KAZUNORI OKADA, Ph.D.

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Computer Science Department
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1. Contact Information

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2. Education

- **University of Southern California**, Los Angeles, CA: 1996-2001, **Ph.D. (May 2001), Computer Science**
- **University of Southern California**, Los Angeles, CA: 1994-1996, **M.S. (May 1996), Computer Science**
- **Nagoya University**, Nagoya, Japan: 1992-1994, **M.Phil. (Mar 1994), Human Informatics**
- **Nagoya University**, Nagoya, Japan: 1988-1992, **B.Eng. (Mar 1992), Mechanical Engineering**

3. Professional Experiences

- ***Professor*** (2018 – Current) San Francisco State University, Computer Science Department, San Francisco
- ***Director*** (2018 – Current) OPSWAT Internship Program, University Corporation, San Francisco State University
- ***Associate Professor*** (2012 – 2018) San Francisco State University, Computer Science Department, San Francisco
- ***Associate Editor*** (2010 – 2014) IPSJ Transaction on Computer Vision and Applications
- ***Assistant Professor*** (2006 – 2012) San Francisco State University, Computer Science Department, San Francisco
- ***Visiting Professor*** (2007) Heriot-Watt University, School of Engineering and Physics, Edinburgh, UK
- ***Member Technical Staff*** (2005 – 2006) Siemens Corporate Research, Imaging and Visualization Dept., Princeton, NJ
- ***Member Technical Staff*** (2003 – 2005) Siemens Corporate Research, Real-Time Vision & Modeling Dept, Princeton, NJ
- ***Research Associate*** (2001 - 2003) University of Southern California, Computer Science Department, Los Angeles
- ***Consultant*** (2002) Omron Corporation, Kyoto, Japan: *Strategic Report on Computer Vision & Face Recognition*
- ***Research Assistant*** (1995 - 2001) USC, Integrated Media System Center, Los Angeles, USA
- ***Visiting Researcher*** (1999) ATR, Human Information Processing Research Labs, Kyoto, Japan
- ***Project Manager: FERET Program*** (1996 - 1997) USC, Lab. of Computational and Biological Vision, Los Angeles, USA
- ***Visiting Researcher*** (1996) Ruhr-Universitat Bochum, Institut fur Neuroinformatik, Bochum, Germany
- ***Research Assistant*** (1996) USC, Annenberg Center of Communications, Los Angeles, USA
- ***Project Leader*** (1993 - 1994) Nagoya University, Information Methodology Laboratory, Nagoya, Japan

4. Teaching Experiences

- ***Biomedical Image Analysis*** (2010 - Current) CS Dept., San Francisco State University, San Francisco CA
  – Graduate- and upper-division undergraduate-level lecture/lab course on advanced biomedical imaging methods
- ***Discrete Mathematics*** (2009 – Current) CS Dept., San Francisco State University, San Francisco CA
  – Undergraduate lecture course on discrete mathematics with emphasis for computer scientist
- ***Pattern Analysis and Machine Intelligence*** (2006 – Current) CS Dept., San Francisco State University, San Francisco CA
  – Graduate-level lecture course on artificial intelligence, statistical pattern recognition and machine learning
- ***Computers For Everyone*** – (2006 – 2009) CS Dept. San Francisco State University, San Francisco CA
  – Undergraduate lecture course on introductory computer & information literacy
- ***Network Self-Organization in Ontogenesis and Function of the Visual Systems*** (2002,2003) CS Dept. USC, Los Angeles
  – Co-taught the first six weeks in a graduate-level lecture course on non-linear dynamical systems
- ***Methods of Computational Physics*** (2002) Physics Department, USC, Los Angeles CA
  – Gave two guest lectures in a graduate-level seminar course on advanced numerical methods for physical computations
- ***Self-Organization and Neural Network*** (1996, 2000) CS Dept. USC, Los Angeles, CA
  – Served as a teaching assistant in a graduate-level lecture course on artificial neural networks
- ***Geometrical Modeling*** (1992 - 1993) Information Methodology Laboratory, Nagoya University, Nagoya, Japan
  – Served as a teaching assistant in an undergraduate-level lecture course on geometrical modeling and graphics

5. New Course Development

- ***Minor in Computing Applications*** (2016,2017) CS Dept., San Francisco State University

– New minor program designed for various STEM disciplines focusing on web application development through hands-on projects.

- ***Biomedical Image Analysis*** (2009) CS Dept., San Francisco State University
  – Graduate- and upper-division undergraduate-level lecture/lab course on advanced biomedical imaging techniques and algorithms
- ***Computing for Biologists*** (2009) CS Dept., San Francisco State University
  – Undergraduate lecture/lab course on basic computer literacy and programming for biological studies
- ***Web & DB for Biologists*** (2009) CS Dept., San Francisco State University
  – Undergraduate lecture/lab course on basic web-based application and database development for biological studies
- ***Pattern Analysis and Machine Intelligence*** (2007) CS Dept., San Francisco State University
  – Graduate-level lecture course on artificial intelligence, statistical pattern recognition and machine learning
- ***Computers for Everyone*** (2006) CS Dept., San Francisco State University
  – Undergraduate lecture course on introductory computer & information literacy

6. Publications (* indicates student/postdoc mentees.)

Book Chapters: (6)

1. J. Huo*, M.S. Brown, K. Okada, *CADrx for GBM Brain Tumors: Predicting Treatment Responses from Changes in Diffusion-Weighted MRI,* In Machine Learning in Computer-Aided Diagnosis: Medical Imaging Intelligence and Analysis, pp. 297-314, IGI-Global, 2012
2. K. Okada, *Anisotropic Scale Selection, Robust Gaussian Fitting, and Pulmonary Nodule Segmentation in Chest CT Scans*, In Multi-Modality State-Of-The-Art Medical Image Segmentation and Registration Methodologies, pp. 69-101, Springer, 2011
3. K. Okada, *Ground-Glass Nodule Characterization in High-Resolution CT Scans,* In Computer-Aided Diagnosis of Lung Imaging, pp., Taylor and Francis, LLC, 2011
4. K. Okada, *Mean Shift From Theory to Application*, In Computer Vision Saisentan Guide 2, pp., Adcom Media, 2010
5. K. Okada and C. von der Malsburg, *Face Recognition and Pose Estimation with Parametric Linear Subspaces*, In Applied Pattern Recognition, H. Bunke, A. Kandel, M. Last (Eds.), pp. 49-74, Springer, 2008
6. K. Okada, J. Steffens, T. Maurer, H. Hong, E. Elagin, H. Neven, and C. von der Malsburg, *The Bochum/USC Face Recognition System And How it Fared in the FERET Phase III Test*, In Face Recognition: From Theory to Applications, H. Wechsler, P.J. Phillips, V. Bruce, F. Fogelman Soulie, T.S. Huang (Eds.), pp. 186-205, Springer-Verlag, 1998

Journal Papers: (18)

