

Curriculum Vitae

JOHN WAKABAYASHI

**Associate Professor of Geology, California State University, Fresno, Department of Earth and Environmental Sciences, 2576 E. San Ramon Ave., Mail Stop ST-24, Fresno, CA 93740-8039
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EDUCATION

A.B. Geology, University of California, Berkeley, 1980; Ph.D. Geology, University of California, Davis, 1989

REGISTRATION

California Professional Geologist No. 5890

PROFESSIONAL SOCIETY MEMBERSHIP

American Geophysical Union; Geological Society of America, Chair of 2013 Cordilleran Section Meeting; Association of Engineering Geologists (member, continuing education committee); Northern California Geological Society.

EMPLOYMENT

8/2010 to present: Associate Professor, California State University, Fresno

8/2005 to 8/2010: Assistant Professor, California State University, Fresno

1993 to 2005: Independent geological consultant: engineering and environmental geology, neotectonics/seismic hazard, independent research.

2005: Lecturer, University of California, Berkeley: taught field course with theme of geologic transect of California

1998-1999: Lecturer, California State University, Hayward: taught structural geology winter quarter in both years

1998: Lecturer, University of California, Berkeley: taught structural geology spring semester

1996: Lecturer, California State University, Hayward: taught graduate seminar on evolution of the San Andreas fault system

1989 to 1992 Geologist, Earth Sciences Associates, Inc., Palo Alto, CA; Seismotectonic analysis and neotectonics; probabilistic seismic hazard analysis; petrographic analysis; slope stability; project work included investigations for water resources (dams, pipelines, tunnels, conjunctive use), hydroelectric and environmental projects

1983 to 1988: Teaching assistant, UC Davis Geology Department; Courses T.A.'d include field geology, structural geology, tectonics, mineralogy, optical mineralogy, metamorphic petrology and igneous petrology

1981 to 1982: Geologist, Geotechnical Consultants Inc., San Francisco, CA. Performed geologic mapping, core logging, petrographic analysis of Franciscan Complex rocks in San Francisco as part of geotechnical study for a cross-town sewer tunnel.

1980: Geologist, Union Carbide Corporation, Grand Junction, CO and Missoula, MT. Performed geochemical, geophysical studies and geologic prospecting for hard rock uranium deposits in Colorado and Montana.

GRADUATE STUDENT AND SENIOR THESIS SUPERVISION

M.S. thesis advisor of Chris Smart (M.S. 2008), Emily Davis (M.S. 2010), Chris Kemp, Andy Shriver, Nobuaki Masutubo, Maya Garcia, Jennifer Jackson, Yvan Mendoza, Dennis Eck, Jennifer Ratliff, Shannon Mark, and Paul Troop. I am serving on the thesis committee of Chad Carlson, Robert Koons, and Anna Brody, and I have served on the master's thesis committee of Anna Brody, (M.S. 2011), Doug DeFlicht (M.S. 2010), Jorge Baca (M.S. 2009), Rohit Sharma (M.S., 2008), Sana Alsaoudi (M.S. 2008), and Marlon Jean (M.S. 2007). I served on the PhD thesis committee of David Shimabukuro (UC Berkeley, 2011). I am serving as senior thesis advisor for Steffany Aguilar, and have served as senior thesis advisor for Miguel Cisneros, Brian Hitz, Yvan Mendoza, Rachel Prohoroff, Chad Carlson, Jared Long, Joey Luce, Wayne Nick, Gary Smith, Barbara Jessup, Nick Smaira, Jerrod Lessel, Dillon Kass, Evalin Herleman and Donna Parkansky. Served on thesis committee of David Shimabukuro, Ph.D. 2011, Dept. Earth and Planetary Science, Univ. California Berkeley, Scott Dickerman, M.S., 1999, Department of Geology, California State University, Hayward; and Ron Rubin, M.S., 2002, Department of Geology, San Jose State University.

