

ON IWASAWA THEORY OF CRYSTALLINE REPRESENTATIONS

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§0. Introduction

0.1. In his paper [F2], J.-M. Fontaine worked out a general approach to the classification of p -adic representations of local fields. His method is based on the relation between local fields of characteristic zero and functional local fields, given by the field of norms functor (see [Win]). More precisely, Fontaine established an equivalence between the category of \mathbb{Z}_p -representations of a local field of characteristic zero and the category $\Gamma \Phi \mathbf{M}_{\mathbb{C}_K}^{\text{ét}}$ of étale modules over a 2-dimensional local ring \mathbb{C}_K , equipped with a Frobenius and a continuous action of the cyclotomic Galois group.

Received 12 May 1998. Revision received 29 November 1999.

2000 *Mathematics Subject Classification*. Primary 11S15; Secondary 11R23.

Author partially supported by Russian Foundation for Fundamental Investigations grant number 97-01-00058-a and by Volkswagen Forschung.