

## Representative Publications

### Books:

1. Ying Dai, et al. (Eds.) Kansei engineering and soft computing: theory and practice, IGI Global, 2010.

### Journals:

1. Y. Dai, et al. Face Texture Model Based on SGLD and Its Application in Face Detection in a Color Scene, Pattern Recognition, Vol.29, pp. 1007-1017 (1996)
2. Y. Dai, et al. Recognition of Facial Images with Low Resolution Using a Hopfield Memory Model, Pattern Recognition, Vol. 31, pp.159-167 (1998)
3. Ying Dai, et al. "Imagery-based image retrieval considering individual's subjective perception", WSEAS Trans. On Information Science and Applications, Issue6, Volume 1, pp. 1662-1667, 2004.
4. Dawei Cai, Ying Dai, "A new nonlinear distortion correction approach for camera-projector system", WSEAS Trans. On Information Science and Applications, Issue6, Volume 1, pp. 1694-1699, 2004.
5. Ying Dai, et al. "Understanding of facial expressions by the hierarchical recognition of genuine emotions", International Journal of Innovative Computing, Information and Control, Vol. 1, Number 2, pp. 203-214, June 2005
6. Ying Dai, et al. "SGLD-based feature presentation of images and its mapping to individual's imagery", Kansei Engineering International, Vol.5 No.3 pp.79-88 (2005).
7. Ying Dai, "Semantic tolerance relation-based image representation and classification", IJSEIA Journal Vol.2 No.1, pp.33-42, 2008.
8. Ying Dai, "Class-based image representation for Kansei retrieval considering semantic tolerance relation", Journal of Japan society for fuzzy theory and intelligent informatics, Vol. 21, No. 2, pp. 184-193 (2009).
9. Feng Guo, Shaozi Li, Ying Dai, Changle Zhou, Ying Lin, Research on Key Technology in Remote Education System of Spirit Diagnosing by Eye in TCM, the special issue in IJDET, Vol. 9, No. 1, Jan. , pp. 101-113, 2011
10. 李绍滋, 苏松志, 郭锋, 曹冬林, 戴莹. 智能多媒体内容理解若干关键技术研究[J]. 厦门大学学报, Vol. 50(No. 2), pp. 276-285, 2011年3月.
11. Ying Dai, "Representing images' meanings by associative values with given lexicons considering the semantic tolerance relation", Advances in multimedia, Vol. 2011, Article ID 786427, 10 pages, 2011. doi:10.1155/2011/786427
12. Yi Wang, Ying Dai, et al. "Sensitivity-based information selection for predicting individual's

- sub-health on TCM doctors' diagnosis data", Journal of Japan society for fuzzy theory and intelligent informatics, Vol. 23, No. 5, pp. 749-760 (2011).
13. Zhiwen Wang, Shaozi Li, and Ying Dai, "Adaptive image de-noising using multivariate statistical model of fractal-wavelet encodes", Information, Vol.15, No. 1, pp. 41-49 (2012)
  14. Ying Dai, "Quality assessment of subjective labelled training data for improving the reliability of status perception", International Journal of Intelligent Computing Research (IJICR), pp. 672-681, Volume 7, Issue 1, 2016.
  15. Ying Dai, "Quality assessment of training data with uncertain labels for classification of subjective domains", Journal of Computer and Communications, Vol. 5, pp. 152-168, doi: 10.4236/jcc.2017.57014, 2017.
  16. Ying Dai, "Sample-specific repetitive learning for photo aesthetic auto-assessment and highlight elements analysis", Multimedia Tools and Applications, Vol. 80, pp. 1387–1402, DOI: 10.1007/s11042-020-09426-z, 2021
  17. Ziyi Zhu, Ying Dai, "Food Ingredients Identification from Dish Images by Deep Learning", Journal of Computer and Communications, Vol. 9, pp. 85-101, DOI: 10.4236/jcc.2021.94006, 2021
  18. Ying Dai, "Exploring Metrics to Establish an Optimal Model for Image Aesthetic Assessment and Analysis", Journal of Imaging 2022, 8(4), 85, DOI: [10.3390/jimaging8040085](https://doi.org/10.3390/jimaging8040085), 2022
  19. Ying Dai, "Building CNN-Based Models for Image Aesthetic Score Prediction Using an Ensemble", Journal of Imaging 2023, 9(2), 30, DOI: 10.3390/jimaging9020030, 2023
  20. Ziyi Zhu, Ying Dai, "A New CNN-Based Single-Ingredient Classification Model and its Application in Food Image Segmentation", Journal of Imaging 2023, 9, 205, DOI: 10.3390/jimaging9100205, 2023
  21. Kun Fu, Ying Dai, "Recognizing Multiple Ingredients in Food Images Using a Single-Ingredient Classification Model", International Journal of Intelligent Information Technologies (IJIT) 20(1), Pages: 21, DOI: 10.4018/IJIT.360782, 2024

