



BACHELOR'S THESIS ASSIGNMENT

I. Personal and study details

Student's name: **Lakshminarayanan Harissh** Personal ID number: **481753**
Faculty / Institute: **Faculty of Mechanical Engineering**
Department / Institute: **Department of Instrumentation and Control Engineering**
Study program: **Bachelor of Mechanical Engineering**
Branch of study: **Information and Automation Technology**

II. Bachelor's thesis details

Bachelor's thesis title in English:

Methods for interferometer adjustment

Bachelor's thesis title in Czech:

Metody pro seřizení interferometru

Guidelines:

- 1) Perform review of different interferometers, its functions, optical schemes and discuss number of elements needed to aligned and in what ranges and motions.
- 2) Make a review of actuation methods suitable for fine automatic adjustment of the interferometer optics.
- 3) Select a simple interferometer with minimum parts necessary for the interferometer adjustment and propose mechanical system for the interferometer realisation.
- 4) Perform experiments with interferometer adjustment and propose an algorithm for adjustment task.

Bibliography / sources:

- [1] Max Born and Emil Wolf, Principles of optics : electromagnetic theory of propagation, interference and diffraction of light, 1999
- [2] Michael Swan, Bernard Smith, Learner English : A teacher's guide to interference and other problems, Cambridge University Press, 1987
- [3] José L. Pons., Emerging actuator technologies : a micromechatronic approach, 2005

Name and workplace of bachelor's thesis supervisor:

doc. Ing. Jan Hošek, Ph.D. Division of Precision Mechanics and Optics FME

Name and workplace of second bachelor's thesis supervisor or consultant:

Date of bachelor's thesis assignment: **27.10.2022** Deadline for bachelor thesis submission: **26.01.2023**

Assignment valid until: _____

doc. Ing. Jan Hošek, Ph.D.
Supervisor's signature

Head of department's signature

doc. Ing. Miroslav Španiel, CSc.
Dean's signature

III. Assignment receipt

The student acknowledges that the bachelor's thesis is an individual work. The student must produce his thesis without the assistance of others, with the exception of provided consultations. Within the bachelor's thesis, the author must state the names of consultants and include a list of references.

Date of assignment receipt

Student's signature