# Curriculum Vitae

# JOHN WAKABAYASHI

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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

Geological Society of America (Fellow): Meeting and Technical Program Chair of 2013 Cordilleran Section Annual Meeting; Past President of International Division (now Section); member, nominating committee for Distinguished Career Award, Mineralogy, Geochemistry, Petrology and Volcanology Division; nominating committee for Best Paper Award, Structural Geology and Tectonics Division; American Geophysical Union (Member); Association of Engineering Geologists (Member): continuing education committee; Northern California Geological Society (Member).

## EMPLOYMENT

8/2015 to present: Professor of Geology, California State University, Fresno
8/2010 to 8/2015: Associate Professor of Geology, California State University, Fresno
5/2015 Visiting Professor University of Paris UPMC, Paris, France
8/2005 to 8/2010: Assistant Professor of Geology, California State University, Fresno
1993 to 2005: Independent geological consultant: engineering and environmental geology, neotectonics/seismic hazard, engineering petrography, 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 (now East Bay): 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 (now East Bay); 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.

## CLASSES TAUGHT

**UC Berkeley**: Structural Geology (EPS 116) 1998, Field trip course (EPS 119) 2005
**CSU Hayward/East Bay**: Graduate course on Evolution of San Andreas Fault System 1996, Structural Geology (Geol 3810) 1998, 1999
**CSU FRESNO (2005-2017)**. Fall Semesters: EES 1 Natural Disasters/Introductory Geology; EES 106 Structural Geology; and one of: EES 210 Faults and Earthquakes (Seismic Hazard Analysis) odd-numbered years; EES 3 Geologic Field Trip; EES 250T Graduate Topics Courses (Tectonics of Orogenic Belts; Subduction Zone Geology and Tectonics). Spring Semesters: EES 1; EES 105 Geomorphology; EES 107 Advanced Field Methods. Other courses taught: EES 50 Geology of Local National Parks (Fall Semesters 2009-2012), EES 101 Petrology (Spring 2008, 2016)

## GRADUATE STUDENT AND SENIOR THESIS SUPERVISION (List of students advised)

Ph.D. (joint advisorship) Jun Luo, Chinese Academy of Sciences, Beijing (co-advisor with Wenjiao Xiao) Ph.D 2015; Mahleqa Rezaei, University of Tabriz, Iran (co-advisor with Mohssen Moazzen).
Ph.D. (thesis committee). Lauren Wheeler, Dept. Earth and Planetary Sciences, Univ. New Mexico; David Shimabukuro, Ph.D. 2011, Dept. Earth and Planetary Science, Univ. California Berkeley
M.S., Calif.State Univ. Fresno as thesis advisor: (2005-2017) Currently: Azael Salinas, Sean Spencer, Jamie Byrd, Jessie Shields, Adam Inman. Graduated: Yvan Mendoza (M.S. 2016), Dennis Eck (M.S. 2014), Nobuaki Masutsubo (M.S. 2013), Jennifer Jackson (M.S., 2012), Chris Kemp (M.S., 2012), Emily Fisher (M.S. 2010), Chris Smart (M.S. 2008)
M.S., Calif.State Univ. Fresno as thesis committee member but not advisor: (2005-2017) Currently: Ben Gooding, Casey Polon, Bryan Rock, Oscar Smith, Michelle Johnson. Graduated: Rosalie Schubert (M.S. 2017), Dustin White (M.S. 2016), Joe Canchola (M.S. 2016), Paul Troop (M.S. 2016), Kiersti Ford (M.S., 2014), Chad Carlson (M.S. 2012), Owen Kubit (M.S., 2012), Anna Brody, (M.S. 2011), Doug DeFlitch (M.S. 2010), Jorge Baca (M.S. 2009), Rohit Sharma (M.S., 2008), Sana Alsaoudi (M.S. 2008), and Marlon Jean (M.S. 2007).
M.S. thesis committee member, exclusive of Calif. State Univ., Fresno: Vance Smith, Department of Geology, San Jose State University. Ron Rubin (M.S., 2002) Department of Geology, San Jose State University. Scott Dickerman (M.S., 1999) Department of Geology, California State University, Hayward (now East Bay).
Calif.State Univ. Fresno as undergraduate thesis advisor: (2005-2016) have served as undergraduate research advisor for Joshua Marroquin, Steffany Aguilar Loeb, Kevin Loeb, John Tanner, Miguel Cisneros, Brian Hitz, Yvan Mendoza, Rachel Prohoroff, Chad Carlson, Jared Long, Joey Luce, Gary Smith, Barbara Jessup, Nick Smaira, Jerrod Lessel, Dillon Kass, Evalin Herleman and Donna Parkansky.

