Yago Diez Donoso

Curriculum Vitae

Education

2003–2008 **Ph.D.**, *UPC and Universitat de Girona (UdG)*, Advanced Studies Diploma 2006.

1996-2002 **B.Sc. Mathematics**, *Universitat Politècnica de Catalunya - Barcelona Tech- UPC*.

Experience

October 2017 – Present **Associate Professor (准教授) at Yamagata University (Yamagata, Japan)**, Faculty Of Science .

Administration: Working on the development of a new Data Science BsC course in Yamagata university. Supervision of Graduation, Masters and PhD students.
Teaching: Programming and other Data-science related subjects (情報数学C、情報科学B、データサイエンス１) undergraduate level (In Japanese). Also Part time lecturer (非常勤講師) at Tohoku university, teaching Computer Literacy (In English,undergraduate level) and Computer Science Fundamentals (Master's level,In English.)
Research: Medical Imaging, Deep learning algorithms for AUV-acquired forest image processing and other Applied fields.

2015 – 2017 **Assistant Professor (助教授) at Tohoku University (Sendai, Japan)**, Tokuyama Laboratory .

Research in the context of the Japanese Government funded IMPACT TRC project on Robotics Challenges for disaster intervention. Focus on Algorithms for GPS trajectory processing and video analysis.

2012–2015 **Staff Researcher at Girona University (Catalonia,Spain)**, Computer Vision and Robotics Group (VICOROB) .

Research in the context of the EU FP7 ASSURE project, focus on Breast Imaging (X-Ray/ABVS/MRi), other responsibilities included acting as journal reviewer and conference PC member, directing PhD and Master Theses, writing project proposals for the EU and Spanish ministry of Science and managing two research projects (budget and team management and reporting to funding organisms).

2011–2012 **Research Project manager at Girona University(Catalonia,Spain)** , VICOROB *group* .

Research Project proposal preparation and management of Spanish Science Ministry-funded projects.Research Focus on Brain MR imaging.

Shiheimachi 15-19-2, Aoba ku – Sendai, Miyagi 984-0032 (Japan)
(0081) 80 84737084 • yagodiezdonoso@gmail.com
*http://yagodiez.com/ • * 18-03-1978*

2009–2011 **Postdoctoral Researcher at Girona University (Catalonia,Spain)**, VICOROB *group*.
Focus on Mammographic Imaging and Computer Vision Algorithms for Point Cloud Matching, research in various projects including one in an industry setting where I also directed a Master's thesis.

2004–2009 **PhD. Candidate at Girona University's Girona Graphics Group (GGG) (Catalonia,Spain)** , Predoctoral research on Bottleneck Point Set matching as well as teaching practical contents in: Algorithmics (Computer Science Studies), Computer Science Basics (Mechanical Engineering, Electronic Engineering and Chemical Engineering studies. Also teaching mathematics subjects at university level in private academies.

Public Identifiers

ORCID: `https://orcid.org/0000-0003-4521-9113` .

ResearchMap: `https://researchmap.jp/7000014723` .

DBLP: `https://dblp.org/pid/02/4232.html`.

Publons: `https://publons.com/researcher/1686699/yago-diez-donoso/`.

Google Scholar: `https://scholar.google.co.jp/citations?user=lVdYAnOAAAAJ&hl=en&oi=ao`.

Research interests

Deep Learning Applications, Remote Sensing, Computational Geometry. 3D Coarse Matching of point clouds. Trajectory Analysis. Medical Image Registration. Multiple Sclerosis imaging. Breast MRI.

Research Project Management Experience

Application for YU-COE project funded by Yamagata University .
Project leader: Katsushi Waki, Faculty Of Science, Yamagata University.

Application for EU FP7 projects including ASSURE project (funded by FP7-HEALTH-2012-INNOVATION1).
Project leader: Nico Karssemeijer, RUNMC University Nijmegen.

Application for Spanish Ministry projects including IA-BioBreast project (funded by grant TIN2012-37171-C02-01).
Project leader: Joan Martí Bonmatí , University of Girona.

