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## Learning Analytics, Riemann Surfaces, and Quadratic Differentials

**Abstract** Massive Open Online Courses (MOOCs) offer, at best, students a wealth of resources supporting several different learning styles. Students have different cognitive profiles, and different learning styles. Some students like to read, some others start by trying to solve problems, some students view videos, etc. Different ways to use the resources of a MOOC determine different study paths.

World Education Portals (WEPS) develops technologies that automatically support students to reach their educational goals in an optimal way. This is based on a mathematical model of learning and studying using MOOCs. In this model, a MOOC is a Riemann surface, an instructor is a quadratic differential on the Riemann surface, and the vertical foliation of the quadratic differential in question defines the study paths for students to follow.

WEPS is working to realize the extraordinary vision of Iisac Asimov from 1988. See [http://www.youtube.com/watchv=Zib6OC\\_yJxk&feature=youtu.be](http://www.youtube.com/watchv=Zib6OC_yJxk&feature=youtu.be).