1. G. Urban, S. Porhemmat*, M. Stark*, B. Feeley, K. Okada, P. Baldi, *Classifying Shoulder Implants in X-ray Images using Deep Learning*, Computational Structural Biotechnology Journal, 18: 967-972 (2020)
2. M. Kim*, K. Okada, A. Ryner, A. Amza, Z. Tadesse, S. Cotter, B. Gaynor, J. Keenan, T. Lietman, T. Porco, *Sensitivity and specificity of computer vision classification of eyelid photographs for programmatic trachoma assessment*, PLoS One, 14(2): e0210463 (2019)
3. A. Mansoor, J. Cerrolaza, G. Perez, E. Biggs, K. Okada, G. Nino, M. Linguraru, *A Generic Approach to Lung Field Segmentation from Chest Radiographs using Deep Space and Shape Learning*, IEEE trans Biomedical Eng., Epub: doi: 10.1109/TBME.2019.2933508 (2019)
4. K. Okada, S. Rysavy*, A. Flores*, MG. Linguraru, *Noninvasive differential diagnosis of dental periapical lesions in cone-beam CT scans*, Medical Physics, 42(4): 1653-1665 (2015)
5. J. Huo*, J. Alger, H. Kim, M. Brown, K. Okada, W. Pope, *Between-Scanner and Between-Visit Variation in Normal White Matter Apparent Diffusion Coefficient Values in the Setting of a Multi-Center Clinical Trial,* Clinical Neuroradiology, Epub, March 20 (2015)
6. Q. Zhao*, K. Okada, K. Rosenbaum, L. Kehoe, DJ. Zand, R. Sze, M. Summar, MG. Linguraru, *Digital facial dysmorphology for genetic screening: Hierarchical constrained local model using ICA*, Medical Image Analysis, 18(5): 699-710 (2014)
7. CS. Mendoza, N. Sadar, K. Okada, E. Myers, GF. Rogers, MG. Linguraru, Personalized assessment of craniosynostosis via statistical shape modeling, Medical Image Analysis, 18(4): 635-46 (2014)
8. EA. Simpson, KV, Jakobsen, DM. Fragaszy, K. Okada, JE. Frick, *The development of facial identity discrimination through learned attention*, Developmental Psychobiology, 56(5): 1083-1101 (2014)
9. J. Huo*, K. Okada, EM. van Rikxoort, HJ Kim, JR Alger, WB Pope, JG Goldin, MS Brown, *Ensemble segmentation for GBM brain tumors on MR images using confidence-based averaging*, Medical Physics, 40(9): 093502 (2013)
10. S. Huang, D. Petkovic, K. Okada, M. Sosnick, S. Zhu, R. Todtenhoefer, *Toward objective and quantitative assessment and prediction of team work effectiveness in software engineering courses*, ACM SIGSOFT Software Engineering Notes, 38(1): 7-9 (2013)
11. A. El-Baz, GM. Beache, GL. Gimel'farb, K. Suzuki, K. Okada, A. Elnakib, A. Soliman, B. Abdollahi, *Computer-aided diagnosis systems for lung cancer: challenges and methodologies*, International Journal of Biomedical Imaging, 2013:942353 (2013)

12. A. El-Baz, GM. Beache, GL. Gimel'farb, K. Suzuki, K. Okada, *Editorial: Lung Imaging Data Analysis*, International Journal of Biomedical Imaging, 2013:618561 (2013)
13. K. Okada, A. Flores*, M. G. Linguraru, *Boosting Weighted Linear Discriminant Analysis*, International Journal of Advanced Statistics for Economics and Life Sciences, 2(1): 1-11 (2010)
14. J. Huo*, K. Okada, H. Kim, W. Pope, J. Goldin, J. Alger, M. Brown, *CADrx for GBM Brain Tumors: Predicting Treatment Response from Changes in Diffusion-Weighted MRI*, Algorithms, 2: 1350 – 1367 (2009)
15. J. Martin-Malivel and K. Okada, *Human and Chimpanzee Face Recognition in Chimpanzees (Pan troglodytes): Role of Exposure and Impact on Categorical Perception*, Behavioral Neuroscience, 121(6): 1145-1154 (2007)
16. H. Ling* and K. Okada, *An Efficient Earth Mover's Distance Algorithm for Robust Histogram Comparison*, IEEE Trans. Pattern Analysis and Machine Intelligence, 29(5): 840-863 (2007)
17. K. Okada, D. Comaniciu, A. Krishnan, *Robust Anisotropic Gaussian Fitting for Volumetric Characterization of Pulmonary Nodules in Multislice CT*, IEEE Trans. Medical Imaging, 24(3): 409-423 (2005)
18. M. Nederhouser, M. C. Mangini, I. Biederman, and K. Okada, *Invariance to contrast inversion when matching objects with face-like surface structure and pigmentation*, Journal of Vision, 3(9): 93 (2003)

Conference Papers: (63)

1. R. Khilari*, J. Puchin*, K. Okada, *Automated quasi-3D spine curvature quantification and classification,* In proc. SPIE Medical Imaging, Huston, 2018
2. I. Donovan*, K. Okada, X. Zhang, *Adjacent Feature for High-Density EMG Pattern Recognition,* In proc. IEEE EMBC, Honolulu, 2018
3. A. Kulkarni, I. Yoon, K. Okada, P. Pennings, C. Domingo, *Promoting Diversity in Computing,* In proc. ACM ITiCSE, Lanarca, Cyprus, 2018
4. I. Yoon, K. Okada, A. Kulkarni, P. Pennings, C. Domingo, *Promoting Inclusivity in Computing (PINC) via Computing Application Minor,* In proc. American Society for Engineering Education 2018 (ASEE), 2018
5. I. Donovan*, J. Puchin*, K. Okada, X. Zhang, *Simple Space-Domain Features for Low-Resolution sEMG Pattern Recognition,* Accepted. IEEE Eng. Med. Biol. Soc. (EMBC), Korea, 2017
6. J. Yan*, J. Dalton*, B. Doronila*, K. Chang-Kam*, V. Melara*, C. Thomas*, I. Donovan**, K. Bholla**, A. G. Enriquez, W. Pong, Z. Jiang, C. Chen, K.-S. Teh, H. Mahmoodi, H. Jiang, K. Okada, and X. Zhang, *Engaging Community College Students in Computer Engineering Research through Design and Implementation of a Versatile Gesture Control Interface*, In proc. of the American Society for Engineering Education 2017 Pacific Southwest Conference (ASEE/PSW-2017), Tempe, 2017
7. I. Donovan*, K. Valenzuela*, A. Ortiz*, S. Dusheko*, H. Jing, K. Okada, X. Zhang, *MyoHMI: A Low Cost and Flexible Platform for Developing Real-Time Human Machine Interface for Myoelectric Controlled Applications,* In proc. IEEE Int Conf System, Man and Cybernetics (SMC), 2016
8. D. Petkovic, M. Sosnick-Perez, K. Okada, R. Todtenhoefer, N. Miglani, A. Vigil*, Using the Random Forest Classifier to Assess and Predict Student learning of Software Engineering, In Proc. Frontiers in Education (FIE) Conference, 2016
9. Q. Zhao*, K. Okada, K. Rosenbaum, M. Summar, MG. Linguraru, *Constrained Local Model with Independent Component Analysis with Kernel Density Estimation: Application to Down Syndrome Detection*, In Prof. IEEE Int. Symp. Biomed. Imaging. (ISBI), 967-970, New York, 2015
10. K. Okada, M. Golbaz*, A. Mansoor, GF. Perez, K. Pancham, A. Khan, G. Nino, *Severity Quantification of Pediatric Viral Respiratory Illnesses in Chest X-ray Images*, In Prof. IEEE Eng. Med. Biol. Soc. (EMBC: Invited Paper), Milan, 2015
11. Q. Zhao*, N. Werghi, K. Okada, K. Rosenbaum, M. Summar, MG. Linguraru, *Ensemble Learning for the Detection of Facial Dysmorphology*, In Prof. IEEE Eng. Med. Biol. Soc. (EMBC), 2014:3633-636, Chicago, 2014
12. D. Petkovic, M. Sosnick-Perez, S. Huang, R. Todtenhoefer, K. Okada, S. Arora* R. Sreenivasen*, L. Flores*, S. Dubey*, *SETAP: Software Engineering Teamwork Assessment and Prediction Using Machine Learning*, Frontiers in Education Conference (FIE), 2014
13. K. Okada, L. Flores*, M. Wong, D. Petkovic, *Microenvironment-Based Protein Function Analysis by Random Forest*, In Proc. International Conference on Pattern Recognition, Stockholm, 2014
14. J. Hung*, J. Collins*, M. Weldetsion*, O. Newland*, E. Chiang*, K. Okada, *Protein crystallization image classification with elastic net*, In Proc. SPIE Medical Imaging, 90341X, San Diego, 2014
15. Q. Zhao*, K. Okada, K. Rosenbaum, DJ. Zand, R. Sze, M. Summar, MG. Linguraru, *Hierarchical Constrained Local model Using ICA and Its Application to Down Syndrome Detection*, In Proc. Int. Conf. Medical Image Computing and Computer Assisted Intervention (MICCAI), vol.2, pp. 222-229, Nagoya, 2013 [acceptance rate = 33%]
16. Q. Zhao*, K. Rosenbaum, K. Okada, DJ. Zand, R. Sze, M. Summar, MG. Linguraru, *Automated down syndrome detection using facial photographs*, In proc. IEEE Eng. Med. Biol. Soc. (EMBC), 2013:3670-3, Osaka, 2013
17. J. Collins*, K. Okada, *Learning metrics for content-based medical image retrieval*, In proc. IEEE Eng. Med. Biol. Soc. (EMBC), 2013:3363-6, Osaka, 2013
18. M. Suzuki*, M.G. Linguraru, K. Okada, *Multi-Organ Segmentation with Missing Organs in Abdominal CT Images*, In proc. Int. Conf. Medical Image Computing and Computer Assisted Intervention (MICCAI), vol. 3, pp. 418-425, Nice, 2012 [acceptance rate = 32%]

