

# SL<sub>2</sub>(R)

by Serge Lang

{REPLACEMENT-(...)-( )}

Representations of  $SL(2, R)$ . These notes describe the irreducible representations of the group  $G = SL(2, R)$  of two by two real matrices of determinant one. Finite dimensional representation theory of  $sl_2(C)$ : a short digest. We now consider ..... of scalars, consider  $V_d, R := V_d \otimes R$  as an  $sl_2(R)$ -module. Letting  $P_d, Z$  be ...  $SL_2(R)$  (Graduate Texts in Mathematics) (v. 105): S. Lang ...  $SL_2(R)$  by Serge Lang Given the formalism of quantum mechanics .

Automorphic Forms on  $SL_2(R)$  - Google Books Result lie algebra  $sl_2(R)$  has no other irreducible representations except the derivatives of the group representations listed above. In fact we will classify the irreducible ... Unitary representations of  $SL(2, R)$  - MathOverflow and ergodic measures for subgroups  $H$  isomorphic to  $SL(2, R)$ . While this is as well a special case of Ratner's theorem, it is a rich class since.  $G$  can be much ... DECOMPOSING  $SL_2(R)$  1. Introduction The group  $SL_2(R)$  is not ...  $SL_2(R)$  gives the student an introduction to the infinite dimensional representation theory of semisimple Lie groups by concentrating on one example -  $SL_2(R)$ . Representations of  $SL(2, R)$  - University of British Columbia

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Irr.tex. 10:55 p.m. December 19, 2013. Analysis on  $SL(2)$ . Representations of  $SL_2(R)$ . Bill Casselman. University of British Columbia cass@math.ubc.ca. FIFTH PILE 32. Representations of the group  $SL_2(R)$  27 Oct 2009 . I've heard that irreducible unitary representations of noncompact forms of simple Lie groups, the first example of such a group  $G$  being  $SL(2, R)$  ... NOTES ON THE REPRESENTATION THEORY OF  $SL_2(R)$ . MATT KERR. Abstract.

Introductory notes with a view toward recent work on auto- morphic ... Tensor Products of Unitary Representations of  $SL_2(R)$  - JStor Now we adopt the previous theoretical constructions for the particular case of the group  $SL_2(?)$ . It is common to present  $SL_2(?)$  solely as the transformation ... Automorphic Forms on  $SL_2(R)$  - Cambridge Books Online . Here  $F = R$  or  $C$ . A Lie algebra over  $F$  is a pair  $(g, [ , \cdot ])$ , where  $g$  is a vector space .... To show that another (real) Lie algebra  $h$  is isomorphic to  $sl(2, R)$  it is enough ...  $SL_2(R)$  S. Lang Springer representations of  $SL_2(R)$ ; in particular we obtain its reduction as a direct . irreducible representations of  $G = SL_2(R)$  has already been dealt with in certain. Fundamental domains for  $SL_2(Z)$  and  $? 1. H$  as homogeneous ... Lie group and Geometry on the Lie Group  $SL_2(R)$ . 2. ACKNOWLEDGEMENT. I wish to express my gratitude to Dr. Debapriya Biswas for her help and guidance ... ON SUBGROUPS OF  $SL(2, R)$  - Project Euclid  $SL(2, C), SL(2, R), SU(1, 1)$ , and  $SU(2)$ . The Lie group  $SU(2)$  is known from quantum mechanics courses. 1If Wigner never said that, I can instead quote my ... Lie group and Geometry on the Lie Group  $SL_2(?)$  - Indian Institute . consists of traceless complex matrices, while the Lie algebra of  $SL(2, R)$  consists of traceless real matrices and the Lie algebra of  $SU(2)$  consists of trace-

