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Caleb Ashley* (ashley.cj@umich.edu), **Naiomi Cameron**, **Edray Goins**, **Emille Lawrence**, **Theo McKenzie** and **Karoline Pershell**. *On Computing Monodromy Groups for Compositions of Belyi Maps*. Preliminary report.

Among all hyperbolic structures on a Riemann surface S_g of fixed genus $g \geq 2$, those that are also arithmetic are special. Grothendieck's famous CNRS research proposal "Esquisse d'un Programme" outlines a link between combinatorial data, so-called "dessin d'enfants," the complex geometry of algebraic curves, and their corresponding algebraic number fields of coefficients. In this talk we describe some fundamental objects and results which outline this theory. Our main goal is to describe $\text{Mon}(\beta \circ \alpha)$, the monodromy group of the composition of two dynamical Belyi maps α and β of a certain broad subclass in a straightforward manner. This work departs from the Ph. D. thesis of Jacob Bond and is joint with N. Cameron, E. Goins, E. Lawrence, T. McKenzie, K. Pershell.) (Received January 19, 2020)