

# Curriculum Vitae

## Jessica M. Kleiss

Scripps Institution of Oceanography  
University of California, San Diego  
9500 Gilman Dr. mc. 0213  
La Jolla, CA 92037-0213

email: jkleiss@ucsd.edu  
phone: 858-534-0807

### EDUCATION

B.S. in Earth, Atmospheric, and Planetary Sciences 1996-2000  
B.S. in Mathematics  
Massachusetts Institute of Technology

Ph.D. in Oceanography. Expected Summer / Fall 2008  
Airborne Measurement of Surface Wave Breaking Evolution  
Advisor: Professor W. Kendall Melville  
Scripps Institution of Oceanography, University of California, San Diego

### PROFESSIONAL EXPERIENCE

#### Research Interests

Air-sea interaction, upper ocean dynamics,  
remote sensing techniques, image processing  
ocean surface wave dynamics, wave breaking  
boundary layer meteorology, synoptic meteorology

#### Research Cruises & Field work

R/V Sproul cruise, 2002, Oct  
Santa Barbara Channel  
Deployment and recovery of a prototype buoy.

R/V Melville, WAKES experiment, 2003, June  
San Diego – Honolulu  
Investigation of steady wave breaking and bubble production from ship wakes

NSF Gulf of Tehuantepec Experiment, 2004, Feb  
Oaxaca, Mexico  
Airborne remote sensing of the ocean surface, waves, and boundary layer meteorology  
under strong winds

## HONORS AND AWARDS

Physical Oceanography Dissertation Symposium (PODS IV) participant	2006
Outstanding student presentation (poster), American Geophysical Union	2005
Outstanding student presentation (talk), American Geophysical Union	2004
NSF Graduate Student Research Fellowship	2002-2007
DOD National Defense Science and Engineering Graduate Fellowship	2002-2005
DOE Computational Science Graduate Fellowship	2002
Outstanding Teaching Award, Experimental Studies Group (ESG), MIT	2000
Affinity Plus Scholarship	1999
John A Wickham Scholarship, Armed Forces Communications and Electronics Association	1999
American Meteorological Society Paul H Kutschenreuter Award	1999
Thomas D. Cabot Scholarship, MIT	1996-1999

## TEACHING

### **Graduate level teaching**

Scripps Institution of Oceanography Laboratory Assistant. Developed and led laboratory experiments SIO202A Wave Physics	2002-2006
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### **Undergraduate level teaching**

Experimental Study Groups, MIT Instructor. Led the course and projects 18.01 Calculus of a single variable 18.02 Vector Calculus	1999 1998-2000
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### **High school teaching**

Jefferson High School, Bloomington MN Mathematics teacher 9 <sup>th</sup> -11 <sup>th</sup> grade Algebra, Geometry, Statistics, and Basic math.	2000-2001
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## SERVICE

Lecturer and activity leader for Better Education for Women in Science and Engineering (BeWise) in Climate Science, 7 <sup>th</sup> -8 <sup>th</sup> grade	2008
Gave a lab tour and science demo for Montessori school - 1 <sup>st</sup> grade	2008
Invited lecturer on tsunamis for OASIS senior citizens program	2005
Expanding Your Horizons, Workshop Leader for 7 <sup>th</sup> -9 <sup>th</sup> grade girls	2005
Organized summer exchange seminar series between Scripps and CICESE in Ensenada, Mexico (Centro de Investigacion Cientifica y Estudios Superiores de Ensenada)	2005
Graduate student representative for Physical Oceanography	2002-2004
National Ocean Science Bowl in San Diego, Science Judge	2002, 2003

### Reviewer for

Journal of Physical Oceanography

### Membership in Professional Societies

American Meteorological Society, American Geophysical Union

## PUBLICATIONS

Melville WK, L Romero, **JM Kleiss**. 2005. Extreme Waves in the Gulf of Tehuantepec. *Aha Hulikoa Proceedings* p. 23-28.

**Kleiss JM**, WK Melville, Airborne remote sensing of surface wave breaking, *Journal of Oceanic and Atmospheric Technology*, in preparation.

**Kleiss JM**, L Romero, WK Melville, Measurements of the fetch dependence of surface wave breaking, *Journal of Physical Oceanography*, in preparation.

## PRESENTATIONS

### Major conferences only

**Kleiss JM**, WK Melville, J Lasswell, Breaking waves in hurricane Isabel, *American Meteorology Society (AMS) 26th Conference on Hurricanes*, Miami, FL, May 2004

**Kleiss JM**, WK Melville, Breaking waves in the Gulf of Tehuantepec *American Geophysical Union (AGU) General Assembly*, San Francisco, CA, Dec 2004

**Kleiss JM**, WK Melville, L Romero, Observaciones de video de oleaje rompiente en GOTEX. *Primer Taller de Proyectos en el Golfo de Tehuantepec: (Workshop on Studies in the Gulf of Tehuantepec)*, Puerto Angel, Oaxaca, Mexico, April 2005

**Kleiss JM**, L Romero, WK Melville, Airborne video observations of wave breaking statistics, *American Geophysical Union (AGU) General Assembly*, San Francisco, CA, Dec 2005

**Kleiss JM**, L Romero, WK Melville, The Contribution of wave breaking to air-sea interaction, *American Meteorology Society (AMS) General Assembly*, Atlanta Georgia, Jan 2006

**Kleiss JM**, L Romero, WK Melville, Airborne video observations of fetch-limited deep water breaking waves, *American Geophysical Union (AGU) Ocean Sciences meeting*, Honolulu Hawaii, Feb 2006

**Kleiss JM**, L Romero, WK Melville, Wave breaking kinematics in fetch-limited sea, *Waves in Shallow Environments (WISE) meeting*, Lorne, Australia, April 2007

## REFERENCES

W. Kendall Melville  
Professor, Scripps Institution of Oceanography

Carl Friehe  
Professor, University of California, Irvine

Robert Pinkel  
Professor, Scripps Institution of Oceanography

Jerome A. Smith  
Research Oceanographer, Scripps Institution of Oceanography