

Inland Geological Society

March 2011

Newsletter of the Inland Geological Society

Volume 27 No. 3

This Meeting:

Thursday,
March 3rd

Time:

Social: 6:00pm
Dinner: 6:30pm
Lecture: 7:00pm

Location:

LSA Associates
1500 Iowa Ave
Suite 200
Riverside, CA
92507

(Map on Pg. 4)

Coming to Dinner?

Please RSVP to

Steve Mains:

By Monday 02/28
(951) 780-5636
watermains@aol.com

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March Speaker:

Larissa Dobrzhinestskaya, Ph.D.
Professor, Department of Earth Sciences
University of California-Riverside, Riverside, CA



Diamond: Beauty, Science, Technology And Political Conflicts

Abstract

Diamond, a high pressure polymorph of carbon, is valued as a gemstone and as a unique industrial/technological material due to its extraordinary hardness, transparency, high thermal conductivity, and ability to be a semiconductor when doped with boron. Most natural diamonds are formed in the Earth's deep interior, which is called the mantle, where high pressure and high temperature stabilize carbon in the form of diamond crystals. Diamonds are delivered to the surface by volatile rich magmas rising up through pipe-like structures, or they are incorporated in rocks and minerals formed during collisions of continental plates. There are also solar diamonds, scattered in cosmic space, and impact diamonds formed due to meteorite bombardments of the Earth.

Due to diamond's chemical inertness and its stability over geologic time, it is a near-perfect container for fluid and solid inclusions that are trapped during

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diamond growth. The chemistry and structure of such inclusions are used to reconstruct the mineralogy in Earth's deep horizons and the conditions of diamond-forming media. All of this provides valuable information for understanding the movements and collisions of continental plates; mountain building; mantle enrichment with H₂O and light elements, including ⁴⁰K, which strongly influence the Earth's thermal evolution; volcano eruptions; and earthquakes.

Diamond is one the most important materials used in high-technology and many industrial applications because of its unique physical properties. Yet, being so useful for human life and society, diamonds unfortunately are used to fuel and finance armed conflicts—such diamonds are known as “bloody diamonds” or “conflict diamonds.” The United Nations General Assembly has recognized that conflict diamonds are a crucial factor in prolonging brutal wars in parts of Africa. In Angola and Sierra Leone, conflict diamonds continue to fund the rebel groups that are acting in contravention of the international community's objectives of restoring peace in the two countries.

Biography:

Dr. Larissa Dobrzhinestskaya received her B.S. and M.S. from the geology department of the Saint-Petersburg University in Saint Petersburg, Russia and her Ph.D. in geology and mineralogy from the Moscow University in Moscow, Russia. Prior to her current position as Professor in the Department of Earth Sciences of the University of California, Riverside (UCR), she worked as a geophysicist for the Department of Earth Sciences of UCR as well as Senior Research for the Los Alamos National Laboratory in New Mexico. In 2001, she received the Distinguished Researcher Award at UCR.

RSVP NOTICE **This Month Only**

To ensure that your request is counted, please RSVP to Steve Mains for the March 2011 meeting at 951-780-5636 or by email at watermains@aol.com.

SPEAKERS WANTED

We are still looking for more speakers for future meetings.

Tell us what you have been working on!

Please contact Jon Smith, Steve Mains or Greg Johnson to get your name in the schedule!

Upcoming Meetings/Events

Rock & Gem Shows—Various locations

Various rock and mineral shows will be throughout So. California. To find one near you, visit www.rockngem.com/showdates.asp

SME—SoCal Section Meeting



Walter Lombardo, Geologist and Owner of the Nevada Mineral and Book Company, Orange, CA, will be giving a talk on "Diamond Mines in North America". The meeting will be on **Tues., March**

15, 2011 at the Pomona Valley Mining Co. Restaurant, in Pomona, CA. For more info., visit www.smenet.org/

Los Angeles Basin Geological Society



Bob Toole, WSPA, will be presenting a talk on "California Energy Policy". The meeting will be on **March 24, 2011** at The Grand at Willow Street Conference Center. For

more info, visit www.labgs.org.

Los Angeles Basin Geological Society



Ray Ingersoll will be presenting a talk on "Restructuring Southern California". The meeting will be on **April 28, 2011** at The Grand at Willow Street Conference Center.

For more info, visit www.labgs.org.