AWARDS/HONORS

Recognized as Outstanding Reviewer (October 2006) by the Geological Society of America. Keynote speaker, International Conference on tectonics of strike-slip restraining and releasing bends in continental & oceanic settings (Geological Society of London, London, UK, Sept. 28-30, 2005), invited as keynote speaker, Geological Society of America Penrose Conference on the Central Asian Orogenic Belt, Urumqi, China, September 2011.

SCIENTIFIC EDITORSHIP

Currently Associate Editor for Geological Society of America Bulletin, serving my third consecutive 3-year term that began in 2010. Edited book "Melanges: Processes of formation and societal significance": Geological Special Paper 480; this includes 13 separate peer-reviewed papers. Currently guest editor of special issue of Lithosphere on subduction initiation and termination and guest editor of Lithosphere volume of papers on the Central Asian Orogenic Belt and comparison to Circum Pacific orogens.

SCIENTIFIC PEER REVIEW

Reviewed manuscripts for American Journal of Science, Bulletin of the Seismological Society of America, California Division of Mines and Geology Special Publications, Canadian Journal of Earth Sciences, Contributions to Mineralogy and Petrology, *Eclogae Geologicae Helveticae*, *G-Cubed*, *Geology*, Geological Society of America Bulletin, Geological Society of America Special Papers, *Gondwana Research*, *The Island Arc* (journal of the Geological Society of Japan), *Journal of the Geological Society of London*, Geological Society of London Special Publication, *Journal of Geology*, *Journal of Geophysical Research*; *Journal of Metamorphic Geology*, *Journal of Structural Geology*, *Lithos*, *Lithosphere*, *Revista Geologica de Chile*, *Tectonics*, *Tectonophysics*, and a book on Western Pacific Subduction Complexes published by Springer. Reviewed grant proposals for the British Council, three different National Science Foundation programs (Structure & Tectonics, Petrology and Geochemistry, and ODP), the Petroleum Research Fund, and National Earthquake Hazard Reduction Program. Reviewed lay persons' geology book for University of California Press.

