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Course Title (in English)	Introduction to Cluster algebras and varieties
Course Title (in Russian)	Введение в кластерные алгебры и многообразия
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Course Description

Cluster algebras and cluster varieties appeared almost simultaneously in the early 2000s; the algebras were introduced in the works of Fomin and Zelevinsky, and varieties in the works of Fock and Goncharov. These notions rather quickly found numerous applications and became popular, for the last 15 years this popularity has not decreased in any way.

The course will be devoted to an introduction to these concepts. We will mainly concentrate on connections with Lie groups, Poisson structures, and integrable systems.

Аннотация

Кластерные алгебры и кластерные многообразия появились практические одновременно в начале 2000-х, алгебры были введены в работах Фомина и Зелевинского, а кластерные многообразия в работах Фока и Гончарова. Эти понятия довольно быстро нашли многочисленные применения и стали популярны, за последние 15 лет эта популярность никак не уменьшилась.

Курс будет посвящен введению в эти понятия. Мы будем более всего обращать внимания на связи с группами Ли, Пуасоновыми структурами и интегрируемыми системами.

Course Academic Level	Master-level course suitable for PhD students
Number of ECTS credits	6
Type of Assessment	Graded

Grade Structure	Activity Type	Activity weight, %
	Class participation	50
	Problem Set	50

A:	86
B:	76
C:	66
D:	56
E:	46

F:	0
Attendance Requirements	Mandatory with Exceptions
Course Stream	Science, Technology and Engineering (STE)
Course Term (in context of Academic Year)	Term 1 Term 2

Students of Which Programs do You Recommend to Consider this Course as an Elective?

Masters Programs	PhD Programs
Mathematical and Theoretical Physics	Mathematics and Mechanics

Course Tags	Math

Required Textbooks	ISBN-13 (or ISBN-10)
Sergey Fomin, Lauren Williams, Andrei Zelevinsky Introduction to Cluster Algebras.	

Recommended Textbooks	ISBN-13 (or ISBN-10)
Michael Gekhtman, Michael Shapiro, and Alek Vainshtein Cluster Algebra and Poisson Geometry	0-8218-4972-7