Coordination tasks project ANDREA-RAIMON, Spanish Ministery of Science (MICIN). joint project UDG - UPV.
Project leaders: Joaquim Salvi and Juan José Serrano

Coordination tasks PROFIT project "Escaneado de superfícies con especiales dificultades". Technology transfer joint project with the AQSENSE company.
Project Leader: Joaquim Salvi.

Supervised Students

PHD Theses 2

Yamagata University, United Graduate School of Agricultural Sciences (UGAS), 1 PhD Thesis.

Title *Deep Learning ALgorithms For Tree Species Classification in Japanese Forests.*
Student Sarah Kentsch
Co-director **Larry Lopez** *(Ongoing, Expected finished July 2021)*

Girona University, 1 PhD Thesis

Title *3D Algorithms for point cloud matching*
Student Ferran Roure
Co-director **Joaquim Salvi** *(Finished March 2017)*

MsC Theses: 3

Yamagata University, 1 MsC Thesis, Data Science Program.

Title *CV Tree Top Detection and classification in forest drone images.*
Student 森竹　孝麿 (Koma Moritake) (in Progress, started 2020)

Girona University, 2 MSC Theses, VIBOT erasmus mundus Master

Title *Robust Segmentation of salient features in Automatic Breast Ultrasound (ABUS) images*
Student Lamees Nasser
Co-director **Robert Martí** *2013*
Title *Scanning Objects with Difficult Characteristics*
Student Isaac Castro
Co-director **Joaquim Salvi, Josep Forest** *2011, in cooperation with the AQSense Company.*

Undergraduate Student project supervision: 6

Yamagata University

森竹　孝麿 (Koma Moritake) *CV Tree Top Detection in forest drone images. Awarded Graduation Thesis Prize 卒業論文賞 Data Science Studies, 2021.*

今高　晃平 (Kohei Imataka) *DL classification of tree health drone images. Awarded Graduation Thesis Prize 卒業論文賞 Data Science Studies, 2021.*

Girona University

Rocío Cabrera-Lozoya: *The Hayton-Brady Pharmacokinetic Model, VIBOT summer Internship, 2009*

Don Joven Agravante: *The 4-Points algorithm for Bin-Picking, VIBOT summer Internship, 2010*

Amanda Prorok *Search Algorithms in Quadtrees, Computer Engineering international Exchange Project 2007.*

Joan Rosset *Searching for Motifs in Proteins, Computer Engineering end-of-Studies Project 2006.*

Program Committee Member/Reviewer

Journals

Intelligent Service Robotics: Editor,reviewer

IEEE Transactions on Knowledge and Data Engineering: reviewer

Neuroimage: reviewer

Artificial Intelligence in Medicine: reviewer

Int. Journal of Computer Assisted Radiology and Surgery (IJCARS): reviewer

The Visual Computer: reviewer

Remote Sensing: reviewer

Sensors: reviewer

Computers in Biology and Medicine (CBM): reviewer

Applied Sciences: reviewer

Simmetry: reviewer

Medicina: reviewer

Insects: reviewer

Entropy: reviewer

Electronics: reviewer

Journal Of Imaging: reviewer

Journal of Electronic Imaging (JEI): reviewer

Optical Engineering (OE): reviewer

Robotics and Autonomous Systems: reviewer

Conferences

VISAP,VISIGRAPP Conference, reviewer 2013, PC member 2014,2015,2016,2017,2018,2019,2020

ICPRAM Conference, PC member,reviewer 2016,2018,2019,2020.

IROS 2017, reviewer.

