

Graphs and Hypergraphs

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Free minor closed classes

Free Minor Closed Classes and the Kuratowski theorem, Dainis Zeps, 1998, <https://arxiv.org/abs/0909.0328>, 2009

Combinatorial maps, constellations and hypergraphs

How to draw combinatorial maps? Dainis Zeps, Paulis Kikusts, <https://dspace.lu.lv/dspace/handle/7/1336>

Graph coloring and critical graphs

On building 4 – critical plane and projective plane multiwheels from odd wheels, Dainis Zeps, Institute of Mathematics and Computer Science, University of Latvia, 2012, <https://arxiv.org/abs/1202.4862>

Testing 4-critical plane and projective plane multiwheels using Mathematica, D. Zeps, <https://dspace.lu.lv/dspace/handle/7/31078>

UNIQUELY HAMILTONIAN GRAPHS

Threeconnected graphs with only one Hamiltonian circuit, E. Grinbergs,

UNIQUELY HAMILTONIAN GRAPHS, Gordon Royle, THE UNIVERSITY OF WESTERN AUSTRALIA, Singapour, 26. September, 2018.

On threeconnected graphs with unique Hamiltonian cycle, Emanuels Grinbergs, The archive of Emanuels Grinbergs manuscripts, University of Latvia

Uniquely Hamiltonian Graphs and Thomassen' s conjecture, Dainis Zeps, University of Latvia, 2019.

How to compute critical UH3 graphs? Dainis Zeps, University of Latvia, 2019.

Two-separable spike subgraphs in UH3 graphs, University of Latvia, 2019.

Hamiltonian vertices and Hamiltonian edges in uniquely Hamiltonian graphs, University of Latvia, 2019.

Using 2-colorings in the theory of uniquely Hamiltonian graphs, University of Latvia, 2019.

Foliations in finite fields

In this field I have only small publications, from *Mathematica* notebooks:

On foliations in finite fields, 2016, <https://www.researchgate.net/publication/331989079>

DOI: 10.13140/RG.2.2.29992.83202

Abstract:

Here we publish a short note written in November 2016. Ghys theorem mentioned here is actually Tait-Kneser theorem, see *Osculating curves: around the Tait-Kneser Theorem*, <https://www.math.psu.edu/tabachni/prints/GTT2.pdf>. We need this short reference to show that we have come here somehow very close to the subject in differential geometry considered in the thesis of Emanuels Grinbergs: *On osculation, superosculation and characteristic points*, PhD thesis, 1943., <https://dspace.lu.lv/dspace/handle/7/46472>. In this dissertation E. Grinbergs builds structure like vector bundle, and our functions considered in this our short note may suit for a little example/illustration for E. Grinbergs approach. We may turn readers attention to the fact that vector bundles, as mathematical structures, appeared only in 50th.

Par kartēm un galīgajiem laukiem. 2016, Par saišķiem no kubiskās funkcijas

<https://www.researchgate.net/publication/331988457>

DOI: 10.13140/RG.2.2.18668.21121

I discovered that my this attempt may have some connection with Emanuels Grinbergs works in differential geometry. So, I am investigating now three of his theses in this field:

Daži pētījumi par telpas ruletēm, candidate wori, 1933., <https://dspace.lu.lv/dspace/handle/7/46476>

Par n dimensiju Eiklīda telpas līknēm, work of habilitation, 1943., <https://dspace.lu.lv/dspace/handle/7/46434>

Par oskulāciju, superoskulāciju un charakteristiskiem punktiem, PhD thesis, 1943., <https://dspace.lu.lv/dspace/handle/7/46435>

Par oskulāciju, superoskulāciju un charakteristiskiem punktiem. Disertācijas manuskripta faksimils, <https://dspace.lu.lv/dspace/handle/7/46446>.

Besides I published E.Grinbergs 'black' calculations that may be connected with this 1943. year doctoral thesis:

On osculation, superosculation and characteristic points. Addenda : Computations, <https://dspace.lu.lv/dspace/handle/7/46433>

PhD thesis, 1943, tr. into English D. Zeps, not yet completed, <http://www.ltn.lv/~dainize/MathPages/graphs.hypergraphs/Grinbergs/Grinbergs.PhD.Osculations.superosculations.pdf>

E. Grinbergs, ABOUT ONE GEOMETRIC VARIATION PROBLEM, Published in LVU Zinātniskie darbi, 1958.g., sējums XX, izlaidums 3, 153.-164., in Russian, translated from Latvian <https://dspace.lu.lv/dspace/handle/7/46617>

E.Grinbergs., ОБ ОДНОЙ ГЕОМЕТРИЧЕСКОЙ ВАРИАЦИОННОЙ ЗАДАЧЕ, 1958.g., sējums XX, izlaidums 3, 153.-164., in Russian, translated from Latvian <https://dspace.lu.lv/dspace/handle/7/46617>