

Alice in Wonderland 2013

Summer Physics Program for Girls

6/10/2013

Alex Demkov
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Austin, Texas

Introduction to Advanced Physics
Summer 2013 Syllabus
RLM 9.222
10 a.m.-Noon (unless specified otherwise)

Week one

June 10 Prof. A. Demkov, "*Introduction and Logistics*" and "*What is Computational Physics?*"

June 11 Kristy Kormondy, "*Molecular Beam Epitaxy: can you make a crystal?*", (Demkov Group)

June 12 Morgann Berg, "*Atomic Force Microscopy*", (de Lozanne group)

June 13 J.G. Ekerdt group, "*Intro to CVD and Surface Analysis Techniques*"

June 14, "*New information technology based on quantum physics*", (Li group)

Week two

June 17 Dr. Ashley DaSilva, "*Many Body Physics*", (MacDonald's group)

June 18 10:00 a.m. Prof. Greg Fiete, "*What does a theoretical physicist do? A perspective from a correlated electron theorist*"

1:00 p.m. Heidi Seinige, "Quantum Magnetism", (Tsoi group)

June 19 Prof. George Shubeita, "*Biophysics I*"

June 20 Prof. Vernita Gordon "*Biophysics II*"

June 21 Prof. EL Florin's group, "*Biophysics III*"

Groups hosting AIW participants:

- Ken Shih, Physics shih@physics.utexas.edu
Scanning tunneling microscopy; nanostructures; thin films and devices; thin film superconductors;
- Alex Demkov, Physics demkov@physics.utexas.edu
Condensed matter physics; physics of electronic materials, surfaces and interfaces; thin films and devices; novel materials; Molecular Beam Epitaxy
- George Shubeita, Physics shubeita@chaos.utexas.edu
Experimental Biophysics: Cell Physics, molecular motor proteins
- Vernita Gordon, Physics gordon@chaos.utexas.edu
Experimental Biophysics: Intercellular and multicellular interactions
- EL Florin, Physics florin@chaos.utexas.edu
Experimental Biophysics: Single-Molecule Experiments in Complex Environments; Membrane and Cell Biophysics; 3D Scanning Probe Microscopy; Thermal Forces on the Nanometer Scale
- John Markert, Physics markert@physics.utexas.edu
Magnetism and superconductivity in oxides and heavy fermion systems; high temperature superconductivity; high pressure research; magnetic resonance microscopy; spin dynamics; magnetic domain dynamics.
- James Chelikowsky, Physics & Chemical Engineering jrc@ices.utexas.edu
Computational Materials Science, Solid State Physics.
- John Ekerdt, Chemical Engineering ekerdt@che.utexas.edu
Surface and interface reaction kinetics, and the chemistry of electronic materials growth.

Logistics:

You will need to visit with our Administrator Mrs. Olga Vorloou; her office is on the 9th floor (RLM 9.212). You will need to bring her a copy of your Driver's license or your school I.D. along with your social security number.

To get the UT EID you will need to find UT direct link on the UT website: <http://www.utexas.edu/> and follow the instructions.

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