#### **Proceedings:**

1. Y. Dai, et al. Automatic Recognition of Province Name on the License Plate of Moving Vehicle, Proc. 9th ICPR, pp. 927--929 (1988)
2. Y. Dai, et al. A Study of Face Recognition with the Low Quality Images, Proc. ICARCV'94, pp1142--1446 (1994)
3. Y. Dai, et al. The Extraction of Facial Image in the Complex Background Using SGLD

- Matrices, Proc. 12th ICPR, pp.137--141 (1994)
4. Y. Dai, et al. A study of facial expression recognition using the Hopfield Model, DPS 90-7, pp. 37-42 (in Japanese) (1998)
  5. Y. Dai, et al. Recognition of Facial Expressions Based on the Hopfield Memory Model, Proc. of IEEE Multimedia Systems'99, Vol. 2, pp. 133-137 (1999)
  6. Y. Dai, et al. "A new method of facial action extraction and expression recognition of person without language", IEEE Proc. of ICPADS, Workshops, pp.129-133 (2000)
  7. Y. Dai, et al. "An introduction to monitoring patients on bed using the facial expression recognition", Proc. of SCI, Vol. X, pp.252-257 (2000).
  8. Y. Dai, et al. "Facial expression recognition of person without language ability based on the optical flow histogram", IEEE Proc. of ICSP2000, pp.1209-1212(2000).
  9. Y. Dai, et al. "An associate memory model of facial expressions and its application in facial expression recognition of patients on bed", IEEE Proc. of ICME2001, pp. 772-775(2001).
  10. Y. Dai, et al. "Integration of facial expression analysis and recognition using facial action features", IEEE CD-ROM of workshop on Cues in communication with CVPR2001(2001).
  11. Y. Dai, et al. "Understanding of facial expressions by the hierarchical recognition approach for man-machine collaboration", Proc. of DMS 2002, pp160-166, 2002, USA.
  12. Y. Dai, et al. "A study of on man-machine collaboration by using facial expressions", Proc. of SPIE, Vol. 4925 (2002), pp. 238-247.
  13. Ying Dai, "Intention-based image retrieval using SGLD matrices", Proc. of the 7<sup>th</sup> IASTED international conference on IMSA, pp. 289-294, 2003, USA.
  14. Ying Dai, "Intention-based image retrieval with or without a query image using eigen SGLD matrices", IEEE Proc. Of IRI 2003, pp. 266-272, 2003, USA.
  15. Ying Dai, "Intention-based image retrieval with or without a query image", IEEE proc. of 10th MMM, 2004, Australia.
  16. Ying Dai, "Imagery-based collection retrieval using eigen SGLD matrices", IEEE Proc. Of ICME 2004, CD-ROM, Jun., 2004, Taiwan.
  17. Ying Dai, et al. "Visual perception-based structure analysis of images for digital collection retrieval", IEEE Proc. Of SMC 2004, CD-ROM, pp. 1104-1111, Oct., 2004, Netherlands.
  18. Ying Dai, et al. "Imagery-based collection retrieval on web using compact perception features", IEEE Proc. of 2005 IEEE/WIC/ACM international conference on web intelligence, pp. 572-576, Sep., 2005, France.
  19. Ying Dai, "Extraction of individual perception features for imagery-based image retrieval", IEEE Proc. of MMSP 2005, CD-ROM, Oct. 2005, China.
  20. Ying Dai, et al. "Semantic categorization of images for the intuitive image retrieval", Proc. of DMS 2006, pp. 88-91, Aug. 2006, USA

