

SAN DIEGO ASSOCIATION OF GEOLOGISTS

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SDAG MEETING ANNOUNCEMENT

Wednesday, March 21, 2007

SIMULATION AND OPTIMIZATION OF THE GUADALUPE VALLEY AQUIFER, BAJA CALIFORNIA

presented by

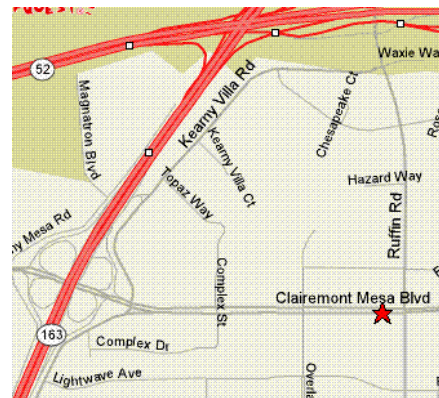
Ruben Campos

Centro de Investigación Científica y de Educación Superior
(CICESE) and SDAG Student Scholarship Award Winner

Where: Giovanni's
9353 Clairemont Mesa Blvd
San Diego, CA 92121
(858) 279-6700

When: **Note the New Times!**
5:30 pm – Social Hour
6:30 pm – Dinner
7:30 pm – Program

Directions: Take the Clairemont Mesa Boulevard exit off the I-15 and head west to Ruffin Road. The restaurant is on the southwest corner of Clairemont Mesa Blvd. and Ruffin Road. Or take the Clairemont Mesa Boulevard exit off the SR 163 and head east to Ruffin Road. The restaurant is on the right at the corner of Clairemont Mesa Blvd. and Ruffin Road.



Dinner: All-you-can-eat pizza, salad, and soda. Beer is available for purchase.

Cost: \$20 per person, \$10 for students, \$5 discount for SDAG members and their guests. Add \$5 if you did not make a reservation.

Reservations: Make your reservation online at www.sandiegogeologists.org or call the SDAG Reservation Hotline at (619) 255-8380, **no later than 12:00 p.m. Monday, March 19th**.

**RESERVATIONS CANNOT BE ACCEPTED AFTER Monday At Noon.
IF YOU DO NOT MAKE A RESERVATION, WE CANNOT GUARANTEE YOU A MEAL.**

2007 EXECUTIVE COMMITTEE

PRESIDENT - David Bloom; *Anteon*; Ph: (619) 571-3470; prez@sandiegogeologists.org

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RUBEN CAMPOS, PHD CANDIDATE, CICESE

José Rubén Campos Gaytán (Rubén Campos) is a Ph.D. candidate in Earth Sciences with a specialization in applied geology (hydrogeology) at the Centro de Investigación Científica y de Educación Superior (CICESE) in Ensenada, B. C., Mexico. For his Ph.D. dissertation, under the supervision of Dr. Thomas Kretzschmar at CICESE, he is conducting a groundwater modeling study of the Guadalupe Valley Aquifer in B.C., Mexico entitled "Simulation and Optimization of the Guadalupe Valley Aquifer". Rubén completed a groundwater modeling study of the Valle do Ojos Negros Aquifer in B.C. for his Master of Science thesis at CICESE, which he completed in 2002. In 1995, Rubén received his Bachelor of Science degree in Civil Engineering at the Universidad Autónoma de Baja California (UABC) in Ensenada. He has presented the results of his research at several scientific meetings and has recently published a paper with T. Kretzschmar entitled "Numerical understanding of regional scale water table behavior in the Guadalupe Valley aquifer, Baja California, Mexico" in Hydrology and Earth System Sciences, which can be found at <http://www.hydrol-earth-syst-sci-discuss.net/3/707/2006/>.



For his Ph.D. dissertation, under the supervision of Dr. Thomas Kretzschmar entitled "Numerical understanding of regional scale water table behavior in the Guadalupe Valley aquifer, Baja California, Mexico" in Hydrology and Earth System Sciences, which can be found at <http://www.hydrol-earth-syst-sci-discuss.net/3/707/2006/>.