PUBLICATIONS: * indicates student advisee

- Wakabayashi, J., in press, Subducted sedimentary serpentinite mélanges: Record of multiple burial-exhumation cycles and subduction erosion: *Tectonophysics*. doi: 10.1016/j.tecto.2011.11.006
- Osozawa, S., Shinjo, R., Armid, A., Watanabe, Y., Horiguchi, T., and Wakabayashi, J., in press, Paleogeographic reconstruction of the 1.55 Ma synchronous isolation of the Ryukyu Islands, Japan, and Taiwan and the inflow of the Kuroshio warm current: *International Geology Review*.
- Ghatak, A., Basu, A.R., and Wakabayashi, J., 2011, Element mobility in subduction metamorphism: Insight from metamorphic rocks of the Franciscan Complex and Feather River ultramafic belt, California: *International Geology Review*, doi:10.1080/00206814.2011.567087
- Wakabayashi, J., and Dilek, Y., 2011, Editors, *Mélanges: Processes of Formation and Societal Significance*, Geological Society of America Special Paper 480, doi : 10.1130/2011.2480, 277 pp.
- Wakabayashi, J., 2011, *Mélanges of the Franciscan Complex, California: Diverse structural settings, evidence for sedimentary mixing, and their connection to subduction processes*: in Wakabayashi, J., and Dilek, Y. eds. *Mélanges: Processes of Formation and Societal Significance*, Geological Society of America Special Paper 480, p. 117-141. doi: 10.1130/2011.2480(05)
- Wakabayashi, J., and Dilek, Y., 2011, Introduction: Characteristics and tectonic settings of mélanges, and their significance for societal and engineering problems: in Wakabayashi, J., and Dilek, Y. eds. *Mélanges: Processes of Formation and Societal Significance*, Geological Society of America Special Paper 480, p.v-x. doi: 10.1130/2011.2480(00)
- Dumitru, T.A., Wakabayashi, J., Wright, J.E., and Wooden, J.L., 2010, Early Cretaceous (ca. 123 Ma) transition from nonaccretion to voluminous sediment accretion within the Franciscan subduction complex: *Tectonics*, v. 29, TC5001, doi: 10.1029/2009TC882542
- Wakabayashi, J., Ghatak, A., and Basu, A.R., 2010, Tectonic setting of supra subduction zone ophiolite generation and subduction initiation as revealed through geochemistry and regional field relationships: *Geological Society of America Bulletin*, v. 122, p. 1548-1568 doi: 10.1130/B30017.1
- Snow, C.A., Wakabayashi, J., Ernst, W.G., and Wooden, J.L., 2010, SHRIMP-based depositional ages of Franciscan metagraywackes, west-central California: *Geological Society of America*, v. 122, p. 282-291; doi:10.1130/B26399.1
- Smart*, C.M., and Wakabayashi, J., 2009, Hot and deep: Rock record of subduction initiation and exhumation of high-temperature, high-pressure metamorphic rocks, Feather River ultramafic belt, California: *Lithos*, v. 113, p. 292-305, doi:10.1016/j.lithos.2009.06.012
- Wakabayashi, J., 2008, Franciscan Complex, California: Problems in recognition of melanges, and the gap between research knowledge and professional practice: *Proceedings of the 2008 Conference of the American Rock Mechanics Association*, San Francisco (published online).
- Wakabayashi, J., and Dumitru, T.A., 2007, $^{40}\text{Ar}/^{39}\text{Ar}$ ages from coherent high-pressure metamorphic rocks of the Franciscan Complex, California: Revisiting the timing of metamorphism of the world's type subduction complex: *International Geology Review*, v. 49, p. 873-906.
- Wakabayashi, J., 2007, Step-overs that migrate with respect to affected deposits: Field characteristics and speculation on some details of their evolution: in Cunningham, W.D., and Mann, P., eds. *Tectonics of strike-slip releasing and restraining bends in continental and oceanic settings*. Geological Society of London Special Publication 290, p. 169-188

