# Complement of the discriminant variety, Gauss–skizze operads and hidden symmetries

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**Abstract**: In this talk, the configuration space of marked points on the complex plane is considered. We investigate a decomposition of this space by so-called Gauss-skizze i.e. a class of graphs being forests. These Gauss-skizze, reminiscent of Grothendieck's dessins d'enfant, provide a totally different real geometric insight on this complex configuration space, which under the light of classical complex geometry tools, remains invisible. Topologically speaking, this stratification is shown to be a Goresky–MacPherson stratification.

We prove that for Gauss-skizze, classical tools from deformation theory, ruled by a Maurer–Cartan equation can be used only locally.

We show as well, that the deformation of the Gauss-skizze is governed by a Hamilton–Jacobi differential equation.

Finally, a Gauss-skizze operad is introduced which can be seen as an enriched Fulton–MacPherson operad, topologically equivalent to the little 2-disc operad.

The combinatorial flavour of this tool allows not only a new interpretation of the moduli space of genus 0 curves with n marked points, but gives a very geometric understanding of the Grothendieck–Teichmüller group.