Simulation and Optimization of the Guadalupe Valley Aquifer, Baja California

A regional groundwater flow model was developed in order to evaluate the water table behavior in the region of the Guadalupe Valley, in Baja California, Mexico. The State of Baja California has been subject to an increase of the agricultural, urban and industrial activities, implying a growing water-demand. However, the State is characterized by its semi-arid climate with low surface water availability; therefore, an extensive use of groundwater in local aquifer has resulted. Water level measurements indicate there has been a decline in water levels in the Guadalupe Valley for the past 20 years. This study describes the use of groundwater optimization modeling to efficiently allocate the groundwater resources in the Guadalupe Valley. A 2-dimensional groundwater flow was used along with optimization techniques to evaluate the effects of the current groundwater management alternative and to determine the optimal withdrawal rates for a variety of management alternatives in the Guadalupe Valley Aquifer.

For all simulations, the objective of the optimization was to maximize total groundwater withdrawals. Both steady-state and transient calibration were carried out in order to obtain the best possible match to measured levels in the Guadalupe Valley Aquifer. The results of this simulation-optimization are as follows: (1) probably this should be an integrated hydrogeological evaluation that determines the conditions of the groundwater resource and permits planning a management of the Guadalupe Valley Aquifer; (2) a satisfactory match between calculated and measured water levels in the Guadalupe Valley Aquifer.

2007 SDAG MEETING SCHEDULE - Mark your Calendars!

Meetings are usually on the 3rd Wednesday of the month but may change to accommodate speaker and meeting place schedules. Check here for updates!

April 18	Ken Hudnut on LIDAR
May 16	TBA
June 20	TBA

ANNOUNCEMENTS:

The 2007 Annual Meeting of the Association of Environmental and Engineering Geologists (AEG) will be held in the Los Angeles area at the Sheraton Universal Hotel (near Universal Studios). This will be the 50th Anniversary of the founding of the AEG and the meeting theme will revolve around that idea as well as celebrating California Geology. The technical program will focus on a variety of tunnel, fault hazard evaluations, marine geology, and coastal processes, as well as classic engineering geology, environmental geology, and groundwater topics. The 2007 Annual Meeting Planning Committee is currently scheduling several technical sessions, special symposia, short courses, and a teachers' workshop. These will provide opportunities for geologists and other professionals to share in the state-of-the-art and practices. In addition several field trips are planned to be held in conjunction with the meeting. Please place 2007 AEG convention on your calendars September 24 through 28, 2007.

SDAG is sad to announce the passing of Welford "Ford" Evans Garner III on September 22nd, 2006 in Encinitas, CA. due to Advanced Pancreatic Cancer which was just diagnosed in late July. A former Marine, Ford graduated from the SDSU Geology Department in 1980 and spent another two years at SDSU doing Graduate Work on Marine Terraces in North County. While working in San Diego he was employed by Catlin Engineering, Geotechnical Exploration Inc., Shaffer Dixon and Group Delta Consultants with a short period of time spent doing Independent Engineering Geology Consulting. He was a Certified Engineering Geologist in California and Arizona. In 1995 his love of the Southwest Desert, the Great Outdoors and a childhood dream took him to the National Park Service to become a Park Ranger. He was stationed at Great Basin National Park, Death Valley National Park, Mojave National Preserve and the Quartzsite/Yuma areas over the last 10 years. He had recently returned to "Real World Geology" and had accepted a job with the Bureau of Land Management in Kingman, AZ. working on Mining Reclamation Plans. Ford was a Life Member of the NRA, Ham Radio Operator (KF6ILM), had an EMT Certification and also Certifications for Disaster Preparedness thru the National Park Service. He was well known for his meticulous note keeping, precise filing systems, attention to detail and his off the wall quotes, such as "Why rough it when you can smooth it". He will be greatly missed by those of us that knew him. If you would like to make a contribution in Ford's memory it is suggested that the National Park of your choice be selected. For information on donations to the NPS check www.Nationalparks.org and look for the "Make a donation online" tab. And in Ford's final words..... Happy Trails to All.