$SL_2(R)$  - Wikipedia, the free encyclopedia 21 Oct 2013 . Fundamental domain for  $? = SL_2(Z)$  on  $H$ . 3. Inversion and translation generate  $SL_2(Z)$ . 4. Re-enabling the action of  $SL_2(R)$ . 5. Fundamental ...  $SL_2(R)$   $SL_2(R)$  by Serge Lang. Given the formalism of quantum mechanics, the study of those of its laws which are invariant under the Lorentz group inevitably leads to ... LECTURES ON THE  $SL(2, R)$  ACTION ON MODULI SPACE 1 . 18 Sep 2012 . Definition. The group is defined as the group of matrices with entries from the field of real numbers and determinant , under matrix multiplication ... Dynamics of  $SL_2(R)$  over moduli space in genus two In mathematics, the main results concerning irreducible unitary representations of the Lie group  $SL(2, R)$  are due to Gelfand and Naimark (1946), V. Bargmann ... Representation theory of  $SL_2(R)$  - Wikipedia, the free encyclopedia NOTES ON THE REPRESENTATION THEORY OF  $SL_2(R)$  . b)  $\text{im } ? = \{u \otimes h : \exp H(tu) \otimes ?(G) \text{ for all } t \in R\}$ . [Hint for b):  $? \otimes ?$  is injective on a ... This exercise investigates the exponential map for  $G = SL_2(R)$ . By the previous ...  $SL_2(R)$  group [8]—one of the two most important. Lie groups in analysis. The other group is the Heisenberg group [3]. By contrast the “ax + b”- group, which is ... 7. LIE GROUPS AND LIE ALGEBRAS 1. Lie algebras 1.1. Definition ... This formula  $SL_2(R) = KAN$  is called the Iwasawa decomposition of the group. Don't confuse the use of  $a$  in Theorem 1.1 as the label for a matrix in  $A$  with  $a$  as a ... Different realizations of the upper half plane  $H$  and the reduction of . 1. The Lie algebra  $sl_2$  and its finite dimensional representations 1.1 ... This book provides an introduction to some aspects of the analytic theory of automorphic forms on  $G=SL_2(R)$  or the upper-half plane  $X$ , with respect to a discrete . Special linear group:  $SL(2, R)$  - Groupprops  $SL(2, R)$  acts on the complex upper half-plane by fractional linear transformations. The group action factors through the quotient  $PSL(2, R)$  (the  $2 \times 2$  projective ... Lecture 3 Homogeneous Spaces from the Group  $SL_2(?)$  LECTURES ON THE  $SL(2, R)$  ACTION ON MODULI SPACE. 1. LECTURE 1. Suppose  $g \in ? 1$ , and let  $? = \{?_1, \dots, ?_n\}$  be a partition of  $2g - 2$ , and let  $H(?)$  be a . 1. Representations of  $SL(2, R)$  These notes describe the irreducible ... generate  $SL(2, Z)$ . 1 Realizations of the upper half plane  $H$ . 1.1 Realization of  $H$  as a quotient of  $SL(2, R)$ . Lemma 1  $SL(2, R)$  operates transitively on  $H$  and ... Starting with the Group  $SL_2(R)$  - American Mathematical Society Let  $G$  be a subgroup of  $SL(2, R)$ . We say  $G$  is elementary if the commutator of any two elements of infinite order has trace 2; equivalently,  $G$  is elementary. MT845 Homework 3  $SL_2(R)$  gives the student an introduction to the infinite dimensional representation theory of semisimple Lie groups

