Publicacions més rellevants de la línia de recerca:
Lògica Algebraica Abstracta: Teoria i metodologia general.

Referència: Font, J. M., Taking degrees of truth seriously. *Studia Logica*, **91** (2009), pp. 383–406.

Abstract: This is a contribution to the discussion on the role of truth degrees in many-valued logics from the perspective of abstract algebraic logic. It starts with some thoughts on the so-called Suszko's Thesis (that every logic is two-valued) and on the conception of semantics that underlies it, which includes the truth- preserving notion of consequence. The alternative usage of truth values in order to define logics that preserve degrees of truth is presented and discussed. Some recent works studying these in the particular cases of Łukasiewicz's many-valued logics and of logics associated with varieties of residuated lattices are also presented. Finally the extension of this paradigm to other, more general situations is discussed, highlighting the need for philosophical or applied motivations in the selection of the truth degrees, due both to the interpretation of the idea of truth degree and to some mathematical difficulties.

Referència: Torrens, A., An Approach to Glivenko's Theorem in Algebraizable Logics. *Studia Logica*, **88** (2008), pp. 349–383

Abstract: In a classical paper V. Glivenko showed that a proposition is classically demonstrable if and only if its double negation is intuitionistically demonstrable. This result has an algebraic formulation: the double negation is a homomorphism from each Heyting algebra onto the Boolean algebra of its regular elements. Versions of both the logical and algebraic formulations of Glivenko's theorem, adapted to other systems of logics and to algebras not necessarily related to logic can be found in the literature. The aim of this paper is to offer a general frame for studying both logical and algebraic generalizations of Glivenko's theorem. We give abstract formulations for quasivarieties of algebras and for equivalential and algebraizable deductive systems and both formulations are compared when the quasivariety and the deductive system are related. We also analyse Glivenko's theorem for compatible expansions of both cases.

Referència: Jansana, R. Selfextensional logica with a conjunction. *Studia Logica*, **84** (2006), pp.

63–104.

Abstract: A logic is selfextensional if its interderivability (or mutual consequence) relation is a congruence relation on the algebra of formulas. In the paper we characterize the selfextensional logics with a conjunction as the logics that can be defined using the semilattice order induced by the interpretation of the conjunction in the algebras of their algebraic counterpart. Using the charactrization we provide simpler proofs of several results on selfextensional logics with a conjunction obtained in Font and Jansana "A General Algebraic Semantics for Sentential Logicsüsing Gentzen systems. We also obtain some results on Fregean logics with conjunction.