- Tsujimori, T., Matsumoto, K., Wakabayashi, J., and Liou, J.G., 2006, Franciscan eclogite revisited: Reevaluation of P-T evolution of tectonic blocks from Tiburon Peninsula, California, USA: *Mineralogy and Petrology*, v. 88, p. 243-267.
- Moores, E.M., Wakabayashi, J., Unruh, J.R., and Waechter, S., 2006, A transect spanning 500 million years of active plate margin history: Outline and field trip guide: in Prentice, C.S., Scotchmoor, J.G., Moores, E.M., and Kiland, J.P., eds., 1906 San Francisco Earthquake Centennial Field Trip Guides: Field trips associated with the 100th Anniversary Conference, 18-23 April 2006, San Francisco, CA: Geological Society of America Field Trip Guide 7, p.373-413; doi: 10.1130/2006.1906SF(20).
- Saha, A., Basu, A.R., Wakabayashi, J., and Wortman, G.L., 2005, Geochemical evidence for subducted nascent arc from Franciscan high-grade tectonic blocks: *Geological Society of America Bulletin*, v. 117, p. 1318-1335.
- Wakabayashi, J., 2005, Franciscan Complex and Coast Range Ophiolite, eastern margin of San Francisco Bay, California: Major components of the former convergent plate boundary: in Stevens, C., and Cooper, J., eds. *Mesozoic tectonic assembly of California Pacific Section, SEPM, Book 96*, p. 1-20.
- Wakabayashi, J., 2004a, Contrasting settings of serpentinite bodies, San Francisco Bay area, California: Derivation from the subducting plate vs. mantle hanging wall: *International Geology Review*, v. 46, p. 1103-1118.
- Wakabayashi, J., and Medley, E.W., 2004, Geological characterization of melanges for practitioners: *Felsbau* v. 22, no. 5, p. 10-18.
- Wakabayashi, J., 2004b, Tectonic mechanisms associated with P-T paths of regional metamorphism: alternatives to single-cycle thrusting and heating: *Tectonophysics*, v. 392, p. 193-218.
- Wakabayashi, J., Hengesh, J.V., and Sawyer, T.L., 2004, Four-dimensional transform fault processes: progressive evolution of step-overs and bends: *Tectonophysics*, v. 392, p. 279-301.
- Anczkiewicz, R., Platt, J.P., Thirlwall, M.F., and Wakabayashi, J., 2004, Franciscan subduction off to slow start: Evidence from high-precision Lu-Hf garnet ages on high-grade blocks: *Earth and Planetary Science Letters*, v. 225, p. 147-161.
- Harrison, S., Safford, H., and Wakabayashi, J., 2004, Does age of exposure of serpentinite explain variation in endemic plant diversity in California? *International Geology Review*, v. 46, p. 235-242.
- Wakabayashi, J., and Dilek, Y., 2003, What constitutes "emplacement" of an ophiolite?: mechanisms and relationship to subduction initiation and formation of metamorphic soles: in Dilek, Y., and Robinson, P.T., eds., *Ophiolites in Earth history*, Geological Society of London Special Publication 218, p. 427-447.
- Moores, E.M., Wakabayashi, J., and Unruh, J.R., 2002, Crustal scale cross-section of the US Cordillera, California and beyond, its tectonic significance, and speculations on the Andean orogeny: *International Geology Review*, v. 44, p. 479-500.
- Wakabayashi, J., and Sawyer, T.L., 2001, Stream incision, tectonics, uplift, and evolution of topography of the Sierra Nevada, California: *Journal of Geology*, v. 109, p. 539-562.
- Wakabayashi, J., and Dilek, Y., 2000, Spatial and temporal relations between ophiolites and their subophiolitic soles: A test of models of forearc ophiolite genesis: in Dilek, Y., Moores, E.M., Elthon, D., and Nicolas, A., eds., *Ophiolites and oceanic crust: New insights from field studies and ocean drilling*, Geological Society of America Special Paper 349, p. 53-64.
- Wakabayashi, J., and Sawyer, T.L., 2000, Neotectonics of the Sierra Nevada and the Sierra Nevada-Basin and Range Transition, California, with field trip stop descriptions for the northeastern Sierra Nevada: in Brooks, E.R., and Dida, L.T., eds., *Field guide to the geology and tectonics of the northern Sierra Nevada*, California Division of Mines and Geology Special Publication 122, p. 173-212.
- Wakabayashi, J., 1999a, Distribution of displacement on, and evolution of, a young transform fault system: the northern San Andreas fault system, California: *Tectonics*, v. 18, p. 1245-1274
- Wakabayashi, J., 1999b, The Franciscan Complex, San Francisco Bay area: A record of subduction processes: in Wagner, D.L., and Graham, S. A., eds. *Geologic field trips in northern California*, California Division of Mines and Geology Special Publication 119, p. 1-21.
- Wakabayashi, J., 1999c, Subduction and the rock record: Concepts developed in the Franciscan Complex, California: in Sloan, D., Moores, E.M., and Stout, D. eds., *Classic Cordilleran Concepts: A View From California*, Geological Society of America Special Paper 338, p. 123-133.
- Moores, E.M., Dilek, Y., and Wakabayashi, J., 1999, California terranes: in Sloan, D., Moores, E.M., and Stout, D. eds., *Classic Cordilleran Concepts: A View From California*, Geological Society of America Special Paper 338, p. 227-234.
- Wakabayashi, J., and Sawyer, T.L., 1998, Paleoseismic investigation of the Miller Creek fault, eastern San Francisco Bay area, California: Final Technical Report, U.S. Geological Survey National Earthquake Hazards Reduction Program Fiscal Year 1997, Award No. 1434-HQ-97-GR-03141.
- Wakabayashi, J., 1996, Tectono-metamorphic impact of a subduction-transform transition and implications for interpretation of orogenic belts: *International Geology Review*, v.38, p. 979-994.
- Working Group on Northern California Earthquake Potential (Wakabayashi is one of 29 members), 1996, Database of potential sources for earthquakes larger than magnitude 6 in northern California: U.S. Geological Survey Open File Report 96-705, 53pp.