EuroCG-2017,2018: reviewer

JCDCG2 2015: reviewer

LATIN16: reviewer

SoCG 2016: reviewer

ICIP 2014: reviewer

IWDM 2014: reviewer

IBPRIA 2014,2015: reviewer

IEEE International Conference on Robotics and Automation ICRA 2016: reviewer

Theses and Master Theses (reader/tribunal member)

Yamagata University (Japan)

University Of Girona (Spain)

Radboud University Nijmegen (The Netherlands)

University of Waikato (New Zealand)

Shiheimachi 15-19-2, Aoba ku – Sendai, Miyagi 984-0032 (Japan)
(0081) 80 84737084 • yagodiezdonoso@gmail.com
*http://yagodiez.com/ • * 18-03-1978*

Publication List

a) Doctoral theses:

1. OWN THESIS:*2D and 3D Colored Point Set matching under the bottleneck distance*
   Supervisor: Joan Antoni Sellarés
2. DIRECTED THESIS:*3D Algorithms for point cloud matching*
   Student: Ferran Roure, Co-Supervisor: Joaquim Salvi

b) Peer-reviewed papers
(22 Journals, 5 Abstracts in medical journals, 26 peer reviewed conferences)

b1) Peer-reviewed Journals, 1 submitted + 22 Publications:

- M. Habib, Y. Diez, J. Salvi,X Lladó, "Motion-Region Annotation for Complex Videos Via Label Propagation Across Occluders" submitted to Machine Vision and Applications.

22. (2021-2) HT Nguyen, ML Lopez Caceres, K Moritake, S Kentsch, H Shu, **Y Diez**
    Individual Sick Fir Tree (Abies mariesii) Identification in Insect Infested Forests by Means of UAV Images and Deep Learning.
    Remote Sensing 13 (2), 260 2021 [JCR EPS IF 4.118, Q1(7/30)]

21. (2021-1) S Kentsch, M Cabezas, L Tomhave, J Gross, B Burkhard, K Waki, **Y Diez**
    Analysis of UAV-Acquired Wetland Orthomosaics Using GIS, Computer Vision, Computational Topology and Deep Learning.
    Sensors 21 (2), 471 2021 [IF 3.501, Q1(38/374) INS]

20. (2020-2) M Cabezas, S Kentsch, L Tomhave, J Gross, MLL Caceres, **Y Diez**
    Detection of Invasive Species in Wetlands: Practical DL with Heavily Imbalanced Data.
    Remote Sensing 12 (20), 3431 4 2020 [JCR EPS IF 4.118, Q1(7/30)]

19. (2020-1) Kentsch, S.; Lopez Caceres, M.L.; Serrano, D.; Roure, F.; **Diez, Y.**
    Computer Vision and Deep Learning Techniques for the Analysis of Drone-Acquired Forest Images, a Transfer Learning Study.
    Remote Sensing 12(8), 1287, 2020. [JCR EPS IF 4.118, Q1(7/30)]

18. (2019-3) E. García, **Y. Diez**, O. Diaz, X. Lladó, A. Gubern-Merida, R. Martí, J. Martí, A. Oliver.
    "Breast MRI and X-ray mammography registration using gradient values".
    Medical Image Analysis. Vol 54, pp 76-87, 2019. [JCR CSAI IF 8.880, Q1(5/133)]

17. (2019-2) **Y. Diez**, M. Fort, M. Korman, J.A. Sellarès,
    "Group evolution patterns in running races",
    Information Sciences,Volume 479,2019,Pages 20-39, [JCR CSIS IF 5.524, Q1(9/155)]

16. (2019-1) F. Roure, X. Lladó, J. Salvi and **Y. Diez**.
    "GridDS, a Hybrid Data Structure for Residue Computation in Point Set Matching"
    Machine Vision and Applications 30 (2), 291-307,2019 [JCR CSC IF 1.788, Q2(10/23)

15. (2018-2) E.García, A.Oliver, **Y.Diez**, O.Diaz, X. Lladó, R.Martí, and J.Martí.
    "Multimodal breast parenchymal patterns correlation using a patient-specific biomechanical model"
    IEEE Trans. on Medical Imaging, 37(3), pp 712-723, 2018. [JCR RNMI IF 6.131, Q1(9/128)].