19. D. Petkovic, K. Okada, M. Sosnick*, A. Iyer*, S. Zhu*, R. Todtenhoefer, S. Huang, *A Machine Learning Approach for Assessment and Prediction of Teamwork Effectiveness in Software Engineering Education*, In proc. Frontiers in Education Conference (FIE), Seattle, 2012
20. C. Kelly*, K. Okada, *Variable Interaction Measures with Random Forest Classifiers*, In proc. IEEE International Symposium of Biomedical Imaging (ISBI), pp. 154-157, Barcelona, 2012 [acceptance rate = 42%]
21. S. Sergeev*, Y. Zhao*, M.G. Linguraru, K. Okada, *Medical image registration using machine learning-based interest point detector*, In proc. SPIE Medical Imaging, vol. 8314, pp. 831424, San Diego, 2012
22. J. Huo*, K. Okada, M. Brown, *Improving semi-automatic segmentation by integrating learning with active sampling*, In proc. SPIE Medical Imaging, vol. 8314, pp. 83142M, San Diego, 2012
23. J. Collins*, K. Okada, A Comparative Study of Similarity Measures for Content-Based Medical Image Retrieval, In CLEF Online Working Notes, 2012
24. M. Suzuki*, M.G. Linguraru, R. Summers, K. Okada, *Analyses of Missing Organs in Abdominal Multi-Organ Segmentation*, In proc. International Workshop on Abdominal Imaging, Computational and Clinical Applications, pp. 256-263, Toronto, 2011
25. N. Timilsina*, C. Moffatt, K. Okada, *Development of a Stained Cell Nuclei Counting System*, In proc. SPIE Medical Imaging, vol. 7962, pp. 79620K, Orlando, 2011 [Oral]
26. J. Huo*, K. Okada, W. Pope, M. Brown, *Sampling-Based Ensemble Segmentation against Inter-Operator variability*, In proc. SPIE Medical Imaging, vol. 7963, pp. 796315, Orlando, 2011 [Oral]
27. J. Huo*, E. van Rikxoort, K. Okada, HJ. Kim, W. Pope, J. Goldin, M. Brown, *Confidence-based Ensemble for GBM brain tumor segmentation*, In proc. SPIE Medical Imaging, vol. 7962, pp. 79622P, Orlando, 2011
28. Y. Miao*, M. Kafai*, K. Okada, *Bayesian Classification of Local 3D Structures in Medical Images*, In proc. International Workshop on Machine Learning in Medical Imaging (MLMI), Beijing, 2010
29. A. Flores*, M. G. Linguraru, K. Okada, *Boosted-LDA for Biomedical Data Analysis*, In proc. International Workshop on Machine Learning in Medical Imaging (MLMI), Beijing, 2010
30. M. Kafai*, Y. Miao*, K. Okada, *Directional Mean Shift and its Application for Topology Classification of Local 3D Structures*, In proc. IEEE Computer Society Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA), pp. 170-177, San Francisco, 2010 [oral]
31. S. Courey, X. Shao*, N. Lam-Miller*, K. Okada, *Web-Based Tools for Enhancing Teacher Preparation: Helping to Build a High Quality Teaching Workforce*, In proc. World Conference on Educational Multimedia, Hypermedia and Telecommunications (ED-MEDIA), pp. 3168-3177, Toronto, 2010 [Oral]
32. X. Shao*, N. Lam-Miller*, S. Courey, K. Okada, *A Web-based Lesson Plan Creator for Teaching Preparation Programs*, In proc. Society for Information Technology & Teacher Education International Conference (SITE), pp. 2375-2380, San Diego, 2010 [Oral]
33. A. Flores*, S. Rysavy*, R. Enciso, K. Okada, *Non-Invasive Differential Diagnosis of Dental Periapical Lesions in Cone-Beam CT*, In proc. IEEE International Symposium of Biomedical Imaging: From Nano to Macro (ISBI), pp. 566-569, Boston, 2009 [acceptance rate = 50%]
34. K. Okada, N. Lam-Miller*, X. Shao*, S. Courey, *Web-based Tools for Credential Candidates in Special Education Programs*, In proc. International Conference on Computer Supported Education (CSEDU), pp. 139-146, Lisboa, 2009 [acceptance rate = 52%]
35. J. Huo*, HJ. Kim, W. Pope, K. Okada, J. Alger, Y. Wang, J. Goldin, M. Brown, Histogram-based classification with Gaussian Mixture Modeling for GBM Tumor Treatment Response using ADC Map, In proc. SPIE Medical Imaging Conferences, vol. 7260, pp. 72601Y, Orland, 2009
36. S. Rysavy*, A. Flores*, R. Enciso, K. Okada, *Classifiability Criteria for Refining of Random Walks Segmentation*, In proc. International Conference on Pattern Recognition (ICPR), Tampa, 2008 [acceptance rate = 38.8%]
37. J. Huo*, W. Pope, K. Okada, J. Alger, HJ. Kim, Y. Wang, J. Goldin, M. Brown, *Early Detection of Treatment Response for GBM Brain Tumor using ADC Map of DW-MRI*, In proc. MICCAI 2008 Workshop on Computational Diffusion MRI, New York, 2008
38. K. Okada, S. Periaswamy, J. Bi, *Stratified Regularity Measures with Jensen-Shannon Divergence*, In proc. IEEE Computer Society Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA), Anchorage, 2008
39. T. Goh*, R. West*, K. Okada, *Robust Detection of Semantically Equivalent Visually Dissimilar Objects*, In proc. International Workshop on Semantic Learning Applications in Multimedia (SLAM), Anchorage, 2008
40. S. Rysavy*, A. Flores*, R. Enciso, K. Okada, *Segmentation of Large Periapical Lesions toward Dental Computer-Aided Diagnosis in Cone-Beam CT Scans*, In proc. SPIE Medical Imaging Conferences, vol. 6914, pp. 691444, San Diego, 2008 [**Best poster honorable mention award**]
41. K. Okada and X. Huang, *Robust Click-Point Linking: Matching Visually Dissimilar Local Regions*, In proc. IEEE International Workshop on Beyond Multiview Geometry: Robust Estimation and Organization of Shapes form Multiple Cue, Minneapolis, 2007 [oral]
42. K. Okada, X. Huang, X. Zhou, A. Krishnan, *Robust Click-Point Linking for Longitudinal Follow-Up Studies*, In proc. Int. Workshop on Medical Imaging and Augmented Reality (MIAR), pp. 252-260, Shanghai, 2006 [oral]
43. K. Okada, M. Singh, V. Ramesh, A. Krishnan, *Prior-Constrained Scale-Space Mean Shift*, In proc. British Machine Vision Conference (BMVC), vol. II, pp. 829-838, Edinburgh, 2006 [oral; acceptance rate = 9% (46/500)]

