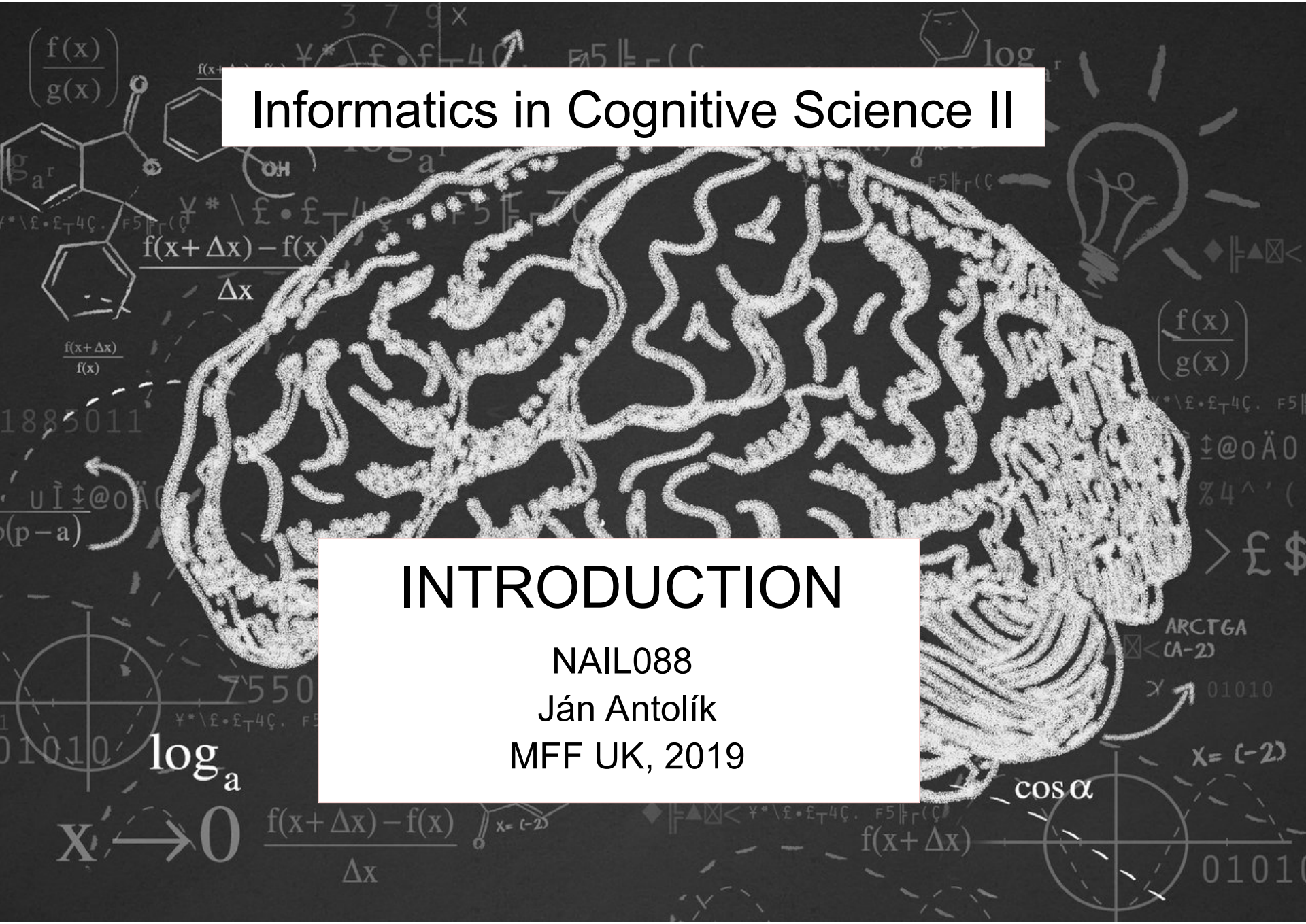
Informatics in Cognitive Science II



INTRODUCTION

NAIL088

Ján Antolík
MFF UK, 2019

Course organization

- Lectures – outline in next slide
- Lab-work - 3 sessions
- Paper presentations
- This semester will be focused more on cortical processing
- We will cover most of the most important topics, but there will be bias towards Vision

Outline - Lectures

27.2. Sub-cortical vision, color, binocularity

6.3. Medium-to-high level vision

13.3. Computational modelling: system identification

20.3. Computational modelling: dynamical modelling

27.3. Development and learning

3.4. Buffer (test)

10.4. Motorika I

17.4. Hippocampus I

24.4. Hippocampus II (Karel Ježek)

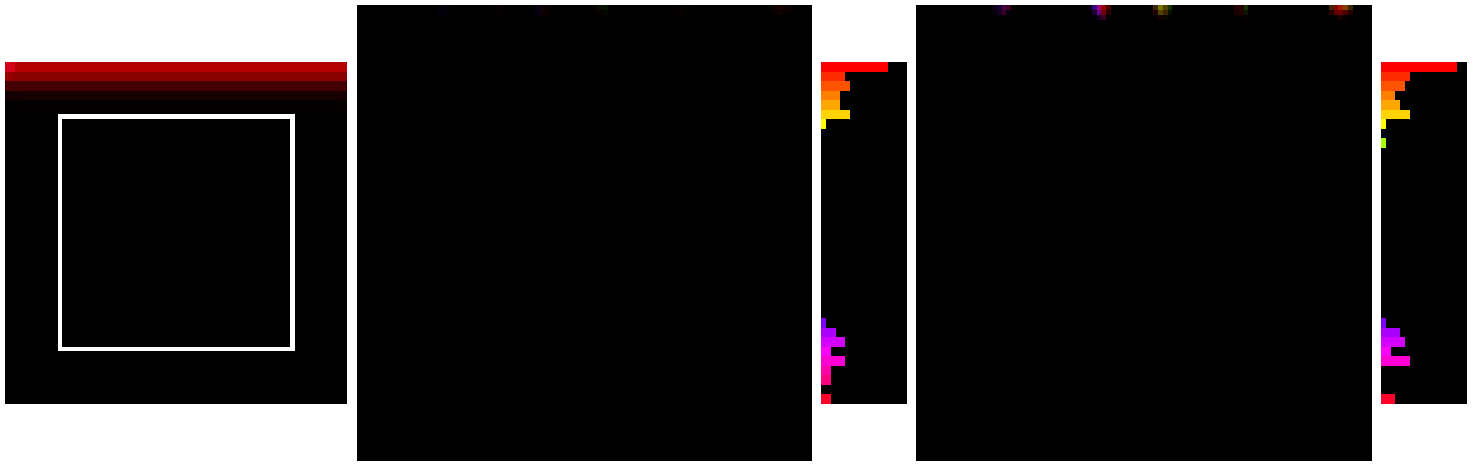
15.5. Learning

22.5. Cognitive theories of multimedia learning (Cyril Brom)

\+ **3 session with Kamil Vlcek on *methodology of neurobiology; memory; spatial cognition***

Lab work

- Developmental models of primary visual cortex in ***Topographica (3 sessions)***



- **Homework**: modelling in topograpnica → report
- **Paper presentations** (1-2 sessions, can be in exam period)

Conditions for passing the course

- Active participation in class and lab-work
- Homework
- Written test – 2 neuro-anatomy chapters from the Bear book
  - Chapter Chapter 7, plus pages 205-248, minus cranial nerves, blood supply, brain stem nuclei
  - Oral test – 2 chapters of choice from Bear book, from chapters 8+
- 15 minute presentation of a paper review