## AWARDS/HONORS

Elected as Fellow of the Geological Society of America, April 28, 2012.
Keynote speaker, Geological Society of America Penrose Conference on the Central Asian Orogenic Belt, Urumqi, China, September 2011.
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)
Visiting Professor, Pierre and Marie Curie University, Paris, France, May 2015
Visiting Scholar, National Taiwan University & Dong-Hwa University, Taiwan March 2014
Visiting Scholar, Centers of Excellence, Tohoku University, Sendai, Japan, May 2009.
Recognized as Exceptional Reviewer for Lithosphere 2016, Geosphere 2015, for Geological Society of America Bulletin 2013, and for Geosphere 2013, and Outstanding Reviewer for the Geological Society of America Bulletin for 2006. Osozawa et al., (2013), on which I am 7th author, won the Entomological Society of Japan Best Paper Award for 2014.

## SCIENTIFIC EDITORSHIP

Associate Editor for Geological Society of America Bulletin 2004-2012 (39 papers handled, excluding revisions). Lead editor of book "Melanges: Processes of formation and societal significance": Geological Special Paper 480 (2011) (12 papers in volume). Lead guest editor of special issue of Lithosphere on subduction initiation and termination v. 4, no. 6 (2012) (8 papers in volume). Lead guest editor of special issue of International Geology Review, v. 57, no. 5-8.(2015) on convergent plate margin processes (23 papers in volume). Currently guest editor for a special issue of the Island Arc, and lead editor of a Geological Society of America Special Paper.

## SCIENTIFIC PEER REVIEW

Reviewed manuscripts (papers reviewed 1994-2017: >185 excluding some reviews of revised versions previously reviewed) for the following journals (39 different journals): American Journal of Science, American Mineralogist, Bulletin of the Seismological Society of America, California Geological Survey (formerly California of Division of Mines and Geology) Special Publications and Maps, Canadian Journal of Earth Sciences, Contributions to Mineralogy and Petrology, Earth Science Reviews, Eclogae Geologicae Helveticiae, Elements, Episodes, Frontiers in Earth Science, G-Cubed, Geological Magazine, Geology, Geological Society of America Bulletin, Geological Society of America Special Papers, Geological Society of America Map and Chart series, Geological Society of London Special Publication, Geoscience Frontiers, Geosphere, Gondwana Research, International Journal of Earth Sciences (formerly Geologische Rundschau),The Island Arc (Journal of the Geological Society of Japan), Journal of Asian Earth Sciences, Journal of the Geological Society of London, Journal of Geology, Journal of Geophysical Research; Journal of Metamorphic Geology, Journal of Structural Geology, Lithos, Lithosphere, Marine Geology, Nature, Precambrian Research, Proceedings of the National Academy of Sciences (PNAS), Revista Geologica de Chile, Tectonics, Tectonophysics, and a book on Western Pacific Subduction Complexes published by Springer.
Reviewed grant proposals for:
USA-based organizations: Three different National Science Foundation (NSF) Earth Science programs (Structure & Tectonics, Petrology and Geochemistry, and ODP/IODP), the Petroleum Research Fund, and National Earthquake Hazard Reduction Program (NEHRP-as ad hoc reviewer in 1990s).

Non-USA based organizations: British Council, Austrian National Science Fund FWF, China State Natural Science Award, National Fund for Scientific and Technological Research of Chile (FONDECYT).
Reviewed lay persons' geology book for University of California Press a chapter of a book on serpentine soils, and a lay persons' book on the geology of Mt Lassen National Park. Currently reviewing a non specialist text on the geology of California.
Served on NEHRP Inter Mountain West Region proposal review panel Aug. 2015 & August 2016.

