



**GEOTHERMAL RESOURCES COUNCIL  
2006 ANNUAL MEETING**

**GRC 2006**



**SEPTEMBER 10-13, 2006**

**TOWN & COUNTRY RESORT  
SAN DIEGO, CALIFORNIA | USA**

Geothermal Resources  
Securing Our Energy Future

**CALL FOR PAPERS**



## Join Us in San Diego!

The Geothermal Resources Council (GRC) invites you to present your latest technical work in geothermal research, exploration, development and utilization at the GRC 2006 Annual Meeting—on **September 10 through 13**—at the Town & Country Resort in San Diego, California.

This year's Annual Meeting theme is *Geothermal Resources—Securing Our Energy Future*. With its Technical Program and other events, the GRC 2006 Annual Meeting will also provide a unique opportunity for exhibitors to showcase their projects, equipment and services at the Geothermal Energy Association (GEA) Trade Show. In addition, the 2006 Annual Meeting will feature distinguished international Keynote Speakers at its Opening Session, as well as Technical Workshops; Field Trips to nearby geothermal projects; the GRC Banquet; and our Annual Membership Meeting and Awards Luncheon.

GRC 2006 Annual Meeting participants will enjoy reasonable rates and excellent accommodations at the Town & Country Resort. Complete guest information will be included in this year's *GRC Annual Meeting Registration Brochure*, which will be available on our website ([www.geothermal.org](http://www.geothermal.org)) and distributed worldwide by mail in mid-2006.

International participation is a key to the success of GRC Annual Meeting Technical Programs. We encourage geothermal researchers and experts from around the world to submit their work as draft papers for presentation at the GRC 2006 Annual Meeting.

## Contact Us!

To receive *Author Instructions* and confirm your desire to present a technical paper at the GRC 2006 Annual Meeting—or to obtain details about opportunities for exhibiting at the GEA Geothermal Energy Trade Show—return the *Request for Information* form in the back of this brochure to the GRC.

### Geothermal Resources Council

2001 Second St., Ste. 5

P.O. Box 1350

Davis, California 95616 • USA

Phone: (530) 758-2360

Fax: (530) 758-2839

E-mail: [grc@geothermal.org](mailto:grc@geothermal.org)

## 2006 Technical Program

*Sponsored by the U.S.  
Department of Energy*

GRC Geothermal Technical Programs provide a forum for the exchange of new and significant information relevant to all aspects of geothermal resources, exploration, development and utilization. Potential topics for Technical Program presentations this year include, but are not limited to:

- Business Development and Finance
- Corrosion and Scaling Technologies
- Cultural and Environmental Issues
- Direct-Use Applications
- Drilling, Well Completion and Logging
- Enhanced Geothermal Systems
- Geothermal and Green Power Marketing
- Geology, Geophysics and Geochemistry
- Geothermal District Heating
- Geothermal Heat Pumps
- Geothermal Project Case Studies
- Geothermal Resource Assessment
- Geothermal Resources Exploration
- Geothermal Resources Outreach
- Power Production Technologies
- Power Operations and Maintenance
- Regulatory and Policy Issues
- Reservoir Engineering and Modeling
- Utility and Transmission Issues

## 2006 Session Themes and Chairs

Several Geothermal Technical Program session themes will focus on science, technologies and issues of special interest to the U.S. and world geothermal community. Session chairs will solicit papers and develop each agenda. The following session themes and chairs/co-chairs have been selected to date:

### THE GEOTHERMAL RESOURCE

**Reconnaissance and Exploration.** *Jim Combs*, Geo Hills Associates, 2445 East Lakeridge Shores, Reno, NV 89509. Phone: (775) 827-1960. Fax: (775) 827-1960. Email: jimjeany@ix.netcom.com. *Mark Coolbaugh*, Great Basin Center for Geothermal Energy, University of Nevada, Reno, 1664 N. Virginia St., MS 172, Reno, NV 89557. Phone: (775) 784-1415. Fax: (775) 784-1833. Email: mfc@unr.nevada.edu.