44. J. Bi, S. Periaswamy, K. Okada, T. Kubota, G. Fung, M. Salganicoff, B. Rao, *Computer Aided Detection via Asymmetric Cascade of Sparse Hyperplane Classifiers*, In proc. Annual SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD), pp. 837-844, Philadelphia, 2006 [oral; acceptance rate = 23%]
45. H. Ling* and K. Okada, *Diffusion Distance for Histogram Comparison*, In proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), vol. I, pp. 246-253, New York, 2006 [acceptance rate = 23.3%]
46. H. Ling* and K. Okada, *EMD_L1: An Efficient and Robust Algorithm for Comparing Histogram-Based Descriptors*, In proc. European Conf. Computer Vision (ECCV), vol. III, pp. 330-343, Graz, 2006 [acceptance rate = 17%]
47. C. Bahlmann, X. Li*, K. Okada, *Local Pulmonary Structure Classification for Computer-aided Nodule Detection*, In proc. SPIE Medical Imaging Conferences, vol. 6144, pp. 1775-1785, San Diego, 2006
48. K. Okada, V. Ramesh, A. Krishnan, M. Singh, U. Akdemir, *Robust Pulmonary Nodule Segmentation in CT: Improving Performance for Juxtapleural Cases*, In proc. Int. Conf. Medical Image Computing and Computer Assisted Intervention (MICCAI), vol. II, pp. 781-789, Palm Springs, 2005 [acceptance rate = 37.3%]
49. T. Kubota and K. Okada, *Estimating diameters of pulmonary nodules with competition-diffusion and robust ellipsoid fit*, In proc. Int. Conf. Comp. Vision Workshop on Computer Vision for Biomedical Image Applications (CVBIA), pp. 324-334, Beijing, 2005
50. K. Okada, U. Akdemir*, A. Krishnan, *Blob Segmentation using Joint Space-Intensity Likelihood Ratio Test: Application to 3D Tumor Segmentation*, In proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), vol. II, pp. 437-444, San Diego, 2005 [oral; acceptance rate = 6.5%]
51. K. Okada, D. Comaniciu, A. Krishnan, *Robust 3D Segmentation of Pulmonary Nodules in Multislice CT Images*, In proc. Int. Conf. Medical Image Computing and Computer Assisted Intervention (MICCAI), vol. II, pp. 881-889, Saint-Malo, 2004 [acceptance rate roughly 40%]
52. K. Okada, D. Comaniciu, A. Krishnan, *Scale Selection for Anisotropic Scale-Space: Application to Volumetric Tumor Characterization*, In proc. IEEE Computer Society Conf. on Computer Vision and Pattern Recognition (CVPR), vol. I, pp. 594-601, Washington D.C., 2004 [oral; acceptance rate = 6.2%]
53. K. Okada, D. Comaniciu, N. Dalal, A. Krishnan, *A Robust Algorithm for Characterizing Anisotropic Local Structures*, In proc. European Conference on Computer Vision (ECCV), vol. I, pp. 549-561, Prague, 2004 [acceptance rate = 26.8%]
54. M. Huesken, M. Brauckmann, S. Gehlen, K. Okada, C. von der Malsburg, *Evaluation of implicit 3D modeling for pose invariant face recognition*, In proc. SPIE Defense and Security Symposium, vol. 5404, pp. 328, Orlando, 2004
55. N. Serrano, A. Ortega, S. Wu, K. Okada, and C. von der Malsburg, *Compression for distributed face recognition*. In proc. Multimodal User Authentication Workshop (MMUA), Santa Barbara, 2003
56. X. Tang*, K. Okada, and C. von der Malsburg, *A Joint Statistical Approach for Geon Detection*, In proc. International Conference on Cognitive and Neural Systems (ICCNS), Boston, 2002
57. K. Okada and C. von der Malsburg, *Pose-Invariant Face Recognition with Parametric Linear Subspaces*, In proc. International Conference on Automatic Face and Gesture Recognition (AFGR), pp. 64-69, Washington DC, 2002 [acceptance rate = 42.5%]
58. K. Okada and C. von der Malsburg, *Analysis and Synthesis of Human Faces with Pose Variations by a Parametric Piecewise Linear Subspace Method*, In proc. IEEE Computer Society Conf. on Computer Vision and Pattern Recognition (CVPR), vol. I, pp. 761-768, Kauai, 2001 [acceptance rate = 22%]
59. K. Okada, L. Kite, and C. von der Malsburg, *An Adaptive Person Recognition System*, In proc. IEEE International Workshop on Robot-Human Interactive Communication (ROMAN), pp. 436-441, Bordeaux Paris, 2001
60. K. Okada, S. Akamatsu, and C. von der Malsburg, *Analysis and Synthesis of Pose Variations of Human Faces by a Linear PCMAP Model and its Application for Pose-Invariant Face Recognition System*, In proc. International Conference on Automatic Face and Gesture Recognition (AFGR), pp. 142-149, Grenoble, 2000 [acceptance rate = 52%]
61. N. Futamura, K. Okada, S. Akamatsu, K. Mori, and Y. Suenaga, *An ICA based Representation of Facial Images and its Application for Face Recognition Systems*, In proc. IEICE workshop on Pattern Recognition and Media Understanding, (PRMU99-180), pp. 21-28, Ehime, 1999
62. K. Okada, C. von der Malsburg, and S. Akamatsu, *A Pose-Invariant Face Recognition System using Linear PCMAP Model*, In proc. IEICE workshop on Human Information Processing (HIP99-48), pp. 7-12, Okinawa, 1999
63. K. Okada and C. von der Malsburg, *Automatic Video Indexing with Incremental Gallery Creation: Integration of Recognition and Knowledge Acquisition*, In proc. International Conference on Knowledge-Based Intelligent Information Engineering Systems (KES), pp. 431-434, Adelaide, 1999

Abstracts & Posters: (10)

