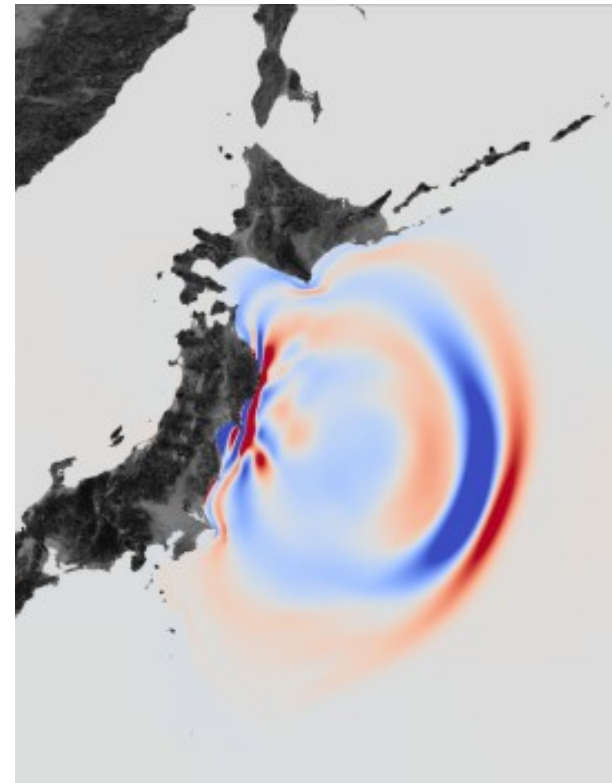# Simulation and Supercomputing in the Geosciences 2012

Casa Munras Hotel

700 Munras Avenue

Monterey, CA 93940

831-375-2411

Interesting Facts

- The Casa Munras hotel is situated around the original grounds of the Hacienda of Don Esteban Munras (the last Spanish diplomat to California).

- Monterey was the capital of Alta California from 1777 to 1846 under both Spain and Mexico.

- G2S3: The 1st was held in Brindisi Italy (2010) on Numerical Linear Algebra. The 2nd was held in Vancouver Canada (2011) on Waves and Imaging. Welcome to the 3rd one on Simulation and Supercomputing in the Geosciences.

Organizers

Michael Bader (Munich Technical University)

Jörn Behrens (University of Hamburg)

Frank Giraldo (Naval Postgraduate School)

Randy LeVeque (University of Washington)

Lecturers/Assistants:

Alex Bauer (Munich Technical University)

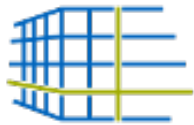Nicole Beisiegel (University of Hamburg)

Shiva Gopalakrishnan (Naval Postgraduate School)

Michal Kopera (Naval Postgraduate School)

Haley Lane (Naval Postgraduate School)

Kyle Mandli (Univ. Texas)

Thanks to Our Sponsors

Important Information

- Registration will occur during the first break today (10:30am).
- Registration Fee: We have been able to lower the fee from $150 to $50 (cash); we can provide a receipt if needed.
- Addendums to the program will be announced at 0900 and/or 1730.
- Anyone with any allergies? Food, feathers (pillows), etc. please let us know.
- Reimbursement for Travel:
  - Those contacted by Jonathan Lim please meet me in Andalucia II on Monday August 6th at 0830 for some important information.
  - Those funded by Uni HH, Metstrom (see Jorn Behrens), MAC (see Michael Bader), PIMS (see Randy LeVeque).
- We will check computer accounts, VM, etc. during today's tutorial (last session of the afternoon today).

Meals

- Breakfast:
  - Light Breakfast served daily (except on Sat. August 4th and Sun. August 5th) at 0800-0900 in Andalucia I
  - Hearty Breakfast served on Sat. August 4th and Sun. August 5th at 0830-1030* in Marbella

- Lunch
  - Lunch served daily (except on Sat. August 4th and Sun. August 5th) at 1230-1330 in Esteban.