Association of Environmental and Engineering Geologists

Inland Empire Chapter, Southern California Section

Short Course Announcement "Groundwater and Related Issues"

Short Course, Saturday 10-March-2007, UCR Extension Services

Please contact Extension Center per the announcement at the University of California, Riverside,

Extension Services Office, not AEG: www.extension.ucr.edu or (951) 827-5804

Low cost of \$70 for AEG/IGS Members, \$75 for nonmembers (\$10 for students). Saturday March 10, 2007, 9:00 am to 4:30 pm (includes parking and lunch, program materials).

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JOB OPENINGS!

Southwest Geophysics is a certified small business enterprise, in San Diego, California, specializing in providing geophysical services to environmental and engineering clients. We are currently seeking to fill the following position:

Full-time Project Geophysicist. A minimum of two years experience is required in conducting all aspects of field investigations. The ideal candidate will have strong technical writing skills and experience in data analysis and reporting. B.S. in Geophysics or Geological Sciences is required, M.S. a plus. California State Registration a plus.

Qualified candidate should email resumes, along with a letter of interest to: jessica@southwestgeophysics.com or they may be mailed to our office at 7438 Trade Street, San Diego, CA 92121, Attention: Jessica Parnell

2006/7 CORPORATE SPONSORS - THANK YOU!!

Corporate sponsors provide a significant portion of SDAG's operating and scholarship budget. In addition to monthly recognition for your contribution, you are entitled to a free Internet "link" from [SDAG's Website](#). We also list Corporate Sponsors in our annual SDAG Field Trip Volume. ***Please consider SDAG sponsorship in 2007!***

A special thank you to **Ninyo & Moore** for sponsoring the preparation, duplication, and mailing of the newsletter for 2006 and 2007!

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Katherine Freese	Lee Vanderhurst, Geotechnics, Inc.
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Dr. Sarah Gray - University of San Diego	Geocon, Inc.
David Bloom - General Dynamics Information Technology	

JOB OPENINGS!



URS Corporation, a nationwide, multidisciplinary consulting firm and the largest design firm in the country, has a strong project backlog in San Diego County in the transportation and water resources markets. We are seeking qualified candidates for the following positions for our San Diego office:

Engineering Geologist (Requisition #URS16201): Geologist/Engineering Geologist with 0 to 5 years of experience in consulting engineering firm; preferably with master's degree. Responsible for supervising field explorations, geologic mapping, and report preparation. Should be experienced in logging borings in soil and rock, knowledge of Caltrans investigation procedures a plus.

Geotechnical Engineer (Requisition #URS15584): Civil/Geotechnical Engineer with 0 to 5 years of experience in consulting engineering firm; preferably with master's degree. Responsible for planning field and laboratory programs, engineering analyses, and report preparation. Strong analytical skills and communication skills a must.

URS is an Equal Opportunity Employer and strongly supports diversity in our work force (M/F/V/D). We offer competitive salaries and a comprehensive benefits package.

For immediate consideration, please submit to mike_blackmore@urscorp.com or apply on-line under the Careers section of our website (www.urscorp.com) using the requisition number shown in parentheses above.

Orange County Water District is looking for a Senior Scientist

Incumbent will be responsible for all research activities at the OCWD Field Research Laboratory (FRL). Research activities include multifaceted scientific investigations aimed at improving groundwater percolation of OCWD's recharge facilities. Position involves supervision and organization of activities of one or more part-time or full time R&D staff as well as close interaction with Forebay management and staff.