## PUBLICATIONS (*denotes student advisee)

82. Osozawa, S., Nackejima, C., and Wakabayashi, J.,in press, Quaternary adapative radiation of *Asarum* (Aristolochiales, Aristolochiaceae; wild ginger) section Heterotropa in the Japan-Ryukyu-Taiwan Islands and co-evolution with *Luehdorfia* butterflies: Ecology and Evolution, v. 7,
81. Osozawa, S, Sato, F., and Wakabayashi, J., in press, Quaternary vicariance of lotic *Coeliccia* in the Ryukyu-Taiwan islands contrasted with lentic *Copera*: Journal of Heredity, v. 108 doi:10.1093/jhered/esx007
80. Osozawa, S., Takahashi, M., and Wakabayashi. J., in press, Quaternary vicariance of *Ypthima* butterflies (Lepidoptera, Nymphalidae, Satyrinae) and systematics in the Ryukyu islands and Oriental region. Zoological Journal of the Linnean Society v. 176,
79. Wakabayashi, J., in press, Serpentinites and serpentinites: Variety of origins and emplacement mechanisms of serpentinite bodies in the California Cordillera: Island Arc.
78. Osozawa, S., Shiyake, S., and Wakabayashi, J., in press, Quaternary vicariance of *Platypleura* (Hemiptera: Cicadidae) in Japan, Ryukyu, and Taiwan islands: Biological Journal of the Linnean Society
77. Osozawa, S., and Wakabayashi, J., in press, Variety of origins and exhumation histories of Sambagawa eclogite interpreted through the veil of extensive structural and metamorphic overprinting: in Bianchini, G., Bodinier, J.-L., Braga, R., and Wilson, M., Eds., The Crust-Mantle and Lithosphere-Asthenosphere Boundaries: Insights from Xenoliths, Orogenic Deep Sections and Geophysical Studies. Geological Society of America Special Paper 526, doi: 10.1130/2016.2526(03).
76. Luo. J.*, Xiao, W., Wakabayashi, J., Han, C., Zhang, J., Wan, B., Ao, S., Zhang, Z., Tian, Z., Song, D., and Chen, Y,2017, The Zhaheba ophiolite complex in Eastern Junggar (NW China): Long lived supra-subduction zone ocean crust formation and its implications for the tectonic evolution of the southern Altaids. Gondwana Research, v. 43, p.17-40. doi.10.1016/j. gr. 2015.04.004
75. Wakabayashi, J., 2016, Sedimentary serpentinite and chaotic units of the lower Great Valley Group forearc basin deposits, California: Updates on distribution and characteristics: International Geology Review, doi.10.1080/00206814.2016.1219679
74. Osozawa, S., Fukuda, H., Kwon, H-Y., Wakabayashi, J., 2016, Quaternary vicariance of *Cicindela* (tiger beetle) in Ryukyu, Japan, Taiwan, Korea- China: Entomological Research, v. 46, 122-127. doi: 10.1111/1748-5967.12156
73. Dumitru, T.A., Elder, W.P., Hourigan, J.K., Chapman, A.D., Graham, S.A., and Wakabayashi, J., 2016, Four Cordilleran paleorivers that connected Sevier thrust zones in Idaho to depocenters in California, Washington, Wyoming, and, indirectly, Alaska: Geology, v. 44, p. 75-78, doi: 11.1130/G37286.
72. Osozawa, K., Ogino, S., Osozawa, S., and Wakabayashi, J., 2016, Carabid beetles (*Carabus blaptoides*) from Nii-jima and O-shima isles, Izu-Bonin oceanic islands: Dispersion by Kuroshio current and the origin of the insular populations., Insect Systematics & Evolution, v. 47, p. 1-16.
71. Osozawa, S., Oba, Y., Kwon, H-Y., and Wakabayashi, J., 2015, Vicariance of Pyrocoelia (Lampyridae; firefly) in the Ryukyu islands, Japan. Biological Journal of the Linnean Society, v. 116, p. 412-422
70. Osozawa, S., and Wakabayashi, J., 2015, Killer typhoons began to impact the Japanese islands from ca. 1.55 Ma based on phylogeography of *Chlorogomphus* (gliding dragonfly): Journal of Earth Science & Climatic Change S3 003 doi: 10.4172/2157-7617. S3-003
69. Osozawa, S., Voung, N., Tich, V., and Wakabayashi, J., 2015, Reactivation of a collisional suture by Miocene transpressional domes associated with the Red River and Song Chay detachment faults, northern Vietnam: Journal of Asian Earth Sciences, v. 105, p. 252-269. doi:10.1016/j.jseaes.2015.01.006
68. Osozawa, S., Takahashi, M., and Wakabayashi, J., 2015, Ryukyu endemic *Mycalesis* butterflies speciated vicariantly due to isolation of the islands since 1.55 Ma. Lepidoptera Science, v. 66, p.8-14
67. Osozawa, S., and Wakabayashi, J., 2015, Late-stage exhumation and deformation of HP metamorphic rocks, progressive localization of strain, and changes in movement direction, Sambagawa belt, Japan. Journal of Structural Geology. v. 75, p. 1-16. doi: 10.1016/j.jsg.2015.03.006.
66. Wakabayashi, J., Tsujimori, T., Ogawa, Y., and Shervais, J., 2015, Convergent Plate Margin Processes and Their Rock Record: Introduction to the Special Volume. International Geology Review. v. 57, p.v-ix. doi: 10/1080/00206814.2015.1026415
65. Wakabayashi, J. and Rowe, C., 2015, Whither the megathrust? Localization of large-scale subduction slip along a contact of a mélange. International Geology Review. v. 57, p. 854-870. doi:10.1080/00206814.2015.1020453