- Buising, A.V., and Wakabayashi, J., 1996, Late Cenozoic structures between San Leandro Reservoir and Dublin Canyon, eastern San Francisco Bay area, California: in Jayko, A.S., and Lewis, S.D., compilers, *Toward Assessing the Seismic Risk Associated with Blind Thrust Faults: U.S. Geological Survey Open File Report 96-267*, p. 119-126.
- Hengesh, J.V., Wakabayashi, J., and Nolan, J.M., 1996, Paleoseismic investigation of the Serra fault, San Francisco peninsula, California: Final Technical Report, U.S. Geological Survey National Earthquake Hazards Reduction Program Fiscal Year 1995, Award No. 1434-95-G-2549
- Wakabayashi, J., and Hengesh, J.V., 1995, Distribution of late Cenozoic displacement on the San Andreas fault system, northern California: in Sangines, E.M., Andersen, D.W., and Buising, A.W., eds., *Recent geologic studies in the San Francisco Bay Area, Pacific Section, SEPM (Society for Sedimentary Geology)*, Book. 76, p.19-30
- Hengesh, J.V., and Wakabayashi, J., 1995, Dextral translation and progressive emergence of the Pleistocene Merced basin and implications for timing of initiation of the San Francisco Peninsula segment of the San Andreas fault: in Sangines, E.M., Andersen, D.W., and Buising, A.W., eds., *Recent geologic studies in the San Francisco Bay Area, Pacific Section, SEPM (Society for Sedimentary Geology)*, Book 76, p.47-54
- Wakabayashi, J., and Unruh, J.R., 1995, Tectonic wedging, blueschist metamorphism, and exposure of blueschist: are they compatible?: *Geology*, v. 23, p. 85-88
- Hengesh, J.V., and Wakabayashi, J., 1995, Quaternary deformation between Coyote Point and Lake Merced on the San Francisco peninsula: Implications for evolution of the San Andreas fault: Final Technical Report, U.S. Geological Survey National Earthquake Hazards Reduction Program Fiscal Year 1994, Award No. 1434-94-G-2426
- Wakabayashi, J., and Smith, D.L., 1994, Evaluation of recurrence intervals, characteristic earthquakes and slip rates associated with thrusting along the Coast Range-Central Valley geomorphic boundary, California: *Bulletin of the Seismological Society of America*, v. 84, p.1960-1970
- Wakabayashi, J., Smith, D. L., and Hamilton, D. H., 1992, The Miller Creek Fault and related structures: Neogene kinematics of a potentially active thrust system in the East Bay Hills, California: in Borchardt, G., ed., *Proceedings of the 2nd Conference on Earthquake Hazards in the eastern San Francisco Bay Area, Calif. Div. Mines and Geology Special Publication 113*, p. 345-354.
- Volpe, R. L., Kissick, C. M., and Wakabayashi, J., 1992, Seismic hazard in the Sacramento-San Joaquin Delta Region, California: insight from probabilistic seismic risk analyses: in Borchardt, G., ed., *Proceedings of the 2nd Conference on Earthquake Hazards in the eastern San Francisco Bay Area, Calif. Div. Mines and Geology Special Publication 113*, p. 525-534.
- Wakabayashi, J., 1992, Metamorphism and tectonic origin of Franciscan metabasites and a field trip guide to three localities in the San Francisco Bay area: in Schiffman, P., and Wagner, D. L., eds., *Field Guide to the Geology and Metamorphism of the Franciscan Complex and Western Metamorphic Belt of Northern California, Calif. Div. Mines and Geology Special Publication 114*, p. 1-11.
- Wakabayashi, J., 1992, Nappes, tectonics of oblique plate convergence, and metamorphic evolution related to 140 million years of continuous subduction, Franciscan Complex, California: *Journal of Geology*, v. 100, p. 19-40
- Wakabayashi, J., 1990, Counterclockwise P-T-t paths from amphibolites, Franciscan Complex, California: relics from the early stages of subduction zone metamorphism: *Journal of Geology*, v. 98, p. 657-680.
- Harper, G. D., Grady, K., and Wakabayashi, J., 1990, A structural study of a metamorphic sole beneath the Josephine ophiolite, western Klamath terrane, California-Oregon: *Geol. Soc. Amer. Special Paper 255*, p. 379-396.
- Wahrhaftig, C. and Wakabayashi, J., 1989, The Franciscan Complex: introduction & The Franciscan Complex: tectonostratigraphic terranes & The Franciscan Complex: Basalts: in Wahrhaftig, C. and Sloan, D., eds. *Geology of San Francisco and vicinity: Int. Geol. Congress Field Trip Guide T105*, p. 5-6 & p. 6-9
- Wakabayashi, J., 1989, Baker Beach amphibolite & Ring Mtn. amphibolites: Counterclockwise P-T paths in Franciscan amphibolites: in Wahrhaftig, C. and Sloan, D., eds. *Geology of San Francisco and vicinity: Int. Geol. Congress Field Trip Guide T105*, p. 42-44 & p. 45-46.
- Wakabayashi, J., and Moores, E. M., 1988, Evidence for the collision of the Salinian Block with the Franciscan subduction zone: *Journal of Geology*, v. 96, p. 245-253.

