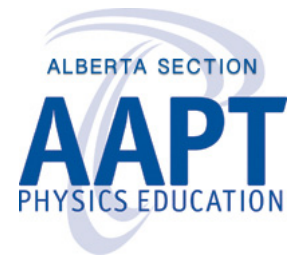




Physics Teachers Meeting
Friday December 6, 2013
8:30 AM to 4:00 PM
CCIS L1-047
University of Alberta



- 1. 8:30 - Registration in CCIS L1-047
- 2. 9:00 Welcome (CCIS L1-140)
- 3. 9:15 Lecture (CCIS L1-140)

Learning Trajectories: Fostering Learning of Introductory Physics via Student Interactions

Dr. Daniel McIsaac
 Dept. of Physics
 SUNY-Buffalo State College

I analyze introductory physics student learning, interpreting student experiences by analogy as a series of individual trajectories through a learning space. I model this learning space as bounded by and consisting of the student's prior knowledge, the formal curriculum, the textbook, the classroom and laboratory learning environments, and the interactions between students and the instructor. A phenomenon akin to an average student drift velocity resulting in standard paths between conceptual structures within the learning space can be observed. Strategies for making learning trajectories more explicit to instructors and students by externalizing student thought, interaction and reflection will be discussed.

- 4. 10:15 Refreshment break (CCIS L1-047)
- 5. 10:30 Lecture (CCIS L1-140)

Misconceptions in Magnetism

Dr. Mark Freeman
 Dept. of Physics
 University of Alberta

Magnetism is a physics topic that peaks way too early in the K-16 curriculum. It is naturally suited to science demonstrations in kindergarten, but from there goes steeply downhill in the experience of most students. In contrast to just about every other physics topic, teaching the science of magnetism has been abandoned to such a state of confusion that the curriculum rarely if ever contains even the beginnings of a quantitative description of everyday examples like refrigerator magnets. It doesn't seem unreasonable to suggest that a complete re-think of the "magnetism curriculum" is overdue.

- 6. 11:30 - 12:50 Lunch at Faculty Club

- 7. 1:00 (Concurrent) Make and Take (Location: TBA)

Allen Linville, Jeff Goldie, Laura Pankratz and Pina Chiarello

- 8. 1:00 (Concurrent) College Instructors (Location: L1-047)

Stefan Cartledge

- 9. 3:00 Refreshment break

- 10. 3:15 Lecture/Colloquium (CCIS L1-140)

Fostering Learning of Introductory Physics via Intensive Student Discourse: Strategies and Examples

Dr. Daniel McIsaac
 Dept. of Physics
 SUNY-Buffalo State College

I describe the promotion of student introductory physics learning via non-traditional levels of student discourse established using rich, multifaceted "touchstone activities" from Physics Education Research, and managed classroom culture. Examples from both small group and large-scale physics lecture environments will be viewed, demonstrated, presented and discussed. Implications for physics teacher preparation will also be presented and discussed.

The registration fee for this one-day workshop is \$30. (We have changed our organizational structure so we are unable to accept credit cards.) Parking is \$15/day and payable upon entrance. If you have any questions, contact Isaac Isaac (780-492-5691 or iisaac@ualberta.ca). Updates (including more parking information and payment options) can be found at:

<http://abphysicsteachers.wordpress.com>

Please pass this notice on to other interested science teachers.

Organizing Committee: L. Pankratz, V. Pasek, P. Chiarello, J. Goldie, A. Linville, B. McDonough, D. Skitsko, C. Sosnowski, Z. Berkes, S. Cartledge, D. Austen, W. Brouwer, J. Couch, I. Isaac & T. Singleton

Please register by December 4, 2013. The cost for this one-day event is \$30 and includes refreshments and lunch at the Faculty Club. Please make your cheques payable to "Alberta Section of AAPT" and mail along with this registration from to:

Physics Teachers Workshop,
 Dept of Physics, Attn: Dr. I Isaac
 4-183 CCIS,
 University of Alberta,
 Edmonton, Alberta T6G 2E1

Please check off if you are a member of ATA
 Science Council
 Yes (____) No (____)

Name: _____

School: _____

Address: _____

Phone: _____ Email: _____

Registration Fee (Please check one): Regular \$30 Cheque _____ Cash _____