Master's Degree (or higher) in Hydrogeology; or in Civil Engineering/Environmental Engineering degree with emphasis on hydrogeology and experience in aspects of groundwater recharge is required. Thorough knowledge of principles of hydrogeology as applied to aquifer recharge (by infiltration and injection), basic knowledge of limnology and geo-biology is desired. Incumbent must be capable of designing and carrying out all aspects of scientific experiments in the laboratory and field. Incumbent should possess knowledge of scientific theory and experimental design, basic instrumentation theory, statistics and modeling principles; should be thoroughly skilled in use of PC computers and common PC software used at OCWD (MS Word/Excel/ PowerPoint) for data acquisition/ analysis/ presentation purposes, and ideally should have experience in use of statistical software such as StatGraphics for data analysis and modeling. Incumbent must be capable of analyzing data and inferring conclusions based on scientific principles, ability to write reports, manuscripts and technical documentation, and presenting results of investigations in a concise and professional manner to diverse professionals at OCWD and elsewhere. Incumbent should be comfortable working outdoors as well as in a laboratory setting. A general knowledge of basic mechanical engineering and hydraulic principals is a requirement, as the incumbent will be expected to construct and operate various experimental apparatus (soil columns) related to soil percolation research. Light lifting (20 pounds) is occasionally required to handle samples and apparatus. Should be comfortable working on floating platforms (boats, etc.); knowledge of small boat handling (outboard) is desirable. Possession of excellent organizational skills, capability of maintaining a neat and organized work environment, and be ability to effectively coordinate the activities of up to four people simultaneously. A valid California driver's license is also required.

Salary Range: \$62,562 - \$90,771/year

Please submit OCWD employment application/resume to:

ORANGE COUNTY WATER DISTRICT, Human Resources Department, Job Code: SS107

P. O. Box 8300

Fountain Valley, CA 92728-8300

e-mail: jobs@ocwd.com Go to www.ocwd.com to download an application. The Orange County Water District is committed to a drug-free work place. Pre-employment drug screening is conducted.

TN & Associates, Inc. specializes in environmental services, natural resources, infrastructure engineering, and construction services. Our San Diego office is currently looking to fill the following positions:

Staff Geologist: Geologist to perform office and field assignments for environmental site assessment and remediation projects. Position will involve soil borings, monitoring well installations, soil and water sampling, historical research investigations, data management, construction documentation and construction QA/QC, and report writing. Ability to adapt to both office and field environments a must. OSHA 40-hour training a plus. Periodic travel is required.

Project Geologist: Geologist with 3 to 7 years experience required in conducting all aspects of field investigations including limited site assessments, multi-task remedial investigations and remedial actions with a strong emphasis in technical writing skills. The ideal candidate will have experience in data analysis and reporting. PG registration and OSHA 40-hour training a plus. Work will entail some fieldwork and travel, mainly within California . Experience with government projects (DOD, USACE, AFCEE, Navy and USEPA) landfills and stormwater engineering/compliance a plus.

We offer a competitive salary, benefits package and friendly working environment. Equal Opportunity Employer. Please mail or fax your resume and letter of interest to: T N & Associates, Inc., 2247 San Diego Avenue, Suite 238, San Diego CA 92110 , fax 619-291-8100.

Since 1986, clients have turned to **Ninyo & Moore** for innovative solutions to complex geotechnical and environmental challenges. As a leading geotechnical and environmental sciences engineering and consulting firm, Ninyo & Moore provides specialized services to clients in both the public and private sectors. With offices in Colorado, California, Nevada and Arizona, the firm is fully committed to being responsive, cost-efficient, and thorough in meeting its clients' project needs and objectives.

Ninyo & Moore Geotechnical & Environmental Sciences Consultants has immediate employment opportunities in our Denver, Irvine, Las Vegas, Oakland, Phoenix, and San Diego offices. Positions include Engineers and Geologists of all levels, including **Staff Engineers and Geologists, Project Engineers and Geologists, Staff and Project Environmental Scientists, Chief Geotechnical Engineer, and Construction Field and Laboratory Technicians.**

The successful candidates should have a BS or MS degree for staff-level positions and five years or more of experience for project to senior-level positions. The candidates should be detailed oriented and have excellent verbal and written communication skills. Professional Engineer (PE) and/or Professional Geologist (PG) registrations preferred.