**Geothermal Resource Assessment.** *Marshall Reed*, U.S. Geological Survey, 345 Middlefield Rd., MS-977, Menlo Park, CA 94025. Phone: (650) 329-5620. Fax: (650) 329-5163. Email: mjreed@usgs.gov. *Joel Renner*, Idaho National Laboratory, P.O. Box 1625, MS 3830, Idaho Falls, ID 83415-3830. Phone: (208) 526-9824. Fax: (208) 526-0969. Email: joel.renner@inl.gov.

**Resource Characterization Technology.** *Mike Shook*, Idaho National Laboratory, P.O. Box 1625, MS 2107, 2525 Fremont Ave., Idaho Falls, ID 83415-2107. Phone: (208) 526-6945. Fax: (208) 526-0875. Email: mike.shook@inl.gov.

**Geothermal Reservoir Management.** *Sabodh Garg*, Science Applications International Corp., 10260 Campus Point Dr., MS A-3, San Diego, CA 92121-1578. Phone: (858) 826-1615. Fax: (858) 826-5115. Email: gargs@saic.com. *Susan Petty*, Black Mountain Technology, 16 W. Harrison St. Suite 204, Seattle, WA 98119. Phone: (206) 217-5960. Fax: (206) 285-0425. Email: blackmountaintech@earthlink.net.

**Enhancing Reservoir Performance.** *Ann Robertson-Tait*, GeothermEx, Inc., 5221 Central Ave. Suite 201, Richmond, CA 94804. Phone: (510) 527-9876. Fax: (510) 527-8164. Email: art@geothermex.com. *Peter Rose*, Energy and Geosciences Institute, University of Utah, 423 Wakara Way, Ste. 300, Salt Lake City, UT 84108. Phone: (801) 585-7785. Fax: (801) 585-3540. Email: prose@egi.utah.edu.

### ACCESSING AND USING GEOTHERMAL ENERGY

**Geothermal Wells and Downhole Pumps.** *Louis E. Capuano, Jr.*, ThermaSource, Inc., P.O. Box 1236, Santa Rosa, CA 95402-1231. Phone: (707) 523-2960. Fax: (707) 523-1029. Email: lcapuano@cds1.net.

**Advances in Energy Conversion.** *Richard Campbell*, TIC-The Industrial Company, 15427 E. Fremont Dr., Centennial, CO 80112. Phone: (303) 339-4945. Fax: (303) 840-5977. Email: rcampbell@ticus.com. *Daniel Schochet*, ORMAT International Inc., 980 Greg St., Sparks, NV 89431-6039. Phone: (775) 356-9029. Fax: (775) 356-9039. Email: dschochet@ormat.com.

**Direct Use of Geothermal Heat.** *R. Gordon Bloomquist*, Washington State University, WSU Energy Program, 925 Plum St. SE, Town Sq. Bldg. 4, Olympia, WA 98504-3165. Phone: (360) 956-2016. Fax: (360) 956-2030. Email: bloomquistr@energy.wsu.edu. *John Lund*, Geo-Heat Center, Oregon Institute of Technology, 3201 Campus Dr., Klamath Falls, OR 97601. Phone: (541) 885-1750. Fax: (541) 885-1754. Email: lundj@oit.edu.

## GRC Year of the Student

The GRC 2006 Annual Meeting will focus on university student participation, with our new "Year of the Student" program. We are encouraging students in the fields of geology, engineering, and environmental sciences to submit draft papers for consideration by our Technical Program Review Committee. With U.S. Department of Energy assistance, we will offer attendance scholarships to any student whose paper is accepted for presentation, and cash prizes for Best Student Oral and Poster Presentations.



**Geofluid Handling and Treatment.** *Carol Bruton*, Lawrence Livermore National Laboratory, 7000 East Ave., L-221, Livermore, CA 94550. Phone: (925) 423-1936. Fax: (925) 422-7438. Email: bruton1@llnl.gov.

#### MARKET OPPORTUNITIES FOR GEOTHERMAL

**Business and Finance.** *Tom King*, US Renewables Group, 2425 Olympic Blvd. Ste. 6050 West, Santa Monica, CA 90404. Phone: (914) 552-7220. Fax: (208) 445-9790. Email: tom@usrenerg.com.