Fourth IWA Specialty Conference

The topic of this year's conference will be *Natural Organic Matter: From Source to Tap and Beyond* and will be held **July 27–29, 2011** in Costa Mesa, CA. For more info., visit www.regonline.com/NOM2011

South Coast Geological Society meeting



Dr. David K. Lynch will be presenting a talk on the "San Andreas Fault: What it is, where to find it and what it means". The next meeting will be held on **Monday, March 1, 2010** at the Doubletree Club Hotel in Santa

Ana, CA. The speaker is to be determined. For more info., visit www.southcoastgeo.org

IGS Meeting Schedule

April 6, 2011 (Wednesday)

Dr. Alan L. Smith, CSU, San Bernardino
TBA

May 5, 2011 (Thursday)

Eric Scott, CSU, Curator of Paleontology, San Bernardino County Museum
TBA

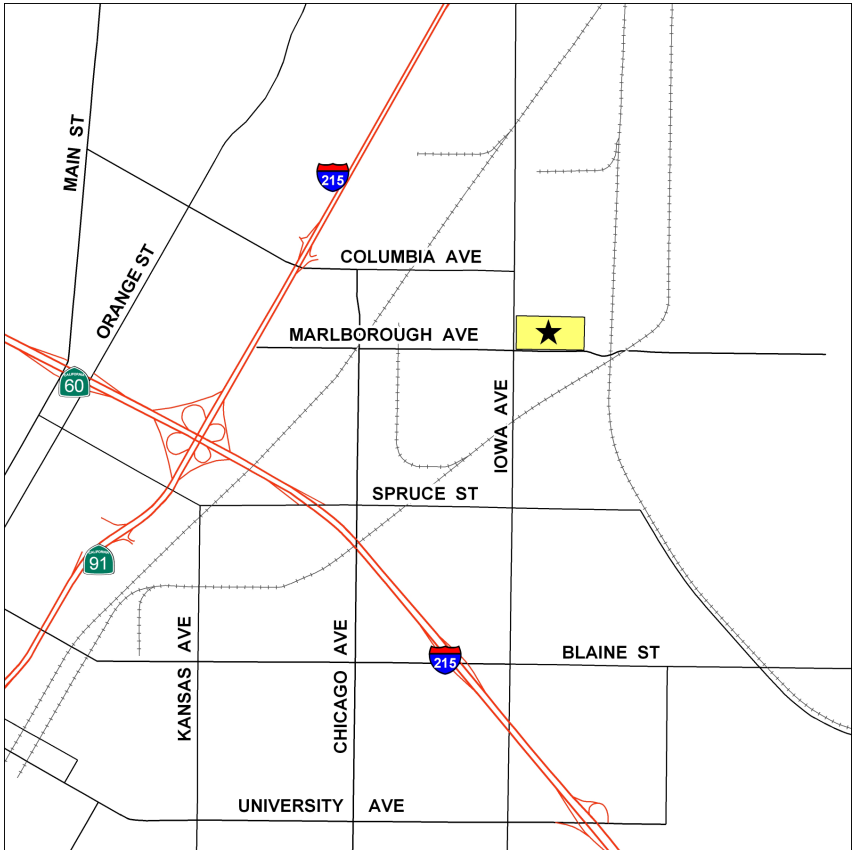
June 1, 2011 (Wednesday)

TBA



IGS MEETING LOCATION:

**LSA Associates, Inc.
1500 Iowa Ave, Suite 200
Riverside, CA 92507**



2011 IGS OFFICERS

President

Greg Johnson, LADPW
gjohnson@ladpw.org
626.458.4923

Vice President

Jon Smith, UCR Student
jbasket789@aol.com
jbasket789@gmail.com
760-792-4440

Web Mistress

Marina West, Big Horn Desert View
Water Agency
wells.out.west@gmail.com
760-910-3264

Treasurer

Margaret Gooding, LSA Associates
Margaret.gooding@lsa-assoc.com
951.781.9310 x279

Secretary

Dixie Lass, Retired
Dixie.lass@att.net
951.784.2168

Web Master

Ernie Roumelis, AKW Geotechnical
eroumelis@verizon.net
951.265.9849

Newsletter Editor

Shelby Barker, AECOM
shelby.barker@AECOM.com
760.680.0389

Membership

Steven E. Mains, Watermaster
Support Services
watermains@aol.com
951.780.5636

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14982 Farmington Street

Hesperia, CA 92345