Computer Analysis of the Writing Process (not just the final product)

Computers can be used to help us become better writers. Should we let them "watch over our shoulders" as we write essays?

It is common to use process logs to capture information about computer users, especially on the Web. However, much of this work has operated as pure data mining, without a strong theory to constrain the inferences drawn from the log files. In this talk, I will focus on a special case where such a theory is available: the process of writing essays and other long texts. In this case, analysis of the keystroke log can reveal important features of the psycholinguistic processes that underlie writing behavior, and support other forms of automated analysis to gain a deeper understanding of individual writers' strengths and weaknesses and patterns of group writing behavior, while supporting inferences about other aspects of individual psychology, such as affect and motivation. In my talk, I will examine how keystroke logs are collected and analyzed, examine how some of the resulting features reflect differences among tasks (such as copy-typing, drafting, and proofreading), and examine how features derived from keystroke logs illuminate differences in the behavior of weaker and stronger writers.

Paul Deane is a Principal Research Scientist in the natural language processing group at Educational Testing Service (ETS). He has published extensively on lexical semantics, vocabulary assessment, writing assessment, and principles of assessment design and automated writing evaluation. During his tenure at ETS, he has led the English Language Arts project within the Cognitively-Based Assessment of, as, and for Learning research initiative, where he has developed innovative approaches to writing assessment, including the use of keystroke logs to capture features of the writing process.

Date:	Thursday, January 18, 2018, 8:00 pm.
	(Refreshments and networking at 7:30 pm.)
Place:	Small Auditorium, Room CS 105
	Computer Science Building, Princeton University
Information:	Dennis Mancl (908) 285-1066
On-line info:	**http://PrincetonACM.acm.org**

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner is held at 6:00 p.m. at Ruby Tuesday's Restaurant on Route 1. Please send email to **princetonacm@acm.org** in advance if you plan to attend the dinner.