**Public Utilities and Transmission.** *Guy Nelson*, Utility Energy Forum, P.O. Box 255, Lincoln City, OR 97367. Phone: (541) 994-4670. Fax: (541) 994-4538. Email: gnelson181@aol.com.

**Government Policies and Incentives.** *Karl Gawell*, Geothermal Energy Association, 209 Pennsylvania Ave. SE, Washington D.C. 20003. Phone: (202) 454-5264. Fax: (202) 454-5265. E-mail: karl@geo-energy.org.

**Leasing and Permitting.** *Christy Morris*, Nevada Division of Minerals, Oil, Gas and Geothermal Program, 400 West King St. Ste. 106, Carson City, NV 87903-4212. Phone: (775) 684-7045. Fax: (775) 684-7052. Email: cmmorris@govmail.state.nv.us. *Laurie McClenahan*, MHA, 4 West 4th Ave., Ste. 303, San Mateo, CA 94402. Phone: (650) 373-1200. Fax: (650) 373-1211 Email: laurie@mha-inc.com.

#### GEOTHERMAL SUCCESS STORIES

**The Geysers Geothermal Field.** *Mitch Stark*, Calpine Corp., 10350 Socrates Mine Rd., Middletown, CA 95461. Phone: (707) 431-6101. Fax: (707) 431-6148. Email: mitchs@calpine.com.

**The Geothermal Field at Coso.** *Steve Bjornstad*, Department of the Navy, Geothermal Program Office, 429 E. Bowen Rd., MS 4011, China Lake, CA 93555-6100. Phone: (760) 939-4048. Fax: (760) 939-2449. Email: steven.bjornstad@navy.mil. *Ted DeRocher*, Caithness Operating Co. LLC, 9790 Gateway Dr., Ste. 220, Reno, NV 89511. Phone: (775) 850-2235. Fax: (775) 851-8240. Email: tderocher@cenyc.com.

**The Basin and Range.** *Lisa Shevenell*, Great Basin Center for Geothermal Energy, University of Nevada, Reno, 1664 N. Virginia St., MS 178, Reno, NV 89557. Phone: (775) 784-1779. Fax: (775) 327-5801. Email: lshevenell@charter.net.

**Salton Trough Geothermal Systems.** *Jeffrey Hulén*, Energy and Geosciences Institute, University of Utah, 423 Wakara Way, Ste. 300, Salt Lake City, UT 84108. Phone: (801) 581-8497. Fax: (801) 585-3540. Email: jhulen@egi.utah.edu.

**Geothermal in the Americas.** *Luis Gutierrez-Negrín*, Comisión Federal de Electricidad, Alejandro Volta 655, Col. Electricistas, Morelia 58090 Mich., Mexico. Phone: 52-443-322-7072. Fax: 52-443-322-7058. Email: luis.gutierrez03@cfe.gob.mx

**Geothermal Energy Overseas.** *Roland Horne*, Stanford University, Petroleum Engineering Department, Green Earth Sciences Bldg. 65, Stanford, CA 94305-2220. Phone: (650) 723-9595. Fax: (650) 725-2099. Email: horne@stanford.edu.

## Technical Program Information

Additional sessions may be accommodated depending on response from the international geothermal research and development community. These sessions and other changes to our program will be announced in our *GRC Annual Meeting Registration Brochure*, which will be available on our website ([www.geothermal.org](http://www.geothermal.org)) and distributed worldwide by mail in mid-2006. If your idea for a paper doesn't fit one of the session themes, or you have questions about a particular theme, contact the Session Chair(s) or 2006 Technical Program Chairman *John W. Pritchett*, Science Applications International Corp. (SAIC), 10260 Campus Point Drive, MS A3018, San Diego, CA 92121. Phone: (858) 826-1628. Fax: (858) 826-5115. Email: [john.w.pritchett@saic.com](mailto:john.w.pritchett@saic.com).