14. (2018-1) E. García, **Y. Diez**, O. Diaz, X. Lladó, R. Martí, J. Martí, and A. Oliver.
    "A step-by-step review on patient-specific biomechanical models for breast MRI to X-ray mammography registration"
    Medical Physics, 45(1), pp e6-e31, 2018. [IF 2.884, Q2(36/128) RNMMI]

13. (2017-3) J.F. Baffier, M.K. Chiu, Y. Diez, M. Korman, V. Mitsou, A. Renssen, M. Roeloffzen, Y. Uno.
    "Hanabi is NP-complete, Even for Cheaters who Look at Their Cards"
    Theoretical Computer science, 675: 43-55, 2017. [JCR SCIE IF 0.772 Q1 38/406]

12. (2017-2) M. Habib, **Y. Diez**, J. Salvi,X Lladó,
"A collection of challenging motion segmentation benchmark datasets."
Pattern Recognition,61, 1-14,2017,Pergamon [JCR CSAI IF:3.399 Q1(15/130)]

11. (2017-1) E. García, O.Diaz, R. Martí, **Y. Diez**, A.Gubern-Mérida, M.Sentís, J. Martí, and A. Oliver.
"Local breast density assessment using reacquired mammographic images."
European Journal of Radiology, 93, pp 121-127, 2017. [IF 2.843, Q2(38/128) RNMMI]

10. (2016-3) M. Cabezas, A. Oliver, D. Pareto, **Y.Diez** ,J.C. Vilanova, M.Tintore, J. Corral,
X. Montalban, A. Rovira, and X. Lladó
"Improved automatic detection of new T2 lesions in multiple sclerosis using deformation fields."
American Journal of Neuroradiology, 2016. [JCR RNMMI IF 3.589, Q1(19/125)]

9. (2016-2) J. Schwaab,**Y. Diez**, A.oliver,R. Martí, J. van Zelst, A. Gubern-Mérida,
A. Bensouda Mourri, J. Gregori, M. Günther.
"Automated quality assessment in 3D breast ultrasound images"
Journal of Medical Imaging, 3(2), 027002. 2016.

8. (2016-1) T. Pribanic, **Y. Diez**, F. Roure, J. Salvi
"An efficient surface registration using smartphone".
Machine Vision and Applications, 27,4,559-576,2016,Springer Berlin Heidelberg. [JCR IF 1.351, Q2)]

7. (2015-2) S.Valverde,A.Oliver,**Y. Diez**,M. Cabezas, J.C. Vilanova,
Ll. Ramió-Torrentà, A. Rovira, X. Lladó.
"Evaluating the effects of white matter multiple sclerosis lesions on the volume estimation
of six brain tissue segmentation methods".
American Journal of Neuroradiology, 6(6), 2015, 1109–1115. [JCR RNMMI IF 3.675, Q1(18/122)]

6. (2015-1) **Y. Diez**, F. Roure, X. Lladó, and J. Salvi.
"A Qualitative Review on 3D Coarse Registration Methods".
ACM Computing Surveys , 47(3), 2015, article 45. [JCR CSTM IF 4.04, Q1(3/102]

5. (2014-2) O. Ganiler, A. Oliver, **Y. Diez**, J. Freixenet, J.C. Vilanova, B.Beltrán, Ll. Ramió-Torrentà, A. Rovira, and X. Lladó.
"A subtraction pipeline for automatic detection of new appearing
multiple sclerosis lesions in longitudinal studies"
Neuroradiology, 56(5), 2014, pp. 363-374. 2014. [JCR RNMMI IF 2.374, Q2(38/121)]

4. (2014-1) **Y. Diez**, A. Oliver, M. Cabezas, S. Valverde, R. Martí, J.C. Vilanova, Ll. Ramió-Torrentà, A. Rovira, and X. Lladó.
"Intensity based methods for brain MRI longitudinal registration. A study on multiple sclerosis patients".
Neuroinformatics, **12**(3), 2014, 365–79. [JCR CSTM IF 3.102, Q1(12/102)]