1. T. Touati*, K. Okada, I. Song, *What makes a person obese?: An individual-level analysis of obesity*, Accepted as 1-page extended abstract at IEEE International Conference on Biomedical and Health Informatics, (2021)
2. A. Mansoor, GF. Perez, K. Pancham, A.Jain, K. Okada, MG. Linguraru, G. Nino, *Automated Lung Segmentation and Longitudinal Air Trapping Quantification in Chronic Lung Disease of Prematurity*, In proc. American Thoracic Society International Conference, pp A4575, 2016
3. A. Mansoor, GF. Perez, K. Pancham, A.Khan, K. Okada, G. Nino, MG. Linguraru, *Partitioned Active Shape Model with Weighted Landmarks for Accurate Lung Field Segmentation*, In proc. Computed-Assisted Radiology and Surgery (CARS: extended abstract) S224-6, Barcelona, 2015

4. S. Courey, N. Lam-Miller*, X. Shao*, K. Okada, *Web-based Tools for Enhancing Teacher Preparation Programs*, OSEP Project Director's Conference, Washington DC, 2009
5. K. Okada, S. Courey, *Evidence-Based Strategies in Every Lesson Plan: The Lesson Plan Creator*, OSEP Project Director's Conference, Washington DC, 2008
6. J. Martin-Malivel and K. Okada, *Human and Chimpanzee Face Processing in Chimpanzees*, International Conference on Comparative Cognition (CO3), Florida, 2007
7. M. Nederhouser, M. C. Mangini, I. Biederman, and K. Okada, *Matching face-like objects is invariant to differences in direction of contrast*, In proc. 10th Annual Workshop on Object Perception and Memory (OPAM), Kansas City, 2002
8. K. Okada and C. von der Malsburg, *Automatic Video Indexing with Incremental Gallery Creation: Integration of Recognition and Knowledge Acquisition*, In proc. ATR Symposium on Face and Object Recognition, pp. 153-154, Kyoto, 1999
9. C. von der Malsburg, K. Reiser, G. Peters, J. Wieghardt, and K. Okada, *3D Object Representation by 2D Views*, In proc. ATR Symposium on Face and Object Recognition, pp. 11-12, Kyoto, 1999
10. K. Okada, *Improving Recognition* Performance *for Duplicate Facial Images*, NATO ASI, Stirling, 1997

Non-refereed Abstracts & Posters: (21)

1. O. Drulea*, K. Okada, BCIKIT: *A Simplified, Open-Source Brain-Computer Interface Research Platform*, College of Science and Engineering Project Showcase, San Francisco, 2017 (**Fourth place award in graduate physical science category)**
2. I. Donovan*, J. Puchin*, X. Zhang, K. Okada, *Simple Space-Domain Features for Low-resolution sEMG Pattern Recognition*, College of Science and Engineering Project Showcase, San Francisco, 2017
3. S. Dusheyko*, X. Zhang, H. Jiang, K. Okada, *Implementation of Spiking Neural Network Classifier in Hardware*, College of Science and Engineering Project Showcase, San Francisco, 2017
4. M. Golbaz*, B. Ymeri*, K. Okada, *Severity Quantification of Pediatric Viral Respiratory Illnesses in Chest X-ray Images*, College of Science and Engineering Project Showcase, San Francisco, 2015 (**First place award in graduate physical science category)**
5. M. Weldetsion*, J. Hung*, K. Okada, *Learning from Imbalanced Data Set*, College of Science and Engineering Project Showcase, San Francisco, 2015
6. L. Flores*, K. Okada, M. Wong, L. Buturovic, D. Petkovic, *Microenvironment-based Protein Function Analysis by Random Forest*, College of Science and Engineering Project Showcase, San Francisco, 2014
7. M. Sosnick*, A. Iyer*, S. Zhu*, K. Okada, D. Petkovic, *Using Machine Learning for Assessment and Prediction of Teamwork Effectiveness in Software Engineering Education*, College of Science and Engineering Project Showcase, San Francisco, 2012
8. T. Sun*, S. Courey, K. Okada, *Automatic Lesson Planner*, College of Science and Engineering Project Showcase, San Francisco, 2011
9. M. Suzuki*, K. Okada, Multi-organ segmentation with missing organs: atlas-guided approach, College of Science and Engineering Project Showcase, San Francisco, 2011
10. N. Timilsina*, K. Okada, *Development of A Stained Cell Nuclei Counting System*, College of Science and Engineering Project Showcase, San Francisco, 2010 (**Third place award in graduate physical science category**)
11. Y. Zhao*, K. Okada, *Machine Learning Based Medical Image Registration*, College of Science and Engineering Project Showcase, San Francisco, 2010
12. T. Sun*, K. Okada, S. Courey, *Automatic Lesson Planner*, College of Science and Engineering Project Showcase, San Francisco, 2010
13. M. Kafai*, Y. Miao*, K. Okada, *Directional Mean Shift*, College of Science and Engineering Project Showcase, San Francisco, 2009 (**First place award in graduate physical science category)**
14. X. Shao*, N. Lam-Miller*, K. Okada, *Web-based Tools for Enhancing Teacher Preparation Programs*, College of Science and Engineering Project Showcase, San Francisco, 2009
15. S. Rysavy*, A. Flores*, R. Enciso, K. Okada, *Segmentation of Large Periapical Lesions toward Dental Computer-Aided Diagnosis in Cone-Beam CT scans*, College of Science and Engineering Project Showcase, San Francisco, 2008 (**Third place award in graduate physical science category**)
16. A. Flores*, S. Rysavy*, R. Enciso, K. Okada, *Classification of Large Periapical Lesions*, College of Science and Engineering Project Showcase, San Francisco, 2008 (**Honorable mention award in graduate physical science category**)
17. E. Yera*, K. Okada, C. Collins, P. Paris, *Computational Cancer Biomaker Discovery*, College of Science and Engineering Project Showcase, San Francisco, 2008
18. S. Rysavy*, A. Flores*, R. Enciso, K. Okada, *Segmentation of Periapical Lesions toward CAD Diagnosis in CBCT Scans*, CSU Biotechnology Symposium, Oakland, 2008
19. A. Flores*, S. Rysavy*, R. Enciso, K. Okada, *Classification of Periapical Lesions toward Dental Computer-Aided Diagnosis in CT Data*, CSU Biotechnology Symposium, Oakland, 2008
20. T. Goh*, R. West, K. Okada, *Vision-Based Detection of Visually Dissimilar Objects*, College of Science and Engineering Project Showcase, San Francisco, 2007 (**Honorable mention award in undergraduate physical science category**)

21. M. Nederhouser, M. C. Mangini, I. Biederman, and K. Okada, *The Matching of Smooth, Blobby Objects--but not Faces--Is Invariant to Differences in Contrast Polarity for both Naive and Expert Subjects*, In proc. University of Southern California Vision Symposium, Los Angeles, 2002

Non-refereed Technical Reports: (4)

1. K. Okada and C. von der Malsburg, *Pose-Invariant Face Recognition: Representing Known Persons by View-Based Statistical Models*, Technical Report #03-784, Computer Science Department, University of Southern California, 2003
2. K. Okada and C. von der Malsburg, *Parametric Piecewise Linear Subspace Method for Processing Facial Images with 3D Pose Variations*, Technical Report #03-783, Computer Science Department, University of Southern California, 2003
3. X. Tang*, K. Okada, and C. von der Malsburg, *Represent and Detect Geons by Joint Statistics of Steerable Pyramid Decomposition*, Technical Report #02-759, Computer Science Department, University of Southern California, 2002
4. K. Okada and M. J. Lyons, *On Gabor Wavelet-based Image Processing for Nissl-stained Rat Brain Slices*, Technical Report #02-756, Computer Science Department, University of Southern California, 2002

