



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)

/ Thesis & Dissertation (/jspui/handle/123456789/1)

/ Doctor of Philosophy (PhD) (/jspui/handle/123456789/268)

/ PhD-2014 (/jspui/handle/123456789/462)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/1565>

Title:	Classification of Pairs of Quaternionic Hyperbolic Isometries
Authors:	Balasaheb, Kalane Sagar (/jspui/browse?type=author&value=Balasaheb%2C+Kalane+Sagar)
Keywords:	Isometries Quaternionic Hyperbolic Cartan's angular invariant
Issue Date:	Apr-2019
Publisher:	IISER Mohali
Abstract:	We consider the Lie groups $SU(n, 1)$ and $Sp(n, 1)$ that act as isometries of the complex and the quaternionic hyperbolic spaces respectively. We classify pairs of semisimple elements in $Sp(n, 1)$ and $SU(n, 1)$ up to conjugacy. This gives local parametrization of the representations ρ in $\text{Hom}(F^2, G)/G$ such that both $\rho(x)$ and $\rho(y)$ are semisimple elements in G , where $F^2 = \langle x, y \rangle$, $G = Sp(n, 1)$ or $SU(n, 1)$. We use the $PSp(n, 1)$ -configuration space $M(n, i, m-i)$ of ordered m -tuples of distinct points in H^n , where the first i points in an m -tuple are boundary points, to classify the semisimple pairs. Further, we also classify points on $M(n, i, m-i)$. Particularly interesting coordinates occur for lower values of n . The conjugacy classification of pairs is then applied geometrically to obtain Quaternionic hyperbolic Fenchel-Nielsen type parameters for generic representations of surface groups into $Sp(2, 1)$ and $Sp(1, 1)$.
URI:	http://hdl.handle.net/123456789/1565 (http://hdl.handle.net/123456789/1565)
Appears in	PhD-2014 (/jspui/handle/123456789/462)
Collections:	

Files in This Item:

File	Description	Size	Format	
PH14071.pdf (/jspui/bitstream/123456789/1565/3/PH14071.pdf)		544.04 kB	Adobe PDF	View/Open (/jspui/bitstream/123456789/1565/3/PH14071.pdf)

Show full item record (/jspui/handle/123456789/1565?mode=full)

[Statistics \(/jspui/handle/123456789/1565/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.

Admin Tools

Edit...

Export Item

Export (migrate) Item

Export metadata