3. (2013-1) **Y.Diez**, J. Martí, J. Salvi.
"Hierarchical Normal Space Sampling To Speed Up Point Cloud Coarse Matching".
Pattern Recognition Letters **33**(16),2012, pp. 2127–2133. [JCR CSAI, IF 1.266 , Q2 (56/112)]

2. (2011-2) **Y. Diez**, A. Oliver, X. Lladó J. Martì, J. Freixenet, J.C. Vilanova, R. Martí.
"Revisiting intensity based image registration applied to mammography".
IEEE Trans. on Inform. Techn. in BioMedicine, 15(5), 2011, pp 716–725, 2011. [JCR CSIA IF: 1.676 Q1(27/133)]

1. (2011-1) **Y. Diez**, J.A. Sellarès.
"Noisy Point Set Matching".
Discrete Applied Mathematics, **159**(6), 2011, pp 433–449. [JCR MA, IF 0.795 , Q2 (106/245)]

b2) Abstracts in peer-reviewed Medical Journals, 5 Publications:

5. S.Valverde, A. Oliver, M. Cabezas, Y. Diez, J. Freixenet, X. Lladó, J.C. Vilanova, A. Rovira and Ll. Ramió-Torrentà. "A quantitative study of the effects of White Matter MS Lesions on tissue segmentation methods"
   Multiple Sclerosis. **19**(S1), 2013, pp 407–408.
   [JCR CN IF:4.472 Q1(25/191)]

4. X. Lladó, M. Cabezas, O. Ganiler, A. Oliver, Y. Diez, J. Freixenet, L. Valls, A. Quiles, G. Laguillo, D. Pareto, J.C. Vilanova, A. Rovira, Ll. Ramió-Torrentà. "SALEM: Herramientas informáticas para la detección de lesiones de esclerosis múltiple en estudios longitudinales mediante imágenes de resonancia magnética del cerebro."
   Neurología, 195–196, 2012.
   [JCR CN IF:1.322 Q3(142/191)]

3. M. Cabezas, A. Oliver, X. Lladó, Y. Diez, J. Freixenet, J.C. Vilanova, A. Quiles, G. Laguillo, Ll. Ramió-Torrentà, D. Pareto, and A. Rovira. "A supervised approach to segment multiple sclerosis lesions using context-rich features and a boosting classifier"
   Multiple Sclerosis. **18**(S4), 2012, pp 157.
   [JCR CN IF:4.472 Q1(25/191)]

2. O. Ganiler, X. Lladó, A. Oliver, Y. Diez, J. Freixenet, J.C. Vilanova, A. Quiles, G. Laguillo, Ll. Ramió-Torrentà, D. Pareto, and A. Rovira. "Detecting evolving white matter MS lesions in serial brain MRI studies: analysis of a subtraction approach".
   Multiple Sclerosis. **18**(S4), pp 385.
   [JCR CN IF:4.472 Q1(25/191)]

1. Y. Díez, X. Lladó, A. Oliver, R. Martí, E. Roura, M. Cabezas, O. Ganiler, J. Freixenet, J.C. Vilanova, L. Valls, Ll. Ramió-Torrentà, D. Pareto, and A. Rovira. "Registration of serial brain MRI scans from multiple sclerosis patients. Analysis of 3D intensity-based methods".
   , Multiple Sclerosis. **18**(S4), pp 384-385.
   [JCR CN IF:4.472 Q1(25/191)]

b3) Peer reviewed Conferences, 26 Publications:

26. Diez Y., Kentsch S., Lopez-Caceres M. L., Moritake k, Nguyen H.T., Serrano D., Roure, F. A Preliminary Study on Tree-Top Detection and Deep Learning Classification Using Drone Image Mosaics of Japanese Mixed Forests International Conference on Pattern Recognition Applications and Methods, 64-86, 2020

25. E.García, A.Oliver, Y.Diez, N.Karssemeijer, J.Martí, R.Martí and O.Diaz. Evaluation of elastic parameters for breast compression using a MRI-mammography registration approach Accepted for publications IWBI 2020.