21. Ying Dai, "Semantic tolerance relation model and its application in image representation", Proc. of the second international workshop on image quality and its application, pp. 131-136, Mar. 2007, Japan.
22. Ying Dai, et al. "Image clustering using semantic tolerance relation model", Proc. of the IASTED European conference of internet and multimedia system and application, pp. 278-283, Mar. 2007, France.
23. Ying Dai, "Multi-domain-based automatic image representation using semantic tolerance relation model", IEEE Proc. of PACRIM'07, pp. 505-509, Aug. 2007, Canada
24. Ying Dai, "Semantic tolerance relation-based image representation and classification", IEEE Proc. of IPC 2007, pp.62-67, Oct. 2007, Korea.
25. Ying Dai, "semantic tolerance relation-based image representation for large image/video retrieval", Proc. of IEEE SITIS 2007, Dec. 2007, China.
26. Ying Dai, "Image/video's semantics assignment using bidirectional associative memories", Proc. of SCI & ISIS 2008, pp. 1759-1764, Sep. 2008, Japan.
27. Ying Dai, "Image/Video's automatic annotation considering semantics' tolerance relation", Proc. of IEEE SMC 2008, pp. 3417-3424, Oct. 2008, Singapore.
28. Ying Dai, et al. "A mechanism for large image/videos' automatic annotation considering semantic tolerance relation", Proc. of IEEE ISSNIP 2008, pp. 133-138, Dec., 2008, Australia.
29. Ying Dai, "Representing meanings of images based on associative values with lexicons", Proc. of IEEE IHH-MSP 2009, pp. 1222-1227, Sep. 2009, Japan
30. Feng Guo, Ying Dai, Shaozi Li, "Large-scale image/videos' automatic annotation and retrieval based on the distributed users", Proc. of IEEE ICIS 2009, pp. 48-52, Nov. 2009, China.
31. Feng Guo, Ying Dai, Shaozi Li and Kenzo Ito, "Inferring individuals' sub-health and their TCM syndrome based on the diagnosis of TCM doctors", the Proc. Of IEEE SMC 2010, pp. 3717-3724, 2010, Turkey
32. Feng Guo, Ying Dai, Yin Lin, Shaozi Li, Kenzo Ito, "Consistency Based Rules Mining on Sparse and Diverse TCM Sub-health Diagnosis Data," 2010 IEEE International Conference on Intelligent Computing and Intelligent Systems, pp. 896-901, October 29-31, 2010, China
33. Yi Wang, Ying Dai, et al. "Sensitive-based data selection for predicting individual's sub-health on TCM dovtors' diagnosis data", Proc. Of IEEE SMC 2011, pp. 896-901, 2011, USA
34. Feng Guo, Ying Lin, Shaozi Li, Ying Dai, "Interval-valued cloud model based personal sub-health status diagnosing prototype system on TCM syndrome data", Proc. Of IEEE UIC 2012, pp. 803-810, 2012, Japan

35. Ying Dai, “Modeling Traditional Chinese Medicine doctor’s diagnosis based on the multimodal dataset with subjectivity”, Proc. of IEEE SSCI in healthcare and e-health 2013, pp. 13-20, 2013, Singapore
36. Ying Dai, “Evaluating the effect of different Mode’s attributes on the subjective classification in the case of TCM”, Proc. of IEEE CIMSIm 2013, pp. 171-176, 2013, Korea
37. Ying Dai, “Predicting person’s Zheng states using the heterogeneous sensor data by the semi-subjective teaching of TCM doctors”, Proc. of IEEE SMC 2014, pp.636-641, 2014, USA.
38. Ying Dai, “Measuring the quality of semi-subjective training data and its application in the inference of TCM Zhengs”, Proc. of IEEE SMC 2015, pp. 2749-2754, 2015, Hong Kong.
39. Ying Dai, “Quality assessment of subjectively labelled training data for improving the reliability of status prediction”, Proc. of IEEE SMC 2016, pp. 1227-1232, 2016, Hungary.
40. Ying Dai, “CNN-based repetitive self-revised learning for photos’ aesthetics imbalanced classification”, Proc. of IEEE 25th International Conference on Pattern Recognition (ICPR), pp. 331-338, 2021, Italy.
41. Ziyi Zhu, Ying Dai, “CNN-based visible ingredient segmentation in food images for food ingredient recognition”, Proc. of AAAI AAI 2022, pp. 348-353, 2022. Japan, DOI: 10.1109/IIAIAAI55812.2022.00077
42. Kun Fu, Ying Dai, et al. “CNN-based visible ingredients recognition in a food image using decision making schemes”, Proc. of IEEE SMC 2023, pp. 2427-2432, 2023, USA, ODI: 10.1109/SMC53992.2023.10394513
43. Ziyi Zhu, Ying Dai, “Improving Food Segmentation through selecting Suitable feature representations of Image Pixels”, Proc. of MADiMa 2024 in ICPR 2024, 2024, India

## 研究会

1. 根市豊、戴瑩、”コンテクストアウェアネスに基づき動的に仮想資源を提供するクラウドシステム” 電子情報通信学会 第 20 回サービスコンピューティング研究会
2. 永田睦稀、戴イン、”CNN を用いた路面のひび割れ検出モデルの構築と最適化”、情報処理学会第 80 回全国大会講演論文集、早稲田大学、2018 年 3 月