Theses: (4)

1. K. Okada, *Pose-Invariant Face recognition: Analysis, Synthesis, Identification of Human Faces with Pose Variations*, VDM Verlag Dr. Mueller, 2010
2. K. Okada, *Analysis, Synthesis and Recognition of Human Faces with Pose Variations*, Ph.D. Thesis, University of Southern California, Los Angeles, 2001
3. K. Okada, *Development of an Active Range Finder System and its Application to Human Face Recognition*, Master's Thesis, Graduate School of Human Informatics, Nagoya University, Japan, 1994
4. K. Okada and T. Inagaki, *Implementation of Autonomous Land Vehicle Controlled by Visual Information using Neural Network*, Bachelor's Thesis, Mechanical Engineering Department, Nagoya University, Japan, 1992

US Patents: (13)

1. M.G. Linguraru, Q. Zhao*, K. Rosenbaum, M. Summar, K. Okada, *Device and Method for Classifying a condition based on Image Analysis*, US9,443,132, Sep 13, 2016
2. K. Okada et al., *Refined Segmentation of Nodules for Computer Assisted Diagnosis* US7,995,809, Aug 9, 2011
3. X. Huang, A. Krishnan, K. Okada, X. Zhou, *Robust Click-Point Linking with Geometric Configuration Context: Interactive Localized Registration Approach* US7,903,857, Mar 8, 2011
4. C. Bahlmann, X. Li, K. Okada, *System and Method for Local Pulmonary Structure Classification for Computer Aided Nodule Detection* US7,764,819, July 17, 2010
5. J. Bi and S. Periaswamy and K. Okada et al., *System and Method for Computer Aided Detection Via Asymmetric Cascade of Sparse Linear Classifiers*, US7,756,313, July 13, 2010
6. K. Okada et al., *Volumetric Characterization Using Covariance Estimation From Scale-Space Hessian Matrices* US7,720,269, May 18, 2010
7. H. Ling and K. Okada, *Diffusion Distance for Histogram Comparison* US7,715,623, May 11, 2010
8. K. Okada et al., *Prior-Constrained Mean Shift Analysis* US7,680,335, Mar 16, 2010
9. K. Okada et al. *Scale-Selection for Anisotropic Scale-Space: Application to Volumetric Tumor Characterization* US 7,616,792, November 10, 2009
10. T. Kubota and K. Okada., *Estimation of Solitary Pulmonary Nodule Diameters with a Hybrid Segmentation Approach* US 7,590,273, September 15, 2009
11. M. Singh, K. Okada et al. *Systems and methods for face detection and recognition using infrared imaging* US 7,542,592, June 2, 2009
12. K. Okada. et al., *System and method for volumetric tumor segmentation using joint space-intensity likelihood ratio* US7,430,321, September 30, 2008
13. K. Okada, D. Comaniciu, L. Bogoni, *Method for Robust Scale-Space Analysis of 3D Local Structures in Medical Images* US 7,308,132, December 11, 2007

Invited Tutorials: (1)

1. K. Okada, *Mean Shift From Theory to Application*, In proc. IEICE workshop on Pattern Recognition and Media Understanding, (PRMU2007-308, Invited Tutorial), pp. 401-414, Kanazawa, 2008 (In Japanese)

Invited Lectures & Presentations: (24)

1. Keynote Talk of COSE Showcase, SFSU (May 2017) *Toward improving the life of amputees: Machine Learning Technologies*
2. Sheikh Zayed Institute for Pediatric Surgical Innovation, Children's National Medical Center, (Oct 2013) *Biomedical Image & Data Analysis Research at BIDAL@SFSU*
3. Sheikh Zayed Institute for Pediatric Surgical Innovation, Children's National Medical Center, (Sep 2012) *Robust Approached for Computer-Aided Analysis of Lung Nodules*
4. Computer Science Department, San Francisco State University, USA (Feb 2012) *Research @ Biomedical Image & Data Analysis Lab (BIDAL)*

5. IBM Almaden Research Center (Nov 2010) *Robust Data Analyses for Computer-Aided Diagnosis of Lung Cancers*
6. Microsoft Research Asia, Beijing (Sep 2010) *Local 3D Topology Type Classification in Chest CT*
7. Radiology and Imaging Science Research, National Institute of Health Clinical Center, Washington DC (Jan 2009)
8. Computer Science Department, San Francisco State University, USA (Sep 2008) *Intelligent Pattern Recognition*
9. Computer Science Colloquia, University of Bonn, Bonn, Germany (May 2008)
10. Biomedical Engineering Department, Rutgers University New Brunswick, USA (Apr 2008) *Robust Analyses of Lung Nodules in CT Scans using Mean Shift*
11. Invited Tutorial, IPSJ Computer Vision and Image Media Workshop, Kanazawa, Japan (Mar 2008) *Mean Shift from Theory to Application*
12. The 4th International Seminar on Primordial Knowledge Model, Kyoto University, Kyoto, Japan (Jan 2008) *Mean Shift Framework for Robust Analysis of Lung Nodules in CT Scans*
13. Graduate School of Natural Science Seminar, Nagoya City University, Nagoya, Japan (Jan 2008) *Mean Shift Framework for Robust Analysis of Lung Nodules in CT Scans*
14. Asilomar Microcomputer Workshop, Asilomar, USA (April 2007) *About Face*
15. School of Engineering and Physics, Herriot-Watt University, Edinburgh, UK (Jan 2007) *Robust Click-Point Linking: Matching Visually Dissimilar Objects*
16. Computer Science Department, San Francisco State University, USA (Nov 2006) *Interactive Intelligent Computing*
17. Siemens Corporate Research, Princeton, USA (May 2006) *Robust Click-Point Linking*
18. Thoracic Imaging, University of California Los Angeles, Los Angeles, USA (Mar 2006) *Robust & Efficient Medical Image Analysis for Lung Nodule Segmentation*
19. Computer Science Department, San Francisco State University, San Francisco, USA (Mar 2006) *Computing for Medical Imaging: Robustness & Efficiency*
20. Electrical and Computer Engineering Department, University of California at San Diego, San Diego, USA (Nov 2002) *Gabor Wavelet-based Face Recognition and Beyond*
21. Siemens Corporate Research, Princeton, USA (Aug 2002) *Gabor Wavelet-based Face Recognition and Beyond*
22. ST Microelectronics, San Diego, USA (Mar 2002) *Gabor Wavelet-based Face Recognition and Beyond*
23. Lau Technologies, Boston, USA (Mar 2001) *Analysis, Synthesis and Recognition of Human Faces with Pose Variations*
24. Eyematic Interface Inc., Los Angeles, USA (Mar 2001) *Analysis, Synthesis and Recognition of Human Faces with Pose Variations*

