

ISTeC

The Information Science & Technology Center



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**Colorado State University's
Information Science and Technology Center (ISTeC)
presents two lectures by**



Dr. John Behrens

**Vice President
Center for Digital Data, Analytics, and Adaptive Learning
Pearson**

**ISTeC Distinguished Lecture
In conjunction with the
Electrical and Computer Engineering Department,
Computer Science Department, and the School of Education Seminar Series**

“Impacts of the Digital Ocean on Education”

**Monday, April 14, 2014
Reception with refreshments: 10:30 am
Lecture: 11:00 am – 12:00 noon
Location: Morgan Library, Event Hall**



**Electrical and Computer Engineering Department, Computer Science Department, and School of
Education Special Seminar *Sponsored by ISTE*C**

“Analytic Evolutions in the Digital Ocean”

**Monday, April 14, 2014
Lecture: 2:00 – 3:00 pm
Location: LSC 220-222**

ISTeC (Information Science and Technology Center) is a university-wide organization for promoting, facilitating, and enhancing CSU's research, education, and outreach activities pertaining to the design and innovative application of computer, communication, and information systems. For more information please see ISTeC.ColoState.EDU.

Abstracts:

Impacts of the Digital Ocean on Education

Data are records of experience and data analysis is learning from records of experience (Tukey & Wilk, 1966). The digital revolution has brought about dramatic changes in what can count as a "record of experience", often with concomitant advances in data analytic techniques across many fields. Unfortunately, the lack of training in the underlying logics of inference, a-historical and isolationist views of methodology, physics envy, statistical religion, and the failure to understand data analysis from a human-centered approach have contributed to a failure for many of these advances to reach social science practitioners and educators. Meta-methodological questions addressed will include "are you optimizing your research for a world that doesn't exist anymore?", "what % of variance in analytic impact is explained by 5% improvement in standard errors?", and "if a p-value gets computed in a forest and no one sees it, does it exist?"

Analytic Evolutions in the Digital Ocean

Until recently, the collection of data regarding the activity of learners typically required interruption of the learning process in the form of tests. The high cost of data collection and manipulation led to a relative paucity of data we refer to as the digital desert (DiCerbo & Behrens, 2012, 2014). As the use of digital devices increases during the natural course of our daily activity, so too does our ability to unobtrusively collect and analyze natural performance data. This leads to a potential wealth of informative data we call the digital ocean. The two eras differ not only in amount of data but in other important characteristics as well. The ubiquitous, proximal, persistent, and interconnected nature of digital experiences and data lead to a blurring of previous well-worn distinctions. Among these notions is the separation of instruction, testing, and play, as well as in-class/out-of-class and formal/informal. Implications for understanding and supporting the activity of learners and the stewards of learning in the age of the rising digital ocean are discussed.

Speaker Biography:

John Behrens is the Vice President of the Center for Digital Data, Analytics, and Adaptive Learning at Pearson. John applies learning science and data science to create experiences that foster learning by integrating digital activities with statistical methods. John has directed a wide variety of development efforts including simulation and game-based assessment and instruction, and data-supported learning ecosystems. His technical interests include exploratory data analysis, learning analytics and psychometrics, instructional personalization, and articulating the implications of the "Digital Ocean". John authors academic papers, serves on editorial and advisory boards, and is an Adjunct Assistant Research Professor in the Department of Psychology at the University of Notre Dame (Indiana, USA). Prior to Pearson, John led product development for a global (160 country) e-learning program and previously was a tenured Associate Professor at Arizona State University. John is a nice guy who likes camping, fishing, archery, and being with his family.

To arrange a meeting with the speaker, please contact James Folkestad, James.Folkestad@ColoState.EDU 970-491-7823