Ninyo & Moore offers a competitive salary, excellent benefits and an opportunity for professional growth. Please visit our website for complete and detailed job descriptions and to submit your resume in

confidence at www.ninyoandmoore.com/careers or mail to our corporate office at 5710 Ruffin Road, San Diego, CA 92123, Attention: Human Resources. EOE



Hargis + Associates, Inc., a San Diego based consulting firm specializing in **hydrogeology and engineering**, and **SDAG Corporate Sponsor** currently has opportunities in our San Diego, California and Mesa Ari office. We are currently looking to fill the following positions:

Staff Engineer: Candidate would have a B.S. Degree in Chemical, Civil, or Mechanical Engineering, EIT Certification and/or a Masters Degree is a plus. Only entry level candidates will be considered. Candidate should possess strong writing and presentation skills. Position will be based in San Diego, California, and will require some travel and field work. OSHA 40-hour training preferred, but not mandatory.

Hydrogeologist: Candidate would have a B.S. Degree in Geology and M. S. Degree would be a plus. Entry level position, with work including soil and groundwater sampling, well installation, aquifer test analysis, and report preparation. Candidate should possess strong writing and presentation skills. Candidate with Hydrogeology coursework or GIS background is a positive. Position will be based in San Diego, and will require travel and field work. Only entry level candidates will be considered. Valid driver's license and U.S. Citizenship required. OSHA 40-hour training preferred, but not mandatory.

Hargis + Associates offer competitive salaries and benefits, and a challenging work atmosphere. Hargis + Associates in an Equal Opportunity Employer. To learn more about Hargis + Associates, please visit our website at: www.hargis.com.

No phone calls please. Qualified candidates should send resumes, along with a cover letter summarizing experience and salary requirements to: Hargis + Associates, Inc., Attention: Phil Rosenberg, 2365 Northside Drive, Suite C-100, San Diego, CA 92108

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegoeologists.org

CALL FOR PAPERS:

*"Hydrogeology and Environmental Issues
in the Guadalupe Valley
and the Northern Coast of Baja California, Mexico"*

*To be published in association with the
2007 San Diego Association of Geologists
Annual Field Trip*

October 13th-14th, 2007

<http://www.sandiegoeologists.org/Publications.html>

Co-editors:

Sarah Gray, Vice President, SDAG

Marine and Environmental Studies Department, University of San Diego
(sgray@sandiego.edu; 619-260-4098)

Thomas Kretzschmar

Depto. de Geología,
Centro de Investigación Científica y de Educación Superior de Ensenada
(CICESE)

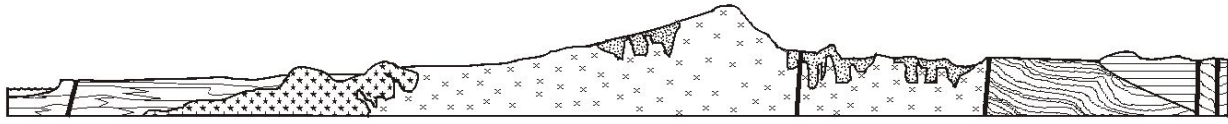
(tkretzsc@cicese.mx; 646 175 0500 Ext. 26047)

SCOPE: Papers addressing topics related to hydrogeology, geology, environmental issues, geography, wineries, and history of the Guadalupe Valley or the northern coast of Baja California.

TIMELINE:

- Email a statement of interest & topic to the co-editors as soon as possible
- Manuscripts due: April 15th, 2007
- Revised manuscripts due: July 1st, 2007
- Target publication date: late September, 2007

For further information, contact sgray@sandiego.edu or tkretzsc@cicese.mx



SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegogeologists.org

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NEW POLICY: Your membership dues include email delivery of the monthly newsletter. If you wish to receive a hardcopy of the newsletter through US Mail, please add \$10.00 to your membership dues.

Dues:	_____ Student Member (email delivery only)	\$ 5.00
(check choice)	_____ Regular Member (email delivery only)	\$ 25.00
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Date: _____ Check for change of mailing address:

Please enclose a check payable to SDAG, and mail to:

Sarah Gray
Marine and Environmental Studies Department
University of San Diego
5998 Alcalá Park
San Diego, CA 92110

**San Diego Association of Geologists
c/o Scott Snyder
Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123**