24. Diez Y., Kentsch S., Lopez-Caceres M. L., Nguyen H.T., Serrano D., Roure, F. Comparison of Algorithms for Tree-top Detection in Drone Image Mosaics of Japanese Mixed Forests, Proceedings of the 9th International Conference on Pattern Recognition Applications and Methods, ICPRAM 2020, Valletta, Malta, 22–24, 2020.

23. F. Roure, X. Lladó, J. Salvi, T. Privanic, Y. Díez. Hierarchical hardware/software algorithm for multi-view object reconstruction by 3D point clouds matching Communications in Computer and Information Science, 2019 (983), 176-191

22. Bojanić D., Bartol K., Pribanić T., Petković T., Diez Y. and Salvi J. On the Comparison of Classic and Deep Keypoint Detector and Descriptor Methods 2019 11th IEEE International Symposium on Image and Signal Processing and Analysis (ISPA), 64–69, 2019.

21. E.García, A.Oliver, O.Diaz, Y.Diez, A. Gubern-Mérida, J.Martí and R.Martí. "Changes in breast denity over time using automatic density measures. Preliminary analysis." International Workshop on Breast Imaging, Proc. SPIE 10718, pp 107181l. Atlanta, Georgia. June 2018.

20. J.F. Baffier, Y. Diez, M. Korman. "Experimental Study of Compressed Stack Algorithms in Limited Memory Environments." Symposium on Experimental Algorithms, SEA 2018: 19:1-19:13.

19. K. Buchin, Y. Diez, T. van Diggelen, W. Meulemans. "Efficient trajectory queries under the Fréchet distance (GIS Cup)". SIGSPATIAL/GIS 2017: 101:1-101:4 Second position at the GISCup challenge 2017.

18. E.García, A.Oliver, Y.Diez, O.Diaz, X. Lladó, R.Martí, and J.Martí. "Similarity metrics for intensity-based registration using breast density maps, 8th Iberian Conference on Pattern Recognition and Image Analysis." IbPRIA 2017, Faro (Portugal), pp 217-225, June 20–23, 2017.

17. F. Roure, X. Lladó, J. Salvi, T. Privanic, Y. Díez. "Hierarchical Techniques to Improve Hybrid Point Cloud Registration." VISAPP (4) 44-51, 2017, Porto (Portugal).

16. E.García, A.Oliver, O.Diaz, Y.Diez, R.Martí, and J.Martí. "Mapping 3D breast lesions from full-field digital mammograms using subject-specific finite element models. " PIE Conference on Medical Imaging, Proc. SPIE 10135, pp 1013504O1-1013504O8. Orlando, Florida. February 2017.

15. J.F. Baffier, M.K. Chiu, Y. Diez, M. Korman, V. Mitsou, A. van Renssen, M. Roeloffzen, Y. Uno. "Hanabi is NP-complete, Even for Cheaters who Look at Their Cards" FUN 2016.

14. E.García, A.Oliver, Y.Diez, O.Diaz, A. Gubern-Mérida, X.Lladó, and J.Martí. " Comparison of four breast tissue segmentation algorithms for multi-modal MRI to X-ray mammography registration." International Workshop on Breast Imaging, 493-500. Malmö, Sweden. June 2015.

13. E.García, A.Oliver, Y.Diez, O.Diaz, J.Georgii, A.Gubern-Mérida, R.Martí, and J.Martí. "Comparing regional breast density using full-field digital mammograms and magnetic resonance imaging: a preliminary study.".
MICCAI Workshop on Breast Image Analysis, pp 33-40. Munich, Germany. October 2015.

12. M. Habib Mahmood, L. Zappella, Y. Diez, J. Salvi and X. Lladó. "A new trajectory based motion segmentation benchmark dataset (UdG-MS15). 7th Iberian Conference on Pattern Recognition and Image Analysis."
IbPRIA 2015, Santiago de Compostela (Spain), June 17–19, 2015.