In review, revision, or acceptance pending:

- Hitz*, B., and Wakabayashi, J., High-pressure metamorphic rocks in otherwise unmetamorphosed mélangé in a basal forearc basin setting: Implications for sedimentation and metamorphic rock exhumation along a long-lived subduction zone: revised and resubmitted, *Tectonophysics*
- Prohoroff*, R.E., and Wakabayashi, J., Sandstone-matrix olistostrome deposited on intra-subduction complex serpentinite, Franciscan Complex, western Marin County, California: in revision for *Tectonophysics*
- Osozawa, S., Shinjo, R., Lo, C-H., Jahn, B-m., Hoang, N., Sasaki, M., Ishikawa, K., Kano, H., Hoshi, H., Xenophontos, C., and Wakabayashi, J., Geochemistry and geochronology of the Troodos ophiolite lavas: Revisiting the Izu-Bonin arc analog, and a model for forming both by subduction initiation beneath a mid-ocean ridge. In review *Geological Society of America Bulletin*
- Osozawa, S., and Wakabayashi, J., Exhumation of Triassic HP-LT rocks by upright extrusional domes and overlying detachment faults, Ishigaki-jima, Ryukyu Islands: In review, *Journal of Asian Earth Sciences*

- Shinjo, R., Osozawa, S., Sasaki, M., Ishikawa, K., Ito, Y., Watanabe, Y., and Wakabayashi, J., Supra subduction zone chemistry of intrusions into a Miocene accretionary prism, southwest Japan: A consequence of ridge subduction? In review, *Journal of Asian Earth Sciences*
- Osozawa, S., Tsai, C-H., and Wakabayashi, J., Folded granite with axial planar foliation, Cretaceous Kitakami-type granite, northeast Japan: in review, *Journal of Asian Earth Sciences*.

In preparation:

- Shimabukuro, D. H.*, Wakabayashi, J., and Alvarez, W., Possible cold subduction initiation beneath a continental margin in Calabria, southern Italy. to be submitted to *Geology*
- Ghatak, A., Basu, A.R., and Wakabayashi, J., Trace element and isotopic geochemistry of Franciscan graywackes: Implications sediment distribution patterns, rapid burial exhumation cycles and interaction of continental sediments with metabasites during subduction.
- Wakabayashi, J., Ghatak, A., Basu, A.R., and Smart, C. M.*, Supra subduction zone ophiolite generation and emplacement: Insight from the geochemistry of metamorphic soles and regional geologic relations.
- Wakabayashi, J., Evolution of topography, Sierra Nevada, California: Landscape response to late Cenozoic uplift, its timing, along-strike variation, and an alternative explanation of isotopic and botanical paleoaltimetry: in prep. for *Geosphere* special volume on Origin and Uplift of the Sierra Nevada.
- Wakabayashi, J., Whither the megathrust? Implications of mélangé geology for large-scale slip-accommodation at subduction zones.