- Dinners
  - Monday July 30 at 1800-2000 in Andalucia Ballroom (Tapas and Poster session)
  - Thursday August 2nd at 1800-20000 in Marbella (Paella dinner and Talk by Sven Harig)
  - Monday August 6th at 1800-2000 in Marbella (Paella dinner and Talk by Kyle Mandli)
  - All other evenings we will organize **dinner groups** to go out to dinner and discuss different topics; we will announce topics before the last session of the day. We are open to suggestions for topics. Note this is optional but highly encouraged.

Student Participation

- Poster Session (tonight); two prizes will be awarded for the best posters.

- Tutorials (1st and 2nd weeks)

- Projects (2nd week)

- Presentations (Friday August 10)

- Dinner Groups: participants cover their costs but will make sure we go to relatively inexpensive places (e.g., Trader Joe's nearby and other places for good inexpensive meals).

- Social Events (Sunday August 5):

Social Events

- Saturday August 4th: Free day (on your own). However, we encourage you to organize groups for social events (e.g., going to San Fran, Kayaking in the bay, Monterey Bay Aquarium).

- Excursion (Whale Watching and exploring Monterey Bay):
  - Sunday August 5th at 10:00am
  - We need to know who is interested in going (tell us at registration).

- Picnic on the Beach :
  - Sunday August 5th in the evening (more details later)
  - Sweaters/Jackets

Local Information

- [Map of Monterey](#)

G2S3 Program

- Lecture Notes: can be found at http://www.mac.tum.de/g2s3/priv/
  - Login: g2s3
  - Password: Tsu%ami$im
- TSS = Tsunami and Storm Surge Modeling
- NMW = Numerical Methods for Wave Propagation
  - Finite Volume Methods
  - Discontinuous Galerkin Methods
- SSGS = Simulation Software and Supercomputing in the Geosciences
  - GeoClaw (Geosciences Conservation Laws)
  - DGCOM (Discontinuous Galerkin Coastal Ocean Model)
  - CUDA (Compute Unified Device Architecture)

Program Outline: Week 1

Time	Mon 7/30	Tues 7/31	Wed 8/1	Thurs 8/2	Fri 8/3	Sat 8/4	Sun 8/5
0900-1030	Intro/ Overview	NMW 2	TSS 3	TSS 4	TSS 5	Breakfast 8:30-10:30	Breakfast 8:30-10:30
1100-1230	TSS 1	TSS 2	NMW 4	NMW 5	NMW 6		Whale Watching*
1400-1530	NMW 1	NMW 3	TSS T2	TSS T3	TSS 6		
1600-1730	TSS T1	NMW T1	NMW T2	NMW T3	NMW T4		Picnic on Beach*
1800-2000	Poster Session: Andalucia	Dinner Groups: TBA	Dinner Groups: TBA	Paella Dinner: Marbella	Dinner Groups: TBA	Dinner Groups: TBA	

Program Outline: Week 2

Time	Mon 8/6	Tues 8/7	Wed 8/8	Thurs 8/9	Fri 8/10
0900-1030	SSGS 1	NMW 7	TSS 7	NMW 8	Presentations
1100-1230	SSGS 2	SSGS 3	SSGS 4	TSS 8	Presentations
1400-1530	Project	Project	Project	Project	Final Break
1600-1730	Project	Project	Project	Project	
1800-2000	Paella Dinner: Marbella	Dinner Groups: TBA	Dinner Groups: TBA	Dinner Groups: TBA	

Organizers' Comments

- Michael Bader
- Jörn Behrens
- Frank Giraldo
- Randy LeVeque

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- Jörn Behrens
- ~~Frank Giraldo~~
- Randy LeVeque

Participants' Self-Introductions

- State your name (nickname that you prefer)
- University (name and location)
- Department where you study

Important Information

- Logging onto the MathGPU:
  - ssh student#@205.155.65.163
  - Password: ABC123