11. F. Roure, Y. Diez, X. Lladó, J. Forest, T. Pribanic and J. Salvi. "A Study on the Robustness of Shape Descriptors to Common Scanning Artifacts".
14th IAPR Internat. Conf. on Machine Vision Applic. , Tokyo (Japan), May 18–22, 2015.

10. F. Roure, Y. Diez, X. Lladó, T. Pribanic, J. Forest and J. Salvi. "An Experimental Benchmark for Point Set Coarse Matching".
10th International Conference on Computer Vision Theory and Applications (VISAPP), Berlin (Germany), March 11–14, 2015.

9. L. Wang, J. Strehlow, J. Ruehaak, Y. Diez, S. Diekmann, H. Laue, H. K. Hahn. "A fast alignment method for breast MRI follow-up studies using automated breast segmentation and current-prior registration".
Proc. SPIE 9413, Medical Imaging 2015, Orlando (USA), March 20, 2015.

8. R. Martí, Y. Diez, A. Oliver, M. Tortajada, R. Zwiggelaar, X. Lladó. "Detecting Abnormal Mammographic Cases in Temporal Studies Using Image Registration Features"
Breast Imaging, IWDM 2014 612-619, Gifu (Japan), June 29 – July 2, 2014.

7. Y. Diez, A. Gubern-Mérida, L. Wang, S. Diekmann, J. Martí, B. Platel, J. Kramme, R. Martí. "Comparison of Methods for Current-to-Prior Registration of Breast DCE-MRI".
Breast Imaging, IWDM 2014 689-695, Gifu (Japan), June 29 – July 2, 2014.

6. J. Schwaab, Y. Diez, J. Martí, R. Martí, J. van Zelst, B. Platel, T. Tan, J. Gregori, S. Wirtz, J. Kramme, M. Günther. "Image quality in automated breast ultrasound images: a preliminary study for the development of automated image quality assessment".
Breast Image Analysis Workshop 2013 at MICCAI 2013, Nagoya (Japan) September, 2013.

5. Y. Díez, M. Tortajada, S. Ganau, L. Tortajada, M. Sentís, R. Martí. "Demons Methods for Digital Mammography Registration".
6th Iberian Conference on Pattern Recognition and Image Analysis, IBPRIA, pp 253-260, Madeira (Portugal), June 5–7, 2013.

4. Y.Diez, A.Oliver, X.Lladó, and R.Martí. "Comparison of registration methods using mammographic images".
IEEE International Conference on Image Processing (ICIP), pp 4421-4424. Hong Kong. September 2010.

3. M.Tortajada, A.Oliver, Y.Diez, R.Martí, J.C.Vilanova, and J.Freixenet. "Improving a CAD system using bilateral information".
IEEE Conference of the Engineering in Medicine and Biology Society (EMBC), pp 5054-5057. Buenos Aires (Argentina). September 2010.

2. Y. Diez, J.A. Sellarès, Mario A.López. "Noisy Road Network Matching".
GIScience08 LNCS 5266 38-54,Park City Utah (USA), 2008.

1. Y. Diez, J.A. Sellarès. "Efficient Colored Point Set Matching Under Noise".
ICCSA 2007, LCNS 4705, 26-40, Kuala Lumpur (Malaysia), 2007.

c) Papers published in a bulletin (0)