64. Wakabayashi, J., 2015, Anatomy of a subduction complex: Architecture of the Franciscan Complex, California, at multiple length and time scales: International Geology Review, v. 57, p. 669-746. doi:10.1080/00206814.2014.998728.
63. Ghatak, A., Basu, A.R., and Wakabayashi, J., 2013, Implications of Franciscan Complex greywacke geochemistry for sediment transport, provenance determination, burial-exposure duration, and chemical exchange with co-subducted metabasites: Tectonics, v. 32, p. 1480-1492. doi: 10.1002/tect.20078.
62. Osozawa, S., Okamoto, T., Su, Z.-H., Oba, Y., Yagi, T., Watanabe, Y., and Wakabayashi, J., 2013, Vicariant speciation due to 1.55 Ma isolation of the islands of Ryukyu, Japan, based on geologic and GenBank data: Entomological Science, v. 16, p. 267-277, doi:10.1111/ens.12037
61. Wakabayashi, J., 2013, Subduction initiation, accretion and non accretion, large-scale material movement, and localization of subduction megaslip, Franciscan Complex and related rocks, California: in Putirka, K., ed. Geological Excursions from Fresno, California, and the Central Valley: A Tour of California's Iconic Geology, Geological Society of America Field Guide 32, p. 129-162, doi: 10.1130/2013.0032(07)
60. Kusky, T.M., Windley, B.F., Safonova, I., Wakita, K., Wakabayashi, J., Polat, A., and Santosh, M., 2013, Recognition of oceanic plate stratigraphy in accretionary orogens through Earth history: A record of 3.8 billion years of sea floor spreading, subduction, and accretion: Gondwana Research, v. 24, p. 501-547, doi 10.1016/j.gr.2013.01.004
59. Wakabayashi, J., 2013, Paleochannels, stream incision, erosion, topographic evolution, and alternative explanations of paleoaltimetry, Sierra Nevada, California: Geosphere, v. 9, p. 192-215, doi:10.1130/GES00814.1
58. Wakabayashi, J., and Shervais, J., 2012, Introduction: Initiation and Termination of Subduction: Rock Record: Geodynamic Models, and Modern Plate Boundaries: Lithosphere, v. 4, p. 467-468. Doi: 10.1130/LINT1.1
57. Shimabukuro*, D.H., Wakabayashi, J., Alvarez, W., and Chang, S.-c., 2012, Cold and old: The rock record of subduction initiation beneath a continental margin, Calabria, southern Italy. Lithosphere, v. 4, p. 524-532. doi: 10.1130/L222.1
56. 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., 2012, Geochemistry and geochronology of the Troodos ophiolite: An SSZ ophiolite generated by subduction initiation and an extended episode of ridge subduction?. Lithosphere, v. 4, p. 497-510. doi: 10.1130/L205.1
55. Osozawa, S., Tsai, C-H., and Wakabayashi, J., 2012, Folding of granite and Cretaceous exhumation associated with regional-scale flexural slip folding and ridge subduction, Kitakami zone, northeast Japan: Journal of Asian Earth Sciences, v. 59, p.85-98, doi: 10.1016/j.jseaes.2012.05.023
54. Osozawa, S., and Wakabayashi, J., 2012, Exhumation of Triassic HP-LT rocks by upright extrusional domes and overlying detachment faults, Ishigaki-jima, Ryukyu Islands: Journal of Asian Earth Sciences, v. 59, p. 70-84 doi:10.1016/j.jseaes.2012.04.001.
53. Prohoroff*, R.E., Wakabayashi, J., and Dumitru, T.A., 2012, Sandstone-matrix olistostrome deposited on intra-subduction complex serpentinite, Franciscan Complex, western Marin County, California: Tectonophysics v. 568-569, p. 296-305. doi: 10.1016/j.tecto.2012.05.018
52. Hitz*, B., and Wakabayashi, J., 2012, Unmetamorphosed sedimentary mélange with high-pressure metamorphic blocks in a nascent forearc basin setting: Tectonophysics. v. 568-569, p. 124-134. doi: 10.1016/j.tecto.2011.12.006
51. Wakabayashi, J., 2012, Subducted sedimentary serpentinite mélanges: Record of multiple burial-exhumation cycles and subduction erosion: Tectonophysics, v. 568-569, p. 230-247. doi: 10.1016/j.tecto.2011.11.006
50. Osozawa, S., Shinjo, R., Armid, A., Watanabe, Y., Horiguchi, T., and Wakabayashi, J., 2012, 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, v. 54. p. 1369-1388.. doi: 10.1080/00206814.2011.639954
49. Ghatak, A., Basu, A.R., and Wakabayashi, J., 2012, Element mobility in Subduction metamorphism: Insight from metamorphic rocks of the Franciscan Complex and Feather River ultramafic belt, California: International Geology Review, v. 54, p. 654-685, doi.10.1080/00206814.2011.567087
48. 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.
47. Wakabayashi, J., 2011, Mélanges of the Franciscan Complex, California: Diverse structural setting, 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)
46. 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)
45. 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
44. 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

