The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies)

By Ahmed Abbes, Michel Gros, Takeshi Tsuji

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji

The *p*-adic Simpson correspondence, recently initiated by Gerd Faltings, aims at describing all *p*-adic representations of the fundamental group of a proper smooth variety over a *p*-adic field in terms of linear algebra--namely Higgs bundles. This book undertakes a systematic development of the theory following two new approaches, one by Ahmed Abbes and Michel Gros, the other by Takeshi Tsuji. The authors mainly focus on generalized representations of the fundamental group that are *p*-adically close to the trivial representation.

The first approach relies on a new family of period rings built from the torsor of deformations of the variety over a universal *p*-adic thickening defined by J. M. Fontaine. The second approach introduces a crystalline-type topos and replaces the notion of Higgs bundles with that of Higgs isocrystals. The authors show the compatibility of the two constructions and the compatibility of the correspondence with the natural cohomologies. The last part of the volume contains results of wider interest in *p*-adic Hodge theory. The reader will find a concise introduction to Faltings' theory of almost étale extensions and a chapter devoted to the Faltings topos. Though this topos is the general framework for Faltings' approach in *p*-adic Hodge theory, it remains relatively unexplored. The authors present a new approach based on a generalization of P. Deligne's covanishing topos.

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies)

By Ahmed Abbes, Michel Gros, Takeshi Tsuji

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji

The *p*-adic Simpson correspondence, recently initiated by Gerd Faltings, aims at describing all *p*-adic representations of the fundamental group of a proper smooth variety over a *p*-adic field in terms of linear algebra--namely Higgs bundles. This book undertakes a systematic development of the theory following two new approaches, one by Ahmed Abbes and Michel Gros, the other by Takeshi Tsuji. The authors mainly focus on generalized representations of the fundamental group that are *p*-adically close to the trivial representation.

The first approach relies on a new family of period rings built from the torsor of deformations of the variety over a universal *p*-adic thickening defined by J. M. Fontaine. The second approach introduces a crystalline-type topos and replaces the notion of Higgs bundles with that of Higgs isocrystals. The authors show the compatibility of the two constructions and the compatibility of the correspondence with the natural cohomologies. The last part of the volume contains results of wider interest in *p*-adic Hodge theory. The reader will find a concise introduction to Faltings' theory of almost étale extensions and a chapter devoted to the Faltings topos. Though this topos is the general framework for Faltings' approach in *p*-adic Hodge theory, it remains relatively unexplored. The authors present a new approach based on a generalization of P. Deligne's covanishing topos.

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji Bibliography

Editorial Review

Review
"The authors give a very detailed introduction to the theory, smoothing out some difficulties by introducing new concepts."**--Gerd Faltings,** *Zentralblatt MATH*

About the Author
Ahmed Abbes is director of research at the French National Center for Scientific Research (CNRS) and the Institute of Advanced Scientific Studies (IHÉS), France. **Michel Gros** is a researcher at the CNRS. **Takeshi Tsuji** is a professor in the Graduate School of Mathematical Sciences at the University of Tokyo.

Users Review

From reader reviews:

Michael Johnson:

Information is provisions for individuals to get better life, information these days can get by anyone in everywhere. The information can be a information or any news even a problem. What people must be consider when those information which is within the former life are difficult to be find than now is taking seriously which one would work to believe or which one the particular resource are convinced. If you obtain the unstable resource then you have it as your main information we will see huge disadvantage for you. All those possibilities will not happen inside you if you take The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) as your daily resource information.

Jenifer Bell:

The reason? Because this The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) is an unordinary book that the inside of the book waiting for you to snap the item but latter it will surprise you with the secret the item inside. Reading this book adjacent to it was fantastic author who else write the book in such wonderful way makes the content inside easier to understand, entertaining technique but still convey the meaning entirely. So , it is good for you for not hesitating having this any longer or you going to regret it. This unique book will give you a lot of positive aspects than the other book get such as help improving your expertise and your critical thinking technique. So , still want to hold off having that book? If I were being you I will go to the book store hurriedly.

William Oden:

Do you have something that you like such as book? The publication lovers usually prefer to opt for book like comic, limited story and the biggest some may be novel. Now, why not trying The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) that give your enjoyment preference will be satisfied through reading this book. Reading behavior all over the world can be said as the way for people to know world much better then how they react toward the world. It can't be stated constantly that reading habit

only for the geeky man but for all of you who wants to end up being success person. So , for all you who want to start examining as your good habit, you could pick The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) become your personal starter.

Rick Braden:

As a pupil exactly feel bored for you to reading. If their teacher inquired them to go to the library or even make summary for some guide, they are complained. Just small students that has reading's internal or real their passion. They just do what the teacher want, like asked to the library. They go to there but nothing reading seriously. Any students feel that examining is not important, boring as well as can't see colorful pics on there. Yeah, it is for being complicated. Book is very important to suit your needs. As we know that on this period, many ways to get whatever we wish. Likewise word says, ways to reach Chinese's country. Therefore , this The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) can make you sense more interested to read.

Download and Read Online The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji #DT4Z2AKUH0S

Read The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji for online ebook

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji books to read online.

Online The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji ebook PDF download

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji Doc

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji Mobipocket

The p-adic Simpson Correspondence (AM-193) (Annals of Mathematics Studies) By Ahmed Abbes, Michel Gros, Takeshi Tsuji EPub