ABSTRACTS * indicates student advisee

- Masutsubo, N.*, and Wakabayashi, J., 2011, Complex temporal-spatial relationships, Feather River ultramafic belt, northern Sierra Nevada. *EOS Fall Meeting Supplement Abstracts*
- Jackson, J.L.*, Wakabayashi, J., and Jackson, B.A., 2011, Southern continuation of high-grade metamorphic rocks of the Feather River ultramafic belt, California: Preliminary reconnaissance. *EOS Fall Meeting Supplement Abstracts*
- Ghatak, A., Basu, A.R., and Wakabayashi, J., 2011, Trace element and isotopic geochemistry of Franciscan graywackes with implications for short time of recycling of detritus and interaction of continental sediments with metabasites during subduction. *EOS Fall Meeting Supplement Abstracts*
- Dumitru, T.A., Ernst, W.G., and Wakabayashi, J., 2011, Episodic vs. continuous accretion in the Franciscan accretionary prism and direct plate motion controls vs. more local tectonic controls on prism evolution. *EOS Fall Meeting Supplement Abstracts*
- Prohoroff, R.E.*, Wakabayashi, J., and Dumitru, T., 2011, Sandstone matrix olistostrome deposited on intra-subduction complex serpentinite, trench slope basin deposits, and nappe and fold architecture and chronology, Franciscan Complex, Marin County, California. *EOS Fall Meeting Supplement Abstracts*
- Wakabayashi, J., 2011, Sedimentary Origins of the Block-in-Matrix Fabric of a Mélangé Between Coherent Nappes of a Subduction Complex: Localization of the Paleosubduction Megathrust Along the Upper Mélangé Contact. *EOS Fall Meeting Supplement Abstracts*
- Masutsubo, N.*, and Wakabayashi, J. 2010, Amphibolite and blueschist facies metamorphism, Feather River ultramafic belt, Yuba River drainage: A record of subduction initiation, ridge subduction, and continued subduction? *Geological Society of America Abstracts with Programs*, v. 42, no. 5, p. 479
- Mendoza, Y.*, and Wakabayashi, J., 2010, Collisional metamorphic signature in the Sierra Nevada, California? High-grade metamorphism of the Shoo Fly Complex: *Geological Society of America Abstracts with Programs*, v. 42, no. 5, p. 479
- Shimabukuro, D.H.*, Wakabayashi, J., Alvarez, W., and Chang, S.-c., 2010, Possible cold subduction initiation beneath a continental margin in Calabria, southern Italy: *Geological Society of America Abstracts with Programs*, v. 42, no. 5, p. 678.
- Prohoroff, R.E.*, and Wakabayashi, J., 2010, Order within the chaotic: Franciscan Complex field relations show km-scale overturned folds, an olistostrom deposited on intra-Franciscan serpentinite, and more: *Geological Society of America Abstracts with Programs*, v. 42, no. 5, p. 35.
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- Wakabayashi, J., Ghatak, A., and Basu, A.R., 2010, Supra-subduction zone protolith signatures in metamorphic soles, initiation of subduction, and models of ophiolite generation and emplacement: *Geological Society of America Abstracts with Programs*, v. 42, no. 5, p. 575-576.
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- Carlson, C.*, Wakabayashi, J., and Pluhar, C., 2009, Field relations and age of late Cenozoic volcanic units inset within the mid-upper San Joaquin River drainage, CA: Geological Society of America Abstracts with Programs, v. 41, no.7, p. 293
- Shriver, A.*, and Wakabayashi, J., 2009, Landscape evolution of the northern Sierra Nevada, USA: Insights from the American River drainage: Geological Society of America Abstracts with Programs, v. 41, no.7, p. 293
- Luce, J.*, and Wakabayashi, J., Revisiting the lone Sierra Nevada eclogite locality: What IS it?: Geological Society of America Abstracts with Programs, v. 41, no. 7, p.404
- Long, J.*, and Wakabayashi, J., 2009, High-P amphibolite blocks from mélangé, Nacimiento belt, coastal California: A first report: Geological Society of America Abstracts with Programs, v. 41, no.7, p. 403
- Masutsubo, N.*, and Wakabayashi, J., 2009, Beyond simple models of orogenic metamorphism: HP/HT, LP/HT, and HP/LT metamorphism, Feather River ultramafic belt, North Yuba River canyon, California: Geological Society of America Abstracts with Programs, v. 41, no.7, p. 519
- Annis, D.*, and Wakabayashi, J., 2009, HP/HT metamorphism of the Devil's Gate ophiolite, Sierra Nevada, California: Where is the upper plate?: Geological Society of America Abstracts with Programs, v. 41, no.7, p. 404
- Hitz, B.*, and Wakabayashi, J., 2009, Franciscan shear zones between Coast Range ophiolite and Great Valley Group rocks: Evidence of mélangé diapirism? Geological Society of America Abstracts with Programs, v. 41, no.7, p.404
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EXTRAMURAL GRANTS

