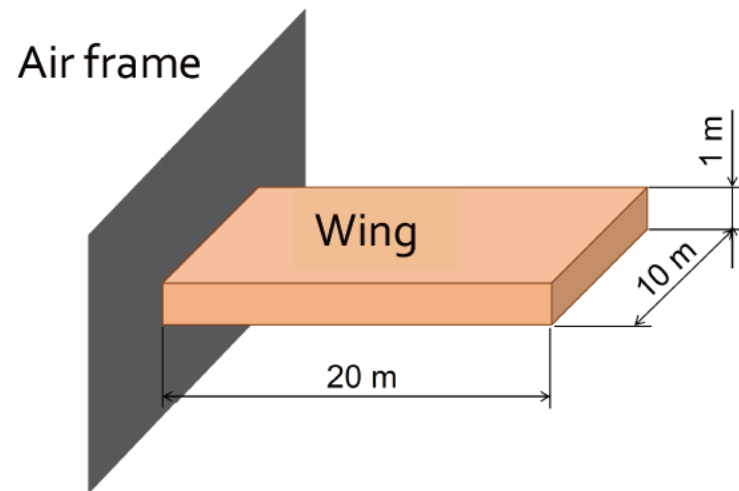


Let's design a light and strong airplane wing

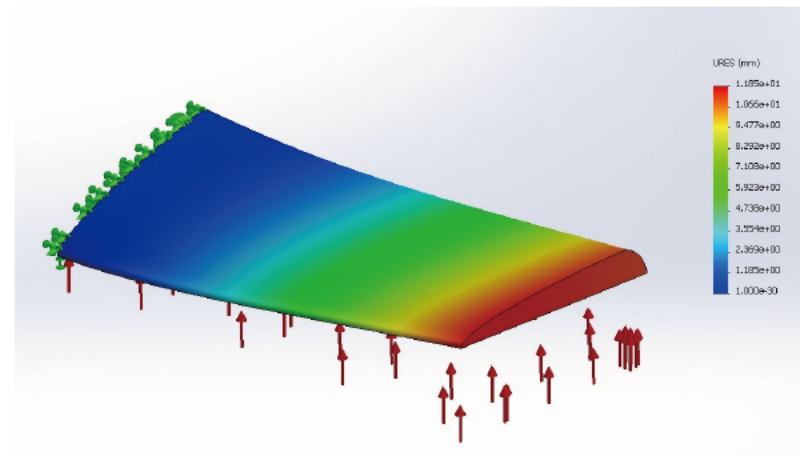
Instructor: Prof. K. Ogawa, Assoc. Prof. Y. Ichikawa, Assoc. Prof. K. Suzuki, Assoc. Prof. K. Sato, Assoc. Prof. Y. Takeda, Assist. Prof. H. Saito, Assist. Prof. F. Ogawa

Total student 40 people, Contact: 022-795-6933 (Assoc. Prof. Y. Ichikawa)

In this course, you will learn elementary mechanics of materials and the strength properties of materials. Based on the above, the design of airplane wing is taught through 3D-CAD (computational software). The design of a wing that is light enough, meeting the lift requirements is discussed.



Where is the maximum tensile stress generated?
What is the distribution of the displacement along the wing length (deflection)? What does it look like?



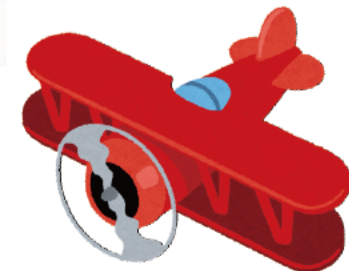
Determine the wing profile and calculate it in CAD



Consideration of maximum stresses and deflections



Let's discuss how to design a suitable wing for airplanes. (There is in-class competition).



This kind of wing might be possible!