

I152: ANALIZA ALGORITAMA

KOLOKVIJUM II – 15. JANUAR 2014.

1. Objasniti šta je (*trenutna*) konfiguracija Tjuringove mašine. Dati definicije relacija \vdash i \vdash^* na skupu svih konfiguracija date Tjuringove mašine.
2. Opisati Euklidov algoritam, dokazati njegovu korektnost i analizirati njegovu vremensku složenost.
3. Definisati klasu složenosti **NP**.

RAD TRAJE **100** MINUTA.

SVAKI ZADATAK VREDI PO **10** POENA.

I152: ANALYSIS OF ALGORITHMS

COLLOQUIUM NO.2 – JANUARY 15, 2014

1. Explain the notion of a *configuration* of a Turing machine. Provide definitions of the relations \vdash and \vdash^* on the set of all configurations of a Turing machine.
2. Describe the Euclidean algorithm, prove its correctness and analyse its time complexity.
3. Provide the definition of the complexity class **NP**.

1H 40MIN IS ALLOWED FOR ANSWERING THE QUESTIONS.
EACH QUESTION IS WORTH **10** POINTS.