3. 小川瞭、戴イン、“CNN を用いた人の性格推測システム”、情報処理学会第 80 回全国大会講演論文集、早稲田大学、2018 年 3 月
4. 根市豊、戴イン、“分散フォグノードを活用した移動端末向けオフローディング手法”、情報処理学会第 80 回全国大会講演論文集、早稲田大学、2018 年 3 月
5. 根市豊、戴イン、“分散フォグノードを活用した移動端末向けオフローディング手法”、第 17 回情報科学技術フォーラム FiT2018 講演論文集第 4 分冊 CM-0004、福岡工業大学、2018 年 9 月
6. 佐藤直也、戴瑩、“顔や舌画像と脈拍を用いたストレス度推測モデルの構築”、2019 年電子情報通信学会総合大会情報・システム講演論文集 1D-2-5、早稲田大学、2019 年 3 月
7. 志賀正樹、戴瑩、“CNN を用いた手書き文字画像から人の性格を推測するシステム”、2019 年電子情報通信学会総合大会情報・システム講演論文集 1D-2-6、早稲田大学、2019 年 3 月
8. 松岡 勇弥、戴 瑩、“CNN を用いた路面ひび割れ検出モデルのロバスト性向上に関する研究”、2019 年電子情報通信学会総合大会情報・システム講演論文集 1D-2-7、早稲田大学、2019 年 3 月
9. 大竹 主真、戴 瑩、“Faster R-CNN を用いた路面のひび割れの特定と カテゴリー推定モデルの構築”、情報処理学会第 82 回全国大会講演論文集 2U-03、金沢工業大学、2020 年 3 月
10. 武藤 千里、戴 瑩、“瞼や顔などの画像を用いた貧血推測モデルの構築”、情報処理学会第 82 回全国大会講演論文集 1U-01、金沢工業大学、2020 年 3 月
11. 村上 拓麻、戴 瑩、“CNN を用いた手書き文字画像から人の性格を推測するシステム”、情報処理学会第 82 回全国大会講演論文集 6P-04、金沢工業大学、2020 年 3 月
12. 朱子宜、戴 瑩、“Faster RCNN を用いた食事画像から料理部分の抽出モデルの構築”、情報処理学会第 82 回全国大会講演論文集 6Q-03、金沢工業大学、2020 年 3 月
13. 平中 彗、戴 瑩、“CNN を用いた単品料理の食材を識別するモデルの構築”、情報処理学会第 82 回全国大会講演論文集 6Q-02、金沢工業大学、2020 年 3 月
14. 本田 皓大、戴 瑩、“CNN を用いた保護性さび評点推測モデルの構築”、情報処理学会第 83 回全国大会講演論文集 5R-05、on-line、2021 年 3 月
15. 大坪凌、戴 瑩、“自然体の顔、舌画像からのストレス度推定”、情報処理学会第 8

4 回全国大会講演論文集 7U-04、2022 年 3 月

16. 田中 敦大、戴 瑩、“個人の好みに合わせた写真を提供するシステムの構築”、情報処理学会第 84 回全国大会講演論文集 5Q-05、2022 年 3 月
17. 米倉 寿莉、戴 瑩、“路面標示の劣化を検出するモデルの構築”、情報処理学会第 84 回全国大会講演論文集 2Q-05、2022 年 3 月
18. 赤坂 健斗、戴 瑩、“道路交通標識の検出モデルと識別モデルの構築”、情報処理学会第 84 回全国大会講演論文集 2P-04、2022 年 3 月
19. Kun Fu, Ying Dai, Ziyi Zhu, “CNN-BASED VISIBLE INGREDIENTS RECOGNITION IN A FOOD IMAGE USING DECISION MAKING SCHEMES”, 情報処理学会第 85 回全国大会講演論文集 4Q-06、2023 年 3 月
20. 森 悠人、戴 瑩、“特徴点を用いた手書き平仮名文字上達支援システム”, 情報処理学会第 85 回全国大会講演論文集 1U-02、2023 年 3 月
21. Chida Hiromasa, Dai Ying, “深層学習を用いた車両台数推定システムの構築”, 情報処理学会第 85 回全国大会講演論文集 1U-03、2023 年 3 月
22. Riku Sugawara, Ying Dai, “自然体の顔、発話時画像からのストレス度推定”, 情報処理学会第 85 回全国大会講演論文集 6Q-02、2023 年 3 月
23. Masato Asanuma Ying Dai, “道路交通標識の検出と分類モデルの構築”, 情報処理学会第 86 回全国大会講演論文集 1S-01、2024 年 3 月
24. 縣 憲世、戴 瑩, “Stable Diffusion を用いたキャラクターの画風変換に関する研究”, 情報処理学会第 86 回全国大会講演論文集 7S-01、2024 年 3 月
25. 須賀 智稀、戴 瑩, “対戦格闘ゲームにおける初心者支援システムの研究”, 情報処理学会第 86 回全国大会講演論文集 4S-05、2024 年 3 月