

数理解析研究所講究録884

モジュライ空間、ガロア表現  
およびL関数

京都大学数理解析研究所

1994年9月

# Preface

During the academic year 1993-94, two conferences under the unified title

"Moduli spaces, Galois representations and L-functions" took place at the RIMS, Kyoto University. The first series was held during October 4-6 (1993), before leaves acquired colors, and the second during March 28-30 (1994) when the cherry blossoms were preparing to bloom. These were part of the RIMS activity of the year, a research project in number theory for which the organizing committee consisted of A. Fujii (Rikkyo University), T. Oda (RIMS), T. Terasoma (Tokyo Metropolitan University), H. Yoshida (Math Dept, Kyoto University) and Y. Ihara (RIMS).

This Volume contains reports of lectures in these conferences, all that have been submitted. I hope that various topics treated in this volume are quietly (keeping) growing, even during this hot summer without enough rain.

Y. Ihara

モジュライ空間、ガロア表現およびL関数  
研究集会報告集

第1回 1993年10月4日～10月6日

第2回 1994年3月28日～3月30日

研究代表者 伊原 康隆(Yasutaka Ihara)

目次

1993年10月分

1. Filtrations of topological and pro- $l$  mapping class groups of surfaces and their use-----1  
東京電機大・工 朝田 衛(Mamoru Asada)
- \* Galois representation on the pronilpotent completion of  $\pi_1$  of algebraic curves  
京大・数理研 織田 孝幸(Takayuki Oda)
2. Shintani Functions and Automorphic L-functions-----14  
京産大・理 村瀬 篤(Atsushi Murase)  
広島大・理 菅野 孝史(Takashi Sugano)
3. Representations and Pseudo-representations-----24  
Univ. Louis Pasteur et C.N.R.S.  
Henri Carayol
4.  $K_2$  of a Fermat quotient and the value of its L function-----27  
東大・数理科学 木村 健一郎(Ken-ichiro Kimura)
5. Introduction to the filtered Galois representation theory in  $\pi_1(P^1 - \{0, 1, \infty\})^{\text{pro-}l}$ -----39  
京大・数理研 松本 眞(Makoto Matsumoto)
6. Galois representations in the pro- $l$  fundamental groups of punctured elliptic curves-----46  
東大・数理科学 中村 博昭(Hiroaki Nakamura)
7. Ramification of the Galois representation on the pro- $l$  fundamental group of an algebraic curve-----54  
京大・数理研 玉川 安騎男(Akio Tamagawa)
8. The 5-cycle relation for iterated integrals (Monodromy of iterated integrals)-----58  
Univ. de Nice-Sophia Antipolis  
Zdzisław Wojtkowiak
9. On the rationality of the determinant of period integrals-----86  
都立大・理 寺杣 友秀(Tomohide Terasoma)

1994年3月分

10. On positively ramified extensions of algebraic number fields-----94  
 Univ. Heidelberg Kay Wingberg
11. Modular stacks-----102  
 UC, Irvine Michael D. Fried
12. Coverings of  $P^1 - \{0, 1, \infty\}$  with restricted "vertical"  
 ramifications-----105  
 京大・数理研 伊原 康隆(Yasutaka Ihara)
13. Fields of definition of Teichmüller modular function fields  
 and Oda's problem-----112  
 東大・数理科学 中村 博昭(Hiroaki Nakamura)  
 京大・数理研 高尾 尚武(Naotake Takao)  
 京大・数理研 上野 亮一(Ryoichi Ueno)
14. On the existence of unramified  $p$ -extensions of exponent  $p$ -----124  
 金沢大・自然 野村 明人(Akito Nomura)
15. Galois representations attached to one-point-punctured elliptic  
 curves-----129  
 早大・理工 角皆 宏(Hiroshi Tsunogai)
16. On  $p$ -adic Hodge theory for semi-stable families-----141  
 京大・数理研 辻 雄(Takeshi Tsuji)
17. Generalization of Anderson's  $t$ -motives and Tate conjecture-----154  
 京大・数理研 玉川 安騎男(Akio Tamagawa)
18. Galois representations on profinite braid groups on curves-----160  
 京大・数理研 松本 眞(Makoto Matsumoto)
19. On free pro- $p$ -extensions of algebraic number fields-----172  
 東大・数理科学 山岸 正和(Masakazu Yamagishi)
- \* Some remarks on coverings of  $p$ -adic curves  
 京大・数理研 若松 和宏(Kazuhiro Wakamatsu)
20. On compactification of Drinfeld moduli schemes-----178  
 MPI, Bonn Richard Pink
- \* On Tate conjecture for  $H^2$  of Shimura varieties  
 UCLA D. Blasius

21. On the residue of Eisenstein series and Siegel-Weil formula-----	184
京大・理                    池田 保 (Tamotsu Ikeda)	
22. On a conjecture of Shimura concerning periods of Hilbert modular forms-----	192
京大・理                    吉田 敬之 (Hiroyuki Yoshida)	
23. Liftings of Frobenius, degeneracies of Hodge-de Rham spectral sequences, and ordinaries-----	209
東大・数理科学            中島 幸喜 (Yukiyoshi Nakkajima)	

\* No manuscript available.