43. 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
42. 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
41. 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): available athttp://www.onepetro.org/mslib/app/Preview.do?paperNumber=ARMA-08-357&societyCode=ARMA
40. Wakabayashi, J., and Dumitru, T.A., 2007, 40Ar/39Ar 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.
39. 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
38. Tsujimori, T., Matsumoto, K., Wakabayashi, J., and Liou, J.G., 2006, Franciscan eclogite revisited: Reevaulation of P-T evolution of tectonic blocks from Tiburon Peninsula, California, USA: Mineralogy and Petrology, v. 88, p. 243-267.
37. 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).
36. 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.
35. 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.
34. Wakabayashi, J., 2004 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.
33. Wakabayashi, J., and Medley, E.W., 2004, Geological characterization of melanges for practitioners: Felsbau v. 22, no. 5, p. 10-18.
32. Wakabayashi, J., 2004, Tectonic mechanisms associated with P-T paths of regional metamorphism: alternatives to single-cycle thrusting and heating: Tectonophysics, v. 392, p. 193-218.
31. 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.
30. 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
29. Harrison, S., Safford, H., and Wakabayashi, J., 2004, Does age of exposure of serpentine explain variation in endemic plant diversity in California? International Geology Review, v. 46, p. 235-242.
28. 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.
27. 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
26. 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.
25. 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.
24. 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.
23. Wakabayashi, J., 1999, Distribution of displacement on, and evolution of, a young transform fault system: the northern San Andreas fault system, California: Tectonics, v. 18, no. 6, p. 1245-1274