## Submission Rules and Author Instructions

**Official Language.** English is the official language of the GRC 2006 Annual Meeting.

**Author Instructions.** The GRC provides explicit directions that **MUST** be followed for preparation and submission of papers. Complete *Author Instructions* will be mailed to all potential presenters who return the Request for Information form provided on the inside back cover of this publication. *Author Instructions* will also be available on our website at: [www.geothermal.org](http://www.geothermal.org). Only papers that conform to our Author Instructions will be considered for oral and/or poster presentations at the 2006 Annual Meeting, and for publication in the GRC Transactions.

**Draft Papers.** Two hard copies of complete draft papers and CD with your draft text in Microsoft Word or Rich Text Format are required for review by the Annual Meeting Technical Program Committee.

**Final Papers.** Following review and acceptance, text of final papers must be submitted to the GRC as both hard copy and on CD in Microsoft Word or Rich Text Format. **Figures and illustrations must not be embedded in text, and should be provided as separate disk files in TIF or EPS formats (not saved in Microsoft Word).** All figures and illustrations should also be submitted separately as top-quality laser copy. Photographs should be submitted as original prints or slides, or as large size, 300-dpi JPEG files in electronic format.

**All Oral Presentations must be in PowerPoint.** GRC Annual Meeting session rooms provide audiovisual support for PowerPoint presentations only. **PowerPoint presentations are not suitable for publication**—Authors must also follow GRC submission rules for publication outlined above, and offered in more detail in our *Author Instructions*.

### Best Paper Awards!

Following the 2006 Annual Meeting, GRC Certificates will be awarded to the authors of Best Papers in each Technical Session. Presentations will be judged by Session Chairmen and the Annual Meeting Technical Program Committee on their contribution to geothermal knowledge and the quality of information conveyed. To promote a successful and interesting Poster Session, the GRC will award a certificate and \$100 cash prize for the best presentation based on the above criteria plus overall graphic impact.

### Important Deadlines

Submission of papers and review by the GRC 2005 Annual Meeting Technical Program Committee consists of five basic steps, with the following strict deadlines:

APRIL 28

**Deadline for Draft Technical Papers.** Receipt of two hard copies and CD with draft text in Microsoft Word or Rich Text Format (with submission form) of each paper at the GRC office in Davis, California. **Adherence to this deadline is a necessary condition of draft technical paper acceptance.**

MAY 8-9

Technical Program Committee review of draft papers. GRC staff will promptly return submissions to authors following the review, with notification of acceptance and/or need for revisions.

JUNE 9

**Deadline for Final Technical Papers.** Receipt of final, corrected papers in format specified by *Author Instructions* at the GRC office in Davis, California. **Adherence to this deadline is a necessary condition of final paper acceptance.**

JULY 7

Technical Program Committee notifies authors of acceptance and assignment of paper(s) for presentation. Deadline for paper withdrawal by authors.

JULY 21

Deadline for authors to confirm that they will attend the Annual Meeting. **Without this confirmation, papers will not be scheduled for oral and/or poster presentations.**

SEPT. 2

**Deadline for oral presenters to submit their PowerPoint presentations to the GRC via its FTP upload link (which will be provided to authors prior to the deadline).**

### Presentation Formats

The 2006 Annual Meeting Technical Program Committee will review all papers submitted to the GRC—with a focus on content, originality and quality—then assign presentation formats (oral and/or poster), sessions and times. All papers accepted for oral and/or poster presentation will be published in the GRC *Transactions* (unless otherwise specified). Depending on Technical Program structure, oral presentations will be limited to 15 - 25 minutes, including discussion. Technical papers that rely heavily on detailed graphics, tables and maps may be more appropriate for the Poster Session, which will be held in the GEA Geothermal Energy Trade Show exhibit area. Technical Sessions will not coincide with the Poster Session, which will offer snacks and adult beverages to maximize attendance and technical discussion.

### Poster Session Ideas?

If you have ideas for the GRC 2006 Poster Session, contact Poster Session Chairman *Mark Coolbaugh*, Great Basin Center for Geothermal Energy, University of Nevada, Reno, 1664 North Virginia Street, MS 172, Reno, NV 89557. Phone: (775) 784-1415. Fax: (775) 337-1224. Email: [mfc@unr.nevada.edu](mailto:mfc@unr.nevada.edu).

