## Semi-annual report of department of "Algebra and mathematical logic" for 2018

In the department 5 works are executed on two themes.

Theme 1. Application of the methods of algebra and mathematical logic.

## Theme 2. Investigating works of Nasireddin Tousi on mathematics and logic sciences.

In the first theme, compactness necessary conditions of weighted endomorphisms of functional algebras of continuous functions was inwestigated, which defined on the metric compacts with the values of banach algebras.

During this period a paper was prepared.

In the second theme, the introduction part of I paper of "The comment of Euclide" of Nasiraddin Tousi, the comment for IX proposal, notes for XIII proposal of forth paper, notes for XXIV and XXV proposal of tenth paper, IV and V paper of "Tajrid –al-mantiq", "Asas-al-Iqtibas", the end part of introduction of "The comment of book "Ball and sylinder" of Archimed" were investigated.

Head of department Ali Babayev has been in professional trip in Saint Petersburg, on may 31-june 2, made a report about "IV фигура силлогизма в силлогистике Насиреддина Туси".

Head of dep. Ali Babayev and s.r.a. Valeriya Majlumbeyova have sent papers named "О математической формализации модусов фигур силлогизмов в труде Насираддина Туси "Основы приобретения знаний" ("Асасул иктибас")" and "Логические аспекты в труде Насираддина Туси "Изложение Евклида"", l.r.a. Eminaga Mammadov and r.a. Rana Babayeva have sent a paper named "Silloqizmlərdə nəticələrin təyin edilməsi", s.r.a. Leyla Sheykhzamanova and r.a. Ali Aliyev have sent a paper named "Nəsirəddin Tusinin "Arximedin "Kürə və silindr" kitabına şərh" to the International Conference "Elm tarixi və elmşünaslıq: fənlərarası tədqiqatlar" will be hold on october 29-31, 2018.

The paper "Насиреддин Туси о выпуклых поверхностях в его трактате "Комментарии к сочинению Архимеда "О шаре и цилиндре" of head

of dep. Ali Babayev, r.a. Ali Aliyev and s.r.a. Leyla Sheykhzamanova has accepted

to the Journal of News of ASPU.

The talk on "О некоторых фактах, изменяющих принятую в истории

математики датировку введения математических понятий of head of dep. Ali

Babayev and s.r.a. Valeriya Majlumbeyova has added to the program of

International Conference will hold on november in Saint Petersburg.

L.r.a. Eminaga Mammadov teachs in school of young mathematicians and

prepares students for mathematics olympiad in high school "Zengi". In addition, he

prepares a paper with r.a. Rana Babayev about sillogisms in "Tacrid al-mantiq".

Former Phd student of department Seymur Meshaik has successfully

defended hiss dissertation on "Структурные свойства прямых произведений

градуированных конечнозначных алгебр логики" in order to get a degree of Phd

in mathematics.

The project of researchers of departments (head of dep. Ali Babayev, l.r.a.

Eminaga Mammadov and Aydin Shahbazov) in the theme of "Nəsirəddin Tusi

yaradıcılığında riyaziyyat və məntiq" was a winner of Grant competition named

"Elm-Təhsil İnteqrasiyası"

**Head of department:** 

A.A.Babayev