Personalized medicine using patient similarities

Abstract:
Clinical guidelines has vastly improved medical treatment. However, the increase in patient co-morbidities and polypharmacy and the rapid accumulation of genomic evidence calls for a more personalized approach, which tailors the treatment to the patient-specific characteristics. To-date, the integration of the different factors affecting patient treatment remains a challenge.

In my talk, I will present a data-driven patient-similarity framework which integrates patient similarities spanning demographic, clinical and genomic data sources and describe the genomic and pharmacovigilance components developed for this framework. Using this framework, treatment choices are suggested based on the choices and outcomes of similar patients, allowing every patient to contribute to the care of all future patients.