## GRC Workshops

The GRC Annual Meeting and Education committees are now considering topics for workshops to complement the 2006 Annual Meeting Technical Program. Details on these and other geothermal education opportunities will be provided in this year's *GRC Annual Meeting Registration Brochure*, which will be available on our website ([www.geothermal.org](http://www.geothermal.org)) and distributed worldwide by mail in mid-2006.

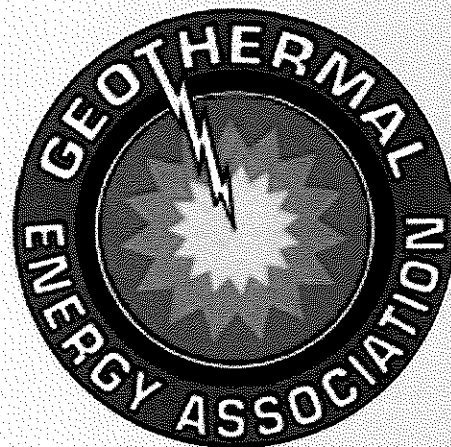
## GRC Field Trips

Our San Diego, California location for the GRC 2006 Annual Meeting offers ideal opportunities for participants to visit geothermal sites and operations at the Salton Sea, East Mesa, and Heber. Complete information about field trips will be provided in this year's *GRC Annual Meeting Registration Brochure*, which will be available on our website ([www.geothermal.org](http://www.geothermal.org)) and distributed worldwide by mail in mid-2006.

## 2006 Geothermal Energy Trade Show

The Geothermal Energy Association (GEA) Trade Show is a traditional companion event at GRC Annual Meetings. It is the world's largest gathering of vendors providing support for geothermal resource exploration, characterization, development, production and management. Trade Show exhibitors have a unique opportunity to showcase their products, services and state-of-the-art technologies to the geothermal community. At the same time, GRC Annual Meeting participants interface with exhibitors to learn about innovative developments and applications, while exchanging valuable ideas. A broad spectrum of companies and organizations are expected to participate in the GEA 2006 Trade Show, including:

- Cooling Tower and Condenser Manufacturers
- Drilling Contractors and Equipment Suppliers
- Educational Institutions and Organizations
- Engineering and Construction Service Companies
- Environmental and Chemical Control Equipment Suppliers
- Exploration and Reservoir Consultants
- Geophysical and Geochemical Survey Companies
- Geothermal Heat Pump Manufacturers and Suppliers
- Geothermal Resource Developers
- Government Agencies
- Instrumentation Manufacturers
- Modeling and Simulation Consultants
- Non-Profit Organizations
- Power Plant Designers & Constructors
- Project Development & Management Consultants
- Testing and Analytical Service Companies
- Turbine-Generator Manufacturers
- Well Logging Companies



Planning for the GEA 2006 Geothermal Energy Trade Show is underway. Exhibitors should sign up as soon as possible to reserve booth space. For more information about exhibit opportunities, send the Request for Information form in the back of this brochure to the GRC, or contact *Daniela Stratulat*, Geothermal Energy Association, 209 Pennsylvania Ave., SE, Washington, DC 20003. Phone: (202) 454-5263. Fax: (202) 454-6264. Email: [daniela@geo-energy.org](mailto:daniela@geo-energy.org). Website: [www.geo-energy.org](http://www.geo-energy.org).