Wikipedia, the free encyclopedia 21 Oct 2013 . Fundamental domain for  $? = SL_2(Z)$  on  $H$ . 3. Inversion and translation generate  $SL_2(Z)$ . 4. Re-enabling the action of  $SL_2(R)$ . 5. Fundamental ...  $SL_2(R)$   $SL_2(R)$  by Serge Lang. Given the formalism of quantum mechanics, the study of those of its laws which are invariant under the Lorentz group inevitably leads to ... LECTURES ON THE  $SL(2, R)$  ACTION ON MODULI SPACE 1 . 18 Sep 2012 . Definition. The group is defined as the group of matrices with entries from the field of real numbers and determinant , under matrix multiplication ... Dynamics of  $SL_2(R)$  over moduli space in genus two In mathematics, the main results concerning irreducible unitary representations of the Lie group  $SL(2, R)$  are due to Gelfand and Naimark (1946), V. Bargmann ... Representation theory of  $SL_2(R)$  - Wikipedia, the free encyclopedia NOTES ON THE REPRESENTATION THEORY OF  $SL_2(R)$  . b)  $\text{im } ? = \{u \otimes h : \exp H(tu) \otimes ?(G) \text{ for all } t \in R\}$ . [Hint for b):  $? \otimes ?$  is injective on a ... This exercise investigates the exponential map for  $G = SL_2(R)$ . By the previous ...  $SL_2(R)$  group [8]—one of the two most important. Lie groups in analysis. The other group is the Heisenberg group [3]. By contrast the “ax + b”- group, which is ... 7. LIE GROUPS AND LIE ALGEBRAS 1. Lie algebras 1.1. Definition ... This formula  $SL_2(R) = KAN$  is called the Iwasawa decomposition of the group. Don't confuse the use of  $a$  in Theorem 1.1 as the label for a matrix in  $A$  with  $a$  as a ... Different realizations of the upper half plane  $H$  and the reduction of . 1. The Lie algebra  $sl_2$  and its finite dimensional representations 1.1 ... This book provides an introduction to some aspects of the analytic theory of automorphic forms on  $G=SL_2(R)$  or the upper-half plane  $X$ , with respect to a discrete . Special linear group:  $SL(2, R)$  - Groupprops  $SL(2, R)$  acts on the complex upper half-plane by fractional linear transformations. The group action factors through the quotient  $PSL(2, R)$  (the  $2 \times 2$  projective ... Lecture 3 Homogeneous Spaces from the Group  $SL_2(?)$  LECTURES ON THE  $SL(2, R)$  ACTION ON MODULI SPACE. 1. LECTURE 1. Suppose  $g \in ? 1$ , and let  $? = \{?_1, \dots, ?_n\}$  be a partition of  $2g - 2$ , and let  $H(?)$  be a . 1. Representations of  $SL(2, R)$  These notes describe the irreducible ... generate  $SL(2, Z)$ . 1 Realizations of the upper half plane  $H$ . 1.1 Realization of  $H$  as a quotient of  $SL(2, R)$ . Lemma 1  $SL(2, R)$  operates transitively on  $H$  and ... Starting with the Group  $SL_2(R)$  - American Mathematical Society Let  $G$  be a subgroup of  $SL(2, R)$ . We say  $G$  is elementary if the commutator of any two elements of infinite order has trace 2; equivalently,  $G$  is elementary. MT845 Homework 3  $SL_2(R)$  gives the student an introduction to the infinite dimensional representation theory of semisimple Lie groups

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by concentrating on one example - RATNERS THEOREM ON  $SL(2, \mathbb{R})$ -INVARIANT MEASURES 1 .  $G = SL(2, \mathbb{R})$ .  $A = \left\{ \begin{bmatrix} a & 0 \\ 0 & 1/a \end{bmatrix} \right\}$   $w = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$   $N = \left\{ \begin{bmatrix} 1 & x \\ 0 & 1 \end{bmatrix} \right\}$   $P = \left\{ \begin{bmatrix} a & 0 \\ 0 & 1/a \end{bmatrix} \right\} = AN$ .  $P = \left\{ \begin{bmatrix} a & 0 \\ 0 & 1/a \end{bmatrix} \right\} = AN$ .  $K = \left\{ \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix} \right\}$  3 ...  $SL(2)$  19 Oct 2003 . ural action of  $SL(2, \mathbb{R})$  on  $M_2$ , the bundle of holomorphic 1-forms over the moduli space of Riemann surfaces of genus two. Contents. 1. 3.12  $SL(2, \mathbb{C})$  and Its Subgroups:  $SL(2, \mathbb{R})$ ,  $SU(2)$ ,  $SU(1, 1)$  and  $SO(1, 2)$

{/REPLACEMENT}