7. Honors and Awards

- Fourth Place Award in Graduate Physical Science Category (2017), College of Science and Engineering Project Showcase
- First Place Award in Graduate Physical Science Category (2015), College of Science and Engineering Project Showcase
- Third Place Award in Graduate Physical Science Category (2010), College of Science and Engineering Project Showcase
- Travel Grant Award (2009), CSU Program for Education and Research in Biotechnology (CSUPERB, funded $1000)
- First Place Award in Graduate Physical Science Category (2009), College of Science and Engineering Project Showcase
- Honorable Mention Award for Best Poster (2008), SPIE Medical Imaging Conference, San Diego
- Third place and Honorable Mention Awards in Graduate Physical Science Category (2008), College of Science and Engineering Project Showcase
- Honorable Mention Award in Undergraduate Physical Science Category (2007), College of Science and Engineering Project Showcase
- Vice President Assigned Time Award (2007), Professional Development Council, San Francisco State University (funded $8,000)
- Fellowship Award (2006), *A Novel Approach to Image Restoration: Exploring Recurring Pattern*, Erasmus Mundus in Vision and Robotics (funded Euro 14,000)
- Graduate Research Assistantship (1995-2001), Computer Science Department, USC, Los Angeles, USA

8. Research Grants

- PI: Ken Fong Translational Research Fund, San Francisco State University (2016), *Integrating Grid Sensing and Machine Learning for Neural-Controlled Artificial Arms*, (funded $20000) with PI Xiaorong Zhang
- Co-PI: Center for Advancing Women for Technology (2016*) Improving diversity in the computing industry; Attracting female biology students to computer science* (funded $350k) with PI Yoon and Co-PI, Kulkarni, Pennings, Domingo.
- PI: Research Seed Mini Grant Award (2016), *Development of the Next-Generation Myoelectric Controlled Prosthetic Arms Using Grid Sensing and FPGA Technologies*, Center for Computing for Life Sciences, San Francisco State University (funded $1000) with PI Xiaorong Zhang
- Consultant: Pilot Research Awards for Faculties of Children's National and the George Washington University (2014), *Molecular, Clinical and Imaging Biomarkers of Severity of Viral Respiratory Illness in Children*, Clinical and Translational Science Institute at Children's National (funded $49975) with PIs Gustavo Nino, Marius G. Linguraru.
- PI: Research Seed Mini Grant Award (2014), *Identification of Novel Lung Imaging Biomarkers for Children with Viral-Induced Lung Diseases: a Pilot Study*, Center for Computing for Life Sciences, San Francisco State University (funded $6000) K. Okada

- Co-PI: Research Seed Mini Grant Award (2014), *GPU Acceleration of Neuron Fiber Tracking*, Center for Computing for Life Sciences, San Francisco State University (funded $6000) W. Hsu, K. Okada
- Co-I: NIH-R01 sub-award from Stanford Univ, PI: R Altman (5R01LM005652-18) (2013-2015), *Annotating functional sites in 3D biological structures* (the total funding of $191,250) D Petkovic (PI), K Okada
- Co-PI: Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (NSF-TUES) (2012-2015), *Collaborative Research: Transforming the Understanding, Assessment and Prediction of Teamwork Effectiveness in Software Engineering Education using Machine Learning,* National Science Foundation, (the total funding of $199,696) D Petkovic (PI), K. Okada, S. Huang (Florida Atlantic University)
- PI: Donation (2012-2013) Genentech (funded $40,000)
- PI: Donation (2010) IBM Research (funded $2000)
- PI: Research Seed Mini Grant Award (2009), *Multi-Organ Analysis of CT Scans for Patients with Missing and Abnormal Organs*, Center for Computing for Life Sciences, San Francisco State University (funded $5000) K. Okada
- Co-PI: Research Mini Grant Award (2009), *Fostering Mathematics Education Research And its Application to Practice*, Center for Science and Mathematics Education (funded $4500), S. Courey and K Okada
- PI: Research Seed Mini Grant Award (2007), *Facial Expression Analysis for Comparative Studies of Autism in Human and Nonhuman Primates*, Center for Computing for Life Sciences, San Francisco State University (funded $4000) K. Okada
- Co-PI: Office of Special Education Programs for Special Education Preservice Training Improvement (CFDA 84.325T) (2007-2011), *Restructuring the Level I Credential Program to Prepare Highly Qualified Teachers To Teach Students with High Incidence Disabilities in Culturally Diverse Urban Public Schools using the Response to Intervention (RTI) Model*, US Department of Education (funded $128,252; the total funding of $448,882) Sue Courey (PI), Pamela LePage, K. Okada
- PI: CSUPERB Research Seed Grant Award (2007), *Computer-Assisted Image Analysis for Differential Diagnosis for Dentistry*, California State University Program for Education and Research in Biotechnology (funded $13,500) K. Okada and R. Enciso
- PI: Research Seed Mini Grant Award (2006), *Large Scale Causality Networks for Human Stem Cell Data* and *Computer-Assisted 3D Image Analysis for Dentistry*, Center for Computing for Life Sciences, San Francisco State University (funded $10,000) K. Okada and I. Yoon.
- PI: Research Seed Mini Grant Award (2006), *A Web-based Collaborative Tool for 3D Medical Image Annotation and Validation*, Professional Development Council, San Francisco State University (funded $5,000)
- Co-PI: Venture Grant (01/2004 - 12/2005), *Sex discrimination across the menstrual cycle: A comparative study in chimpanzees and rhesus monkeys* Center for Behavioral Neuroscience, NSF (funded $7700; the total funding of $30,850) J. Martin-Malivel (PI), A. Lacreuse, K. Okada, M. Mangini

9. Professional and Civic Activities

- *Member*, IEEE and IEEE Computer Society
- *Member*, ACM
- *Associate Editor* (2010 – 2014) IPSJ Transaction on Computer Vision and Applications
- *Guest Editor*, International Journal of Biomedical Imaging, 2012-2013
- *Guest Reviewer for Proposals*
    - Veni Grant, Innovational Research Incentives, The Netherlands Organization for Scientific Research (NOW), 2012
    - External Review: Ateneo Projects, the University of Padova, 2014
    - Israeli Ministry of Science, Technology and Space, Applied and Engineering Researches 2016
- *Organizing Committee Member*
    - MICCAI 2011 Workshop on Computational and Clinical Applications in Abdominal Imaging, 2011
- *Area Chair*
    - IAPR International Conference on Machine Vision Applications, 2019
- *Program Committee Member*
    - International Conference on Computer Vision, 2007
    - IEEE Computer Society Conference on Computer Vision and Pattern Recognition, 2008
    - MIRAGE: International Conference on Computer Vision /Computer Graphics Collaboration, 2007, 2009, 2011, 2013
    - Second International Workshop on Machine Learning in Medical Imaging (MLMI), 2011, 2012
    - MCBR-CDS 2011: Medical Content-based Retrieval for Clinical Decision Support, 2011, 2012
    - MICCAI Workshop on Clinical Image-based Procedures: From Planning to Intervention (CLIP), 2012
    - International Workshop on Computational and Clinical Applications in Abdominal Imaging, 2012
    - Asian Conference on Computer Vision, 2013, 2017, 2019
    - Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2015,2017,2019,2020
- *Reviewer* of Journals and Conferences on Computer Vision and Medical Imaging Professing (2003 – Current)
    - IEEE Transactions on Pattern Analysis and Machine Intelligence