22. Wakabayashi, J., 1999, 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.
21. Wakabayashi, J., 1999, 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.
20. 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.
19. 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.
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## EXTRAMURAL GRANTS (as PI/co-PI)

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 LECTURES/TALKS

Keynote talks at International Conferences:
Geological Society of America Penrose Conference on the Central Asian Orogenic Belt, Urumqi, China, September 2011, 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 talks at Invitation-Only International Conferences
Coleman Symposium (Dec. 2003), Liou Symposium (Dec. 2005).
Invited talks at International Conferences
American Geophysical Union Fall Meeting 1994, 1998; Geological Society of America Annual Meeting, 1999, 2009 (twice), 2014; Japanese Geoscience Union 2016.
Invited talks at National Geologic Research Organizations
U.S. Geological Survey (Menlo Park, CA) (twice), U.S. Geology Survey (Denver, CO)
Invited talks at Geoscience Departments, Universities outside of USA
Cambridge Univ. (U.K.) 1998; Kyoto Univ. (Japan) 1993, Tohoku University) (Japan) (two presentations on two separate days) 2009,Guangzhou Institute of Geochemistry (China) (three presentations on three separate days) 2011; National Taiwan University (1) and National Dong-Hwa University (2) 2014. University Pierre and Marie Curie (two presentations on two separate days) (UPMC), Paris 2015.
Invited talks at Ph.D-granting Geoscience Departments, USA
Stanford Univ. (thrice); University of Southern California; UC Davis (four times); UCLA (twice); UC Santa Cruz (twice); University of Nevada-Las Vegas; University of Nevada-Reno; Southern Methodist University
Invited talks at non-Ph.D-granting Geoscience Departments , USA
Cal. State Univ. Chico (thrice); Cal. State University Fresno (thrice; prior to employment there); Cal. State Hayward/East Bay (four times); Cal. State Univ. Sacramento (twice); Humboldt Stat; San Francisco State (thrice), San Jose State (thrice); Sonoma State (five times); University of the Pacific; Central Washington University
Keynote talks at RegionalGeologic Society Meetings
National Association of Geoscience Teachers, 2012
Invited Talks, Regional Geologic Society Meetings
Association of Engineering Geologists, San Francisco Section (thrice), Association of Engineering Geologists, Sacramento Section; Association of Engineering Geologists, Fresno Chapter (twice); 2012; Northern California Geology Society (thrice), Peninsula Geological Society, San Joaquin Geological Society (twice), Volcanological Society of Sacramento (twice) .

## GEOLOGIC FIELD TRIPS LED

(organizations for which trips were led; university trips exclude trips conducted while in employ of that university)
Field Trips Led for International Conferences or Organizations

International Geologic Congress (1989); Amer. Assoc. of Petroleum Geologists (1990); International Geologic Correlations Project-Metabasites (1992); International Conference on Geochronology, Cosmochronology and Isotope Geology (1994); Amer. Geophysical Union Chapman Conference on Geodynamics and Plate Motions (1996); Geological Society of America Penrose Conference on Ophiolites (1998); Geological Society of America Cordilleran Section (1999, 2005, 2013); Casey Moore Retirement Celebration (2008); Ernst 80th Celebration (2011);CIDER(Cooperative Institute for Dynamic Earth Research) 2013; Goldschmidt 2014; Structural Geology and Tectonics Forum 2016.

Field Trips Led for National/Regional Geoscience Organizations

Assoc. of Engineering Geologists SF-Section (three times), Friends of the Pleistocene Pacific Cell (1995 as stop leader, 2001 as main leader; 2003 as stop leader; 2015 as co-leader); Assoc. of Women Geoscientists, National Assoc. of Geoscience Teachers (twice), Northern California Geological Society (three times), Peninsula Geologic Society/Stanford Univ., Indiana Geological Survey (for German participants)

Field Trips Led for Geoscience Departments, Universities outside of USA

Univ. Oslo (Norway), Univ. Mainz (Germany), Univ. Wien (Austria), Univ. Salzburg (Austria), University of Quebec at Montreal (Canada).

Field Trips Led for Geoscience Departments, USA Universities

CSU Hayward, UC Berkeley (twice), UC Davis, Chico State, Brigham Young Univ., Miami University (Ohio).