# GRC 2006 Annual Meeting Committee

## GENERAL CHAIRMAN

### Frank Monastero

Department of the Navy  
Geothermal Energy Division  
Code ESC25, 429 Bowen Rd., Stop 4011  
China Lake, CA 93555-6100  
Phone: (760) 939-4046  
Fax: (760) 939-2449  
Email: francis.monastero@navy.mil

## TECHNICAL PROGRAM CHAIRMAN

### John Pritchett

Science Applications Intl. Corp.  
10260 Campus Point Dr., MS A3018  
San Diego, CA 92121  
Phone: (858) 826-1628  
Fax: (858) 826-5115  
Email: john.w.pritchett@saic.com

## POSTER SESSION CHAIRMAN

### Mark Coolbaugh

Great Basin Center for Geothermal Energy  
University of Nevada, Reno  
1664 N. Virginia St., MS 172  
Reno, NV 89557  
Phone: (775) 784-1415  
Fax: (775) 784-1833  
Email: mfc@unr.nevada.edu

## FUND-RAISING CHAIRMAN

### Louis E. Capuano, Jr.

ThermaSource, Inc.  
P.O. Box 1236  
Santa Rosa, CA 95402-1231  
Phone: (707) 523-2960  
Fax: (707) 523-1029  
Email: lcapuano@cds1.net

## GEA TRADE SHOW LIAISON

### Karl Gawell

Geothermal Energy Association  
209 Pennsylvania Avenue, SE  
Washington, DC 20003  
Phone: (202) 454-5264  
Fax: (202) 454-5265  
Email: karl@geo-energy.org

## INVITED SPEAKER CHAIRMAN

### Jonathan Weisgall

MidAmerican Energy Holdings Co.  
1200 New Hampshire Ave., NW  
Suite 300  
Washington, DC 20036  
Phone: (202) 828-1378  
Fax: (202) 828-1380  
Email: jnwaisgall@midamerican.com

## FIELD TRIPS CHAIRMAN

### Andy Sabin

Innovative Technical Solutions, Inc.  
2730 Shadelands Ave., Ste. 100  
Walnut Creek, CA 94598  
Phone: (925) 946-3121  
Fax: (925) 256-8998  
Email: asabin@itsi.com

## SPECIAL EVENTS CHAIRMAN

### Sabodh Garg

Science Applications Intl. Corp.  
Resource Technology Program  
10260 Campus Point Dr., MS A-3  
San Diego, CA 92121-1578  
Phone: (858) 826-1615  
Fax: (858) 826-5115  
Email: gargs@saic.com

## OUTREACH CHAIRMAN

### Randy Manion

Western Area Power Administration  
P.O. Box 281213  
Lakewood, CO 80228  
Phone: (720) 962-7423  
Fax: (720) 962-7427  
Email: manion@wapa.gov

## GRC EXECUTIVE DIRECTOR

### Ted J. Clutter

Geothermal Resources Council  
P.O. Box 1350  
Davis, CA 95617  
Phone: (530) 758-2360  
Fax: (530) 758-2839  
Email: tclutter@geothermal.org



**GEOHERMAL RESOURCES COUNCIL  
2006 ANNUAL MEETING**



# Geothermal Resources Securing Our Energy Future

SEPTEMBER 10-13, 2006

TOWN & COUNTRY RESORT | SAN DIEGO, CALIFORNIA | USA

## **Request for Information**

### GRC Annual Meeting Technical Program

The GRC invites submission of technical paper(s) for the 2006 Annual Meeting on all pertinent geothermal topics. To confirm your desire to present a paper, complete and return this form as soon as possible to the GRC. Refer to the list of topics and Special Session Themes in this brochure as you list your title(s) and topic/theme(s) below. *Author Instructions* will be provided upon receipt of this form by the GRC, and will also be available on our website at: [www.geothermal.org](http://www.geothermal.org).

Title(s) of my proposed Technical Program presentation(s) for the GRC 2006 Annual Meeting:

Title	Topic or Theme
Title	Topic or Theme
Title	Topic or Theme

### GEA Geothermal Energy Trade Show

Please send an Exhibitors Packet for the GEA 2006 Geothermal Energy Trade Show.

Name	Company/Organization	
Address	City	
State/Province/Prefecture	Country	Postal Code
Phone	Fax	Email



Return this form by mail or fax to:

**Geothermal Resources Council**

P.O. Box 1350 | Davis, California 95616 | USA

Phone: (530) 758-2360 | Fax: (530) 758-2839

Email: [grc@geothermal.org](mailto:grc@geothermal.org) | Website: [www.geothermal.org](http://www.geothermal.org)