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Mariela Carvacho* (`mariela.carvacho@usm.cl`), Avenida Espana 1680, 2390123 Valparaiso, Chile, and **Víctor González-Aguilera**. *Structure of $\widetilde{\mathcal{M}}_4$* . Preliminary report.

Given a group G acting on a compact Riemann surface X it induces an action on the space of holomorphic 1-forms of X . This action induces a representation group ρ called *analytic representation*.

It is known that the map to associate the pair $[X, G]$ to $[\rho]$ is injective for $g = 2$ and 3 but for genus 4 it is not injective Kimura.

The moduli space of genus 4 , \mathcal{M}_4 , has been studied in [1].

In this talk we show partial results about the structure of the moduli space of genus 4 : 1-2 dimensional families, relation with the analytic representation and its boundary components using the results given in [2].

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References

- [1] G.Bartolini, A.Costa and M.Izquierdo **On the orbifold structure of the moduli space of Riemann surfaces of genera four and five**. M. RACSAM (2014) 108: 769-793.
- [2] R. Díaz and V. González-Aguilera **Limit points of the branch locus of \mathcal{M}_g** . arXiv 1703.07328v1 (2017)

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