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Nota di contenuto	Intro -- Introduction -- Contents -- 1 Hodge Filtration and Operations in Higher Hochschild (Co)homology and Applications to Higher String Topology -- 1.1 Introduction and Overview -- 1.2 Notations, Conventions and a Few Standard Facts -- 1.3 Higher Hochschild (Co) homology -- 1.3.1 -Modules and Hochschild (Co)chain Complexes over Spaces -- 1.3.2 Combinatorial Higher Hochschild (Co)chains -- 1.3.3 Derived Hochschild (Co)chains -- 1.4 Hodge Filtration and - Operations on Hochschild (Co)homology over Spheres and Suspensions -- 1.4.1 -Rings and Lambda Operations -- 1.4.2 Edgewise Subdivision and Simplicial Approach to -Operations -- 1.4.3 Hodge Filtration for Hochschild Cochains over Spheres and Suspensions -- 1.4.4 Hodge Filtration on Hochschild Cochains on the Standard Model -- 1.4.5 Hodge Filtration and -Operations for Hochschild Chains over Spheres and Suspensions -- 1.4.6 Hodge Filtration and the Eilenberg-Zilber Model for Hochschild Cochains of Suspensions and Products -- 1.5 Additional Ring Structures for Higher Hochschild Cohomology -- 1.5.1 The Wedge and Cup Product -- 1.5.2 The Universal En-Algebra Structure Lifting the Cup-Product -- 1.5.2.1 The En-Structure of Hochschild (Co)homology over Sn -- 1.5.2.2 The Combinatorial

Sommario/riassunto

Held during algebraic topology special sessions at the Vietnam Institute for Advanced Studies in Mathematics (VIASM, Hanoi), this set of notes consists of expanded versions of three courses given by G. Ginot, H.-W. Henn and G. Powell. They are all introductory texts and can be used by PhD students and experts in the field.   Among the three contributions, two concern stable homotopy of spheres: Henn focusses on the chromatic point of view, the Morava K(n)-localization and the cohomology of the Morava stabilizer groups. Powell's chapter is concerned with the derived functors of the destabilization and iterated

loop functors and provides a small complex to compute them. Indications are given for the odd prime case. Providing an introduction to some aspects of string and brane topology, Ginot’s contribution focusses on Hochschild homology and its generalizations. It contains a number of new results and fills a gap in the literature. .