

# Workshop Approaching Twenty Years of Knowledge Tracing (BKT20y)

Knowledge Tracing is an extremely popular method for student modeling because of its capability to infer a student's dynamic knowledge state in real time as the student is observed solving a series of problems (Corbett & Anderson, 1995). After its introduction in 1995, many extensions to the original technique have been proposed to improve its predictive accuracy. Variants include: fitting model parameters to individuals rather than populations (e.g., Lee & Brunskill, 2012; Yudelson, Koediger, & Gordon, 2010), contextualizing model parameters based on past and current usage of an intelligent tutoring system (Baker, Corbett, & Aleven, 2008, Baker et al., 2010; GonzálezBrenes, 2014; Pardos et al., 2010) and on latent characteristics of students and problems (Khajah et al, 2014), clustering similar students and sharing parameters among them (Pardos et al, 2012), soft sharing of parameters via hierarchical Bayesian inference (Beck & Chang, 2007; Beck, 2007), and considering knowledge state as a continuous variable (SohlDickstein, 2013; Smith et al., 2004).

As we approach twenty years since the introduction of Knowledge Tracing, what lessons have we learned? This workshop's motivation is to open the floor for the discussion of the recent advances in Knowledge Tracing and student modeling in general, take stock of the promises and failures of current approaches, and work toward developing integrated approaches.

We gratefully acknowledge the following members of the workshop program committee:

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