

## A Homological Characterization Of Topological Amenability

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A HOMOLOGICAL CHARACTERIZATION OF TOPOLOGICAL AMENABILITY 3 It is also worth pointing out that when  $X$  is a point we have  $W_0(G;X) = \mathbb{1}(G)$  and  $N_0(G;X) = \mathbb{1}(G)$ . The above modules and decompositions were introduced in [4]

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Generalizing Block and Weinberger's characterization of amenability we introduce the notion of uniformly finite homology for a group action on a compact space and use it to give a homological ...

### (PDF) A homological characterization of topological ...

Title: A homological characterization of topological amenability Authors: Jacek Brodzki , Graham A. Niblo , Piotr Nowak , Nick J. Wright (Submitted on 24 Aug 2010 ( v1 ), last revised 13 Dec 2010 (this version, v2))

### [1008.4154] A homological characterization of topological ...

A HOMOLOGICAL CHARACTERIZATION OF TOPOLOGICAL AMENABILITY 3 Definition 1 ([4]). We call  $W_0(G;X)$ , with the above action of  $G$ , the standard module of the action of  $G$  on  $X$ . We have the following short exact sequence of  $G$ -modules:

### A HOMOLOGICAL CHARACTERIZATION OF TOPOLOGICAL AMENABILITY

Generalizing Block and Weinberger's characterization of amenability we introduce the notion of uniformly finite homology for a group action on a compact space and use it to give a homological characterization of topological amenability for actions.

### Brodzki , Niblo , Nowak , Wright : A homological ...

Petri et al. used a homological approach for studying the characteristics of functional brain networks at the mesoscopic level. TDA is a new discipline inspired by homology theory [ 5 ]. Informally, homology is a machinery for counting the number of  $n$ -dimensional holes in a topological space.

### Entropy | Free Full-Text | Topological Characterization of ...

Topological Characterization of Complex Systems: Using Persistent Entropy Emanuela Merelli 1; ... Petri et al. [9] used a homological approach for studying the characteristics of functional brain networks at the mesoscopic level. TDA is a new discipline inspired by homology theory [5].

### Topological Characterization of Complex Systems: Using ...

In this paper I give a completed topological characterization of Stein manifolds of complex dimension  $>2$ . Another paper (see [E14]) is devoted to new topological obstructions for the existence of a Stein complex structure on real manifolds of dimension 4. Main results of the paper have been announced in [E13].

### TOPOLOGICAL CHARACTERIZATION OF STEIN MANIFOLDS OF ...

HOMOLOGICAL CHARACTERIZATION OF THE UNKNOT MICHAEL EISERMANN Abstract. Given a knot  $K$  in the 3-sphere, let  $QK$  be its fundamental quandle as introduced by D.Joyce. Its first homology group is easily seen to be  $H_1(QK) \cong \mathbb{Z}$ . We prove that  $H_2(QK) = 0$  if and only if  $K$  is trivial, and  $H_2(QK) \cong \mathbb{Z}$  whenever  $K$  is non-trivial.

### Homological characterization of the unknot

Recently a generic class of three-dimensional band structures was identified that host two-fold line degeneracies meeting at three-fold or triple point degeneracies, which resist the usual topological characterization of isolated point degeneracies as in Dirac/Weyl semimetals.

### Physical Review B - Accepted Paper: Topological character ...

HOMOLOGICAL FINITENESS 5 •every two elements  $(U_1, E_1, \varphi_1), (U_2, E_2, \varphi_2)$  in  $TE$  are compatible in the sense that the map  $\varphi^{-1} \circ \varphi_1: (U_1 \cap U_2) \times E_1 \rightarrow (U_1 \cap U_2) \times E_2$  and its inverse are both tempered bundle maps; •for every local chart of  $E$ , if it is compatible with all elements of  $TE$ , then it belongs to  $TE$ ; •there exists a finite family  $\{(U_i, E_i, \varphi_i)\}_{i=1}^k$  ( $k \geq 0$ ) of elements of  $TE$  such

### HOMOLOGICAL FINITENESS OF REPRESENTATIONS OF ALMOST LINEAR ...

J. Nunke, Purity and subfunctors of the identity, Topics in abelian groups, ed. by J. M. Irwin and E. A. Walker, Chicago, Scott Foresman (1963). Google Scholar

### A homological characterization of certain subgroups of ...

paper we will apply some other ideas from topology to give a homological characterization of  $Q$ -matrices. Continuing to borrow from topology, we define the nerve of a matrix which, along with our characterization, leads to an algorithm for checking whether or not a matrix is  $Q$ .

### A Homological Characterization of Q-Matrices

Factorization homology theories of topological manifolds, after Beilinson, Drinfeld, and Lurie, are homology-type theories for topological  $n$ -manifolds whose coefficient systems are  $n$ -disk algebras or  $n$ -disk stacks. In this work, we prove a precise formulation of this idea, giving an axiomatic characterization of factorization homology with coefficients in  $n$ -disk algebras in terms ...

### Factorization homology of topological manifolds - Ayala ...

theory of convexity. For example, Goodey's homological characterization of summands [4] is the analogue of the Kosinski-Aumann Theorem [6] for convex sets. The purpose of this paper is to exploit these analogies, using techniques from Algebraic Topology, as homology theory and the theory of acyclic sections of fiber bundles, to obtain

### Homological characterizations of Minkowski summands

Given a knot  $K$  in the 3-sphere, let  $QK$  be its fundamental quandle as introduced by Joyce. Its first homology group is easily seen to be  $H_1(QK) \cong \mathbb{Z}$ . We p...

### Homological characterization of the unknot

Homological Characterizations of Spiral Defect Chaos in ... We develop a robust topological characterization that associates quantitative measures with global qualitative geometric structures ...

### (PDF) Homological Characterizations of Spiral Defect Chaos ...

Homological characterization of the unknot Michael Eisermann UMPA, Ecole Normale Supérieure de Lyon, 46 allée d'Italie, 69364 Lyon, France Received 19 November 2001; received in revised form 31 January 2002 Communicated by C. Kassel Abstract Given a knot  $K$  in the 3-sphere, let  $QK$  be its fundamental quandle as introduced by Joyce.

### Homological characterization of the unknot

A homological characterization of large subgroups J. Winthrop 1 , 2 Acta Mathematica Academiae Scientiarum Hungarica volume 25 , pages 255 - 262 ( 1974 ) Cite this article

### A homological characterization of large subgroups ...

We use a quantitative topological characterization of complex dynamics to measure geometric structures. This approach is used to analyze the weakly turbulent state of spiral defect chaos in experiments on Rayleigh-Benard convection. Different attractors of spiral defect chaos are distinguished by their homology. The technique reveals pattern asymmetries that are not revealed using statistical ...

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