

# SEMPARIS – Séminaires en région parisienne

<http://string.lpthe.jussieu.fr/semparis/>

**TBA**

**Judi 13 Fevrier 2025, 11 :00**

IHES, Amphithéâtre Léon Motchane( Séminaire de Géométrie Arithmétique

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Domaines : math

Titre : *On the  $(\phi, \Gamma)$ -modules Corresponding to Crystalline Representations, Semi-stable Representations and de Rham Representations*

Orateur : **Takumi Watanabe ( Université de Tokyo & IHES )**

Résumé : *From the 1980s to the 1990s, Jean-Marc Fontaine introduced the theory of  $(\phi, \Gamma)$ -modules to study  $p$ -adic Galois representations. They are simpler than  $p$ -adic Galois representations, but he showed an equivalence between them. Among  $p$ -adic Galois representations, some classes are particularly important in number theory. Main examples are crystalline representations, semi-stable representations and de Rham representations. In this talk, I will explain how we can determine the  $(\phi, \Gamma)$ -modules corresponding to these representations. These results can be seen, in a sense, as generalizations of Wach modules.*

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