NSF-EAR \$69,692 (Award for 2007-2009). Geochemical investigations of subduction initiation processes, Franciscan Complex, California. Pre-Fresno State extramural grants included three National Earthquake Hazard Reduction Program Grants for a total funded amount of approximately \$150,000 awarded 1994-1997.

INVITED SEMINARS/PRESENTATIONS

(geology departments unless otherwise noted)

Keynote speaker, International Conference on tectonics of strike-slip restraining and releasing bends in continental & oceanic settings (Geological Society of London, London, UK, Sept. 28-30, 2005); Liou Symposium (Dec. 2005), Coleman Symposium (Dec. 2003), Association of Engineering Geologists, San Francisco Chapter (thrice); American Geophysical Union Fall Meeting 1994, 1998; Geological Society of America Annual Meeting, 2009 (twice), National Association of Geoscience Teachers 1994, Geological Society of America 1999, Northern California Geology Society (thrice), Peninsula Geological Society, San Joaquin Volcanological Society of Sacramento (twice), U.S. Geological Survey (Menlo Park, CA), University of Southern California, UC Davis (four times); UC Santa Cruz, UCLA, University of Nevada-Las Vegas; Stanford Univ. (thrice), San Francisco State (three times), Cal. State Univ. Chico (thrice), Cal. State University Fresno (thrice; prior to employment), Cal. State Univ. Sacramento, (twice) Cal. State Hayward (four times), Humboldt State, San Jose State (thrice), Sonoma State (five times), University of the Pacific, Cambridge Univ. (U.K.); Kyoto Univ. (Japan).

FIELD TRIPS LED

(organizations for which trips were led; university trips exclude trips conducted while in employ of that university)
Assoc. of Engineering Geologists (three times), Friends of the Pleistocene, International Geologic Congress, Geological Society of America Penrose Conference on Ophiolites, Geological Society of America Cordilleran Section, International Geologic Correlations Project-Metabasites, Amer. Geophysical Union Chapman Conference, Amer. Assoc. of Petroleum Geologists, Assoc. of Women Geoscientists, National Assoc. of Geoscience Teachers, Northern California Geological Society (three times), Peninsula Geologic Society/Stanford Univ., Cal. State Hayward, UC Berkeley (twice), UC Davis, Chico State, Brigham Young Univ., University of Miami (Ohio), Univ. Oslo (Norway), Indiana Geological Survey (for German participants), Univ. Mainz (Germany), Univ. Wien (Austria), Univ. Salzburg (Austria).