Lecture 8. Texts about Mathematics

В настоящей лекции речь пойдет не о математических текстах (типа определение, теорема, доказательство), а о текстах *про математику* – разного рода разговоров о том, что мы будет делать, как и почему, зачем это нужно, что было раньше, кто и как это придумал и т.п. Используя терминологию из математической логиги, можно сказать, что вместо математики, мы будем заниматься *метаматематикой*. Такие тексты ближе к гуманитарным и используют огромное количество различных оборотов – перечислить их все не представляется возможным. Все же мы попробуем привести некий минимальный набор наиболее часто встречающихся штампов, разбив их по их служебным функциям в тексте, т.е. на обороты, встречающихся в аннотациях (§1), предисловиях и введениях (§2), замечаниях и комментариях (§3), и, наконец, в благодарностях (§4).

При создании текстов этого типа, нужно помнить, что также как в прямых математических текстах, пословный перевод русских выражений и идиом приводит к катастрофическим результатам.

В этой лекции мы будем приводить штампы не в обычном виде (т.е. в виде текста с переменными полями, обрамленными квадратными скобками с указанием типа переменного поля), но в виде разных вариантах текста (варианты заключаются в фигурные скобки) а в переменные поля вписываются не названия типа переменной, с конкретные примеры их заполнения.

§1. Abstracts

IN THIS [paper], WE PROVE {STUDY, CONSTRUCT, DEVELOP, PRESENT, CONSIDER, SURVEY, GENERALIZE} [the main facts of TQFT].

THIS [article] IS DEVOTED TO {DEALS WITH} {IS CONCERNED WITH } [a new approach to thermodynamics].

IN THIS ARTICLE [polynomial knot invariants] ARE DEFINED {GENERALIZED, STUDIED, CONSIDERED}.

IN THE SECOND PART OF [this survey] WE DEVELOP [the theory of ...]

AMONG OTHER THINGS, WE SHOW {PROVE, ...} THAT [...]

§2. Introductions and Prefaces

THIS [book] IS AN INTRODUCTION TO {A SYSTEMATIC STUDY OF} [the main Painlevé equations].

THIS [article] INTRODUCES [the notion of...] AND DEVELOPS [new methods for ...]

IN THIS [survey], WE STUDY [the methods of algebraic topology] AS WELL AS [...]

THE PURPOSE OF [this chapter] IS TO [study the ...]

THIS [book] IS BASED ON LECTURES ON [Banach spaces] THAT THE AUTHOR GAVE AT [MIT] IN [1999].

THIS [book] WAS WRITTEN WHILE THE AUTHOR WAS [an invited professor at ...]

AN IMPORTANT FEATURE OF THIS [chapter] IS [the systematic use of Lie algebras].

I HAVE TRIED TO MAKE THIS [paper] SELF-CONTAINED.

PREREQUISITES FOR READING THIS [book] ARE [some linear algebra and ...]

THE [book] CONTAINS MANY PROBLEMS {HAS THREE APPENDICES} AND ...

THE ORIGIN OF [topology] LIES IN THE WORKS OF [Poincaré, Riemann, ...]

[Complex analysis] WAS DEVELOPED IN {ACQUIRED ITS MODERN FORM} IN THE SEMINAL WORK OF [...]

[This] WILL BE THE OBJECT OF ANOTHER PUBLICATION.

WE WILL STUDY [the general case] IN SUBSEQUENT PUBLICATIONS.

[Here the proofs] ARE AT THE PHYSICAL LEVEL OF RIGOR.

THE PAPER IS ORGANIZED AS FOLLOWS.

§3. Remarks and Comments

IT WAS [Emil Artin] WHO FIRST [defined the braid group]

[This proof] FIRST APPEARED IN [in the remarkable work of ...]

THERE ARE SEVERAL PROOFS OF [...]

OUR APPROACH TO [this problem] FOLLOWS THE WORK OF [...]

WE DON'T KNOW WHO INVENTED {FIRST PROVED} [this theorem].

OUR TREATMENT OF [this subject] IS BASED ON [...]

[The computation of areas] GOES BACK TO [the Ancient Greeks].

THE FIRST SUBSTANTIAL ACHIEVEMENT IN [the theory of integral equations] IS DUE TO [von Neumann], WHO [first showed that ...]

[This] WAS KNOWN TO MATHEMATICIANS SINCE THE TIME OF [Gauss].

[These results] WERE IMMEDIATELY NOTICED BY [Hermite], WHO [...]

[Functional analysis] HAS MANY APPLICATIONS, IN PARTICULAR TO [...]

[Our proof] FOLLOWS THE SEMINAL PAPER BY [Gelfand and Graev]

[This theorem] IS THE MAIN CONNECTION BETWEEN [...] AND [...]

[The Lieb algebra] IS THE MAIN INGREDIENT OF {A CLASSICAL OBJECT IN} [...]

THE FOLLOWING PROBLEM(S) REMAIN OPEN.

§4. Ackowledgements

I AM GRATEFUL [to my scientific advisor professor Ivanov] FOR SETTING THE PROBLEM AND FOR VALUABLE DISCUSSIONS.

I WOULD LIKE TO THANK [Ivan Ivanov] FOR VALUABLE ADVICE {FOR SUPPLYING THE PROOF OF [Lemma 7.1]}

I AM GRATEFUL TO [prof. Petrov], WHO READ A FIRST DRAFT [of this paper] AND CORRECTED SEVERAL ERRORS.

MY THANKS GO TO [professor Sidorov], WHO INDICATED [...]

PART OF THIS WORK WAS CARRIED OUT WHEN THE AUTHOR [was a visiting professor at the IHES]; I AM GRATEFUL FOR THE EXCELLENT WORKING CONDITIONS AND HOSPITALITY.

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[The first-named author] WAS SUPPORTED BY [...]

I THANK THE LISTENERS OF THIS COURSE FOR THEIR ATTENTION

Homework. No homework – prepare for the final exam!