

1135-46-1927      **Igor Nikolaev\*** ([igor.v.nikolaev@gmail.com](mailto:igor.v.nikolaev@gmail.com)), 8000 Utopia Parkway, New York, NY 11439.

*Remark on arithmetic topology.*

We formalize the arithmetic topology, i.e. a relationship between knots and primes. Namely, using the notion of a cluster  $C^*$ -algebra we construct a functor from the category of 3-dimensional manifolds  $M$  to a category of algebraic number fields  $K$ , such that the prime ideals (ideals, resp.) in the ring of integers of  $K$  correspond to knots (links, resp.) in  $M$ . It is proved that the functor realizes all axioms of the arithmetic topology conjectured in the 1960's by Manin, Mazur and Mumford. Reference: arXiv:1706.06398 (Received September 25, 2017)