



Universiteit
Leiden
The Netherlands

Inverse Jacobian and related topics for certain superelliptic curves

Somoza Henares, A.

Citation

Somoza Henares, A. (2019, March 28). *Inverse Jacobian and related topics for certain superelliptic curves*. Retrieved from <https://hdl.handle.net/1887/70564>

Version: Not Applicable (or Unknown)

License: [Leiden University Non-exclusive license](#)

Downloaded from: <https://hdl.handle.net/1887/70564>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/70564> holds various files of this Leiden University dissertation.

Author: Somoza Henares, A.

Title: Inverse Jacobian and related topics for certain superelliptic curves

Issue Date: 2019-03-28

INDEX

- Abel-Jacobi map, **14**, 15
- abelian variety, 10
 - absolutely simple, 10
 - Picard group, 10
- analytic representation, 12
- CM, *see* complex multiplication
- CM class number one, 78
 - CPQ case, **81**, 89
 - Picard case, 79
- CM-field, 50
- CM-type, 75
 - CPQ-compatible, 82
 - generalized, *see* m -CM-type
 - induced, 75
 - primitive, **76**
 - restricts to an m -CM-type, 82
 - type norm, 76
- complex torus polarizable 11
- CPQ curve, *see* cyclic plane quintic curve
- cyclic plane quintic curve, **35**
 - basis of regular differentials, 38
 - branch points, **35**, 42
 - invariants, 47
 - Legendre-Rosenhain equation, 35
 - with maximal CM, **47**, 77
- dicyclic group, 81
- dual variety, 11
- field of moduli, 78
- homomorphism
 - of complex tori, 12
 - of abelian variety, 10
- inverse Jacobian algorithm, 15
 - for CPQ curves, 45
 - for Picard curves, 27
- inverse Jacobian problem, 7
- isogeny, 10
- isomorphism
 - of polarized abelian varieties, 11
 - with m -CM-type, **50**, 62
- Jacobian of a curve, 7, **14**, 15
 - over \mathbb{C} , 15
- m -CM-type, 50
- non-special divisor, *see* special divisor
- \mathcal{O}_K -lattice, 63
 - ideal index, 64
 - polarized, 63
 - principally polarized, **63**
 - S -maximal, 67
 - S -norm, 67
 - S -scale, 67
 - trace dual, 63
- period matrix, 12
 - big, 12
- Picard curve, 7, **9**
 - affine branch points, **9**, 18, 25

- invariants, 33
 - Legendre-Rosenhain equation, 9
 - with maximal CM, **33**, 77
- polarization, 11
 - principal, 11
- polarized abelian variety, *see also* polarization
 - over \mathbb{C} , 11
 - with m -CM-type, 50
 - with CM, 76
- rational representation, 12
- reflex
 - CM-type, 76
 - field, 76
- relative class number, 83
- Riemann
 - constant, 16
 - form, 11
 - associated hermitian form, 11
 - of a principal polarization, 11
 - with respect to bases, 12
 - theta constant, 18
 - implementation, 30
 - quasi-periodicity, 19
 - symmetry, 19
 - theta function, 16
 - with characteristic, 18
 - Vanishing Theorem, 16
- Riemann-Schottky problem, 7, **14**, 71
- Rosati involution, 11
- signature
 - of a hermitian matrix, 66
 - of an antihermitian matrix, 51
- special divisor, 17
- superelliptic curve, 7
 - basis of regular differentials, 37
 - $(1 - \rho_*)$ -torsion, 40
- symplectic
 - basis, 12
 - group, 13
 - matrix, *see* symplectic group
- Torelli locus, 71
 - open, 71
- Torelli map, 14
- Torelli's Theorem, 14