- IEEE Transactions on Medical Imaging
- IEEE Transactions on Information Theory
- IEEE Transactions on Biomedical Engineering
- IEEE Journal of Biomedical and Health Informatics
- Medical Image Analysis
- IEE Proceedings Vision, Image and Signal Processing
- Computer Vision and Image Understanding Journal
- Neural Computation Journal
- IEICE Transactions on Information and Systems
- Image and Vision Computing
- Pattern Recognition
- EURASIP Journal on Image and Video Processing
- The Visual Computer
- International Journal of Computer Assisted Radiology and Surgery
- Computers in Biology and Medicine
- BioData Mining
- Journal of Medical and Biological Engineering
- PLOS One
- Journal of Signal and Imaging Systems Engineering
- International Conference on Medical Image Computing and Computer-Assisted Intervention
- IEEE International Symposium on Biomedical Imaging
- International Conference on Computer Vision
- IEEE Conference on Computer Vision and Pattern Recognition
- European Conference on Computer Vision
- Asian Conference on Computer Vision
- International Conference on Pattern Recognition
- International Conference on Artificial Neural Network
- International Conference on Independent Component Analysis
- International Workshop on Medical Imaging and Augmented Reality
- MIRAGE: International Conference on Computer Vision /Computer Graphics Collaboration

10. Student Mentees

San Francisco State University: (38)

Master's Theses Completed: (18)

1. Steven Rysavy (MS, CS), May 2008, Thesis: *Segmentation of Periapical Lesions*, **Recipient of the ARCS Scholarship**, Now at University of Washington, Biomedical and Health Informatics Department, **Third Prize at COSE Research Showcase , Distinguished achievement honor**
2. Arturo Flores (MS, CS) May 2008, Thesis: *Classification of Large Periapical Lesions*, Recipient of the LS-AMP Scholarship, Now at University of California at San Diego, Computer Science Department, **Third Prize at COSE Research Showcase**
3. Edgar Liu (MS, CS), May 2008, Thesis: *MICA: 3D Medical Image Collaborative Annotator*, Now at SONY Inc. Taiwan.
4. Rodrigo Salas (MS CS), Feb 2009, Thesis: *Development of CAD System for Periapical Lesions*, Now at Qualcomm
5. Yiyi Miao (MS, CS), Feb 2009, Thesis: *Pulmonary Structure Classification Using Bayesian Framework*, Now at OPSWAT, San Francisco, **Distinguished achievement honor**
6. Mehran Kafai (MS, CS), May 2009, Thesis: *Directional Mean Shift*, **First Prize at COSE Research Showcase**, Now at University of California at Riverside, **Distinguished achievement honor**
7. Xinhang Shao, (MS, CS), Oct 2009, Thesis: *A Web-based Lesson Plan Creator for Mild/Moderate Special Education Program at SFSU*, Now at Silicon Valley Education Foundation
8. Ngoc Lam-Miller, (MS, CS) Oct 2009, Thesis: *An Electronic Portfolio and Assessment management System*, Now at Greenplum, **Distinguished achievement honor**
9. Yang Zhao, (MS, CS) May 2010, Thesis: *Machine Learning Based Medical Image Registration*, Now at NextBio
10. Niranjan Timilsina, (MS, CS) Sep 2010, Thesis: *Development of A Stained Cell Nuclei Counting System*, Now at QuinStreet, **Third Prize at COSE Research Showcase**
11. Runtang Wang, (MS, CS) Feb 2011, Thesis: *Improvement of E-portfolio and Lesson Plan Creation Tool for Mild/Moderate Special Education Programs at SFSU*, Now at The Mind Research Network, New Mexico, **Distinguished achievement honor**
12. Miyuki Suzuki, (MS, CS) Dec 2011, Thesis: *On Missing Organs in Multi-Organ Segmentation with Atlas-Guided Approach*, Now at Rakuten, San Francisco
13. Sergey Sergeev (MS, CS) May 2013, Thesis: *Analysis and Optimization of Machine Learning Based Medical Image Registration Framework*, Now at Square Trade, San Francisco

14. John Collins (MS, CS) May 2013, Thesis: *Machine Learning with Large Image Datasets*, Now at Archimedes, San Francisco
15. Oliver Newland (MS, CS) May 2013, Thesis: *Highly Loss-Sensitive Classification of Protein Crystallization Images*, Now at CrowdFlower, San Francisco
16. Marzieh Golbaz (MS, CS) May 2015, Thesis: *Severity quantification of viral respiratory infection in chest X-ray images,* **First Prize at COSE Research Showcase**, Now at Evidera **Distinguished achievement honor**
17. Juris Puchin (MS, CS) May 2017, Thesis: *Machine Learning Analysis of Neuromuscular Signals in the Human Arm*
18. Octavian Drulea (MS, CS) May 2017, Thesis: *bcikit: A simplified, Open Software Platform for Research and Development of Brain-Computer Interfaces,* **Forth Prize at COSE Research Showcase**
19. Maya Stark (MS, CS) Jan 2018, Thesis: *Automatic Detection and Segmentation of Shoulder Implants in X-ray Images*
20. Jeff Hung (MS, CS) May 2018, Thesis: *Model-Based Registration of Histological Images*
21. Katie Fotion (MS, CS) May 2018, Thesis: *Feature Power: A New Variable Importance Measure for Random Forests*
22. Jakob Dohrmann (MS, CS) Dec 2020, Thesis: *Optimizing a Prediction Pipeline by Prepending an Efficient Low-Fidelity Model*

Current Graduate Students: (2)
- Luis Fernando Chumpitaz Diaz (Master's student, CS), Aug 2020 – current
- Xinwei Fan (Master's student, CS), Jan 2021 – current

Undergraduate Students: (11)
- Taeil Goh (BS, CS), Nov 2006 – Dec 2007, Recipient of the C.Y. Chow Memorial Scholarship, Now at OPSWAT
- Ryan West (BS, CS), Jan 2007 – Aug 2007, Now at Location Labs
- Sean Todd (BS, CS), May 2007 – May 2008, Now at Winasaurus
- David Wang (BS, CS), Oct 2007 – Dec 2008, Now at CSU East Bay
- Andrew Scott (BS, CS), Jan 2009 – May 2010, Now at Sputnik, Inc
- Eric Chiang (BS, CS), Dec 2012 – Jan 2013, Now at Yhat, Inc.
- Christopher Washington (BS, Math), Dec 2012 – May 2013, Now at SFSU Math Graduate Program
- Poulomi Das (BS, CS), Jun 2015 – May 2016
- Andre Simpelo (BS, CS), Jan 2017 – May 2017
- Juniper Overbeck (BS, Math), Jun 2016 – Dec 2017
- Saman Porhemmat (BS, CS), Jun 2016 – Feb 2018

Visiting Scholars: (3)
- Diana Chu, Visiting Volunteer Researcher, Biomedical Engineering, Cornell University, May 2016 - current
- Dr. Hong Ge, Visiting Professor, South China Normal University, Guangzhou, China, Jan 2012 – Dec 2013
- Malik Fahem, Summer Intern, ENSEEIHT, Toulouse, France, Jun 2012 – Aug 2012

University of California at Los Angeles: (1)
Biomedical Physics Interdepartmental Graduate Program
- Jing Huo (Ph.D. Student), Feb 2008 – Dec 2012, Co-supervised with Dr. Matthew Brown

Siemens Corporate Research: (4)
- Umut Akdemir, Graduate Internship Student, 2004 (May-Sep), Now at ASPOne
- Xianlin Li, Undergraduate Internship Student, 2005 (Jun-Aug), Now at Harvard University
- Haibin Ling, Graduate Internship Student, 2005 (May-Sep), Now at Temple University
- Andre Hegerath, Graduate Internship Student, 2006 Spring with Dr. Chenyang Xu and Dr. Yiyong Sun