



Not-A-Boring-Competition

Short Description

Do you want to

- be part of a multidisciplinary student team?
- participate in a technically challenging and international competition?
- have the chance to travel to the USA for such a competition and meet Elon Musk?

Then, join our team!

Introduction

Groundhogs is the pioneering Swiss team officially representing ETH Zürich in the first-ever Not-A-Boring-Competition, brought to life by Elon Musk. This competition will take place in 2021 at The Boring Company's Dig-a-Factory Track in the Mojave Desert.

As former members of the Swissloop Team in 2018/19, where we managed to finish second in the Hyperloop competition and receive an innovation award, we are now looking for new team members to assemble a successful group of talented students.

If you are motivated to join us in this challenging competition you can expect to work in an inspiring environment, embedded in a team of driven people.

Goal & Tasks

As part of a multidisciplinary team, you will be involved in the designing, building, and testing of a state-of-the-art tunneling machine.

The main goal of the competition is to design a tunneling machine that can be controlled to dig a 30-meter-long tunnel of 0.5 meters in diameter and 1.5 m underground. To win the competition, we need to **be the fastest!** Additionally, this tunneling machine should also be able to generate a flat surface on which a miniature Tesla car can be driven! Finally, we need to create a system with the most accurate guiding system possible.

There are many positions still available, so if you are interested, get in touch and we will see where you could fit.

Prerequisites

We are looking for people with basic knowledge and interest in ANY of these fields:

- Mixed-signal electronics
- Embedded systems
- Power electronics
- Closed-loop control systems
- Navigation & path planning for autonomous systems

Detailed Task Description

As part of the Groundhogs team, you will develop one of the several necessary subsystems for the tunneling machine. There will be many diverse tasks in the field of LV electronics development, firmware implementation, high-power electric machines, and state estimation of autonomous systems.

With this opportunity you will not only be able to join an experienced and inspired team but you will also get a lot of hands-on experience!!

Supervisors

Dr. Michele Magno

Character

Bachelor Thesis (BA)

Master Semester Project (SA)

Student project or side project