d) Proceedings (low tier peer-reviewed conferences) 14 Publications

14. Y. Diez, M. Korman, A. van Renssen, M. Roeloffzen and F. Staals, "Kinetic All-Pairs Shortest Path in a Simple Polygon" EuroCg 2017, Malmo Sweeden.
13. F. Roure, X. Lladó, J. Salvi, Y. Díez. " Range Searching Data Structures for point Cloud Matching " 9th Annual Meeting of the Asian Association for Algorithms and Computation, Taipei, Taiwan. May 2016.
12. J.F. Baffier, Y. Diez, M. Korman. "Implementation of Stack Structure with Limited Memory" 9th Annual Meeting of the Asian Association for Algorithms and Computation, Taipei, Taiwan. May 2016.
11. Y. Diez, A. Maroto, O. Diaz, A. Gubern-Mérida, R. Martí. "A study of rigid registration methods for ABUS temporal studies".
European Congress of Radiology (ECR), Viena (Austria), March 2–6, 2016.
10. J. Schwaab, A. Malave, Y. Diez, R. Martí, J. Van Zelst, A. Bensouda, J. Gregori, M. Günther. "Computerized image quality assessment in automated 3D breast ultrasound."
European Congress of Radiology (ECR), Viena (Austria), March 2–6, 2016.
9. O. Diaz, R. Agarwal, A. Gubern-Mérida, J. Van Zelst, Y. Diez, R. Martí. "Automated volumetric lesion quantification in automated 3D breast ultrasound: comparison of 5 breast lesion segmentation algorithms."
European Congress of Radiology (ECR), Viena (Austria), March 2–6, 2016.
8. L. Wang, A. Gubern-Mérida, O. Diaz, Y. Diez, R. Mann, S. Diekmann, F. Zöhrer, H. Laue and J. Schwaab. "Automated assessment of motion in breast MRI to assess study quality and prevent unnecessary call-backs".
European Congress of Radiology (ECR), Viena (Austria), March 4–8, 2015.
7. M.Tortajada, A.Oliver, Y.Diez, J.C.Vilanova, J.Martí, J.Freixenet, S.Ganau, L.Tortajada, R.Aguilar, M.Vives, J.Fernandez-Bayo, M.Sentís, and R.Martí. "CAD system using case-based information."
Annual Meeting of the European Society of Radiology. Vienna (Austria). March 2013.
6. M.Tortajada, A.Oliver, Y.Díez, R.Martí, J.C.Vilanova, and J.Freixenet. "Integrating Bilateral Information in the Eigendetection CAD Approach".
96th Radiological Society of North America (RSNA) Scientific Assembly and Annual Meeting. Chicago, November 28–December 3, 2010.
5. Y. Diez, M.Fort, J.A. Sellarès. "Solving Reverse k-Nearest Queries on Road Networks with the GPU".
XIII Encuentros de Geometría Computacional (EGC), pp 117- 124, Zaragoza (Spain), June 29 - July 1, 2009.
4. Y. Diez, J.A. Sellarès. "Noisy Bottleneck Colored Point Set Matching in 3D".
24th European Workshop on Computational Geometry (EuroCG), pp 237-240, Nancy (France), March 18-20, 2008.
3. Y. Diez, J.A. Sellarès. "Colored Point Set Matching Under Noise in 3D".
XII Encuentros de Geometria Computacional (EGC) pp: 67-74, Valladolid (Spain), June 25–27, 2007.
2. Y. Diez, J.A. Sellarès. "Noisy disk set matching under rigid motion"
22nd European Workshop on Computational Geometry (EuroCG), Delphi (Greece), March 27–29, 2006.
1. Y. Diez, J.A. Sellarès. "Approximate disk matching under rigid motion".
XI Encuentros de Geometria Computacional (EGC),279–286, Santander (Spain), 2005.

e) Books (0)

f) List of grants acquired

(Co-I) Forests 4.0 .Joint research with startup company 森から人へ.
Innovation Contest "Yamagata Business Plan" 山形ビジネスプラン winning project
Company provided budget: 2021: 8,759,500 円. Estimated (2021-2024) 13,858,500 円
Project Leader: Larry Lopez

Participant-Advisor: Application of Artificial Intelligence to estimate forest thinning 人工知能を用いて間伐の推定に関する研究
Allotted Budget 2021: 200,000 円
Project Leader: 株式会社ジツタ

(part of the writing team): EU FP7 project ASSURE project (funded by EU, FP7-HEALTH-2012-INNOVATION1).
Project leader: Nico Karssemeijer, RUNMC University Nijmegen.

(part of the writing team): IA-BioBreast project (funded by grant TIN2012-37171-C02-01 of the Spanish Science Ministry).
Project leader: Joan Martí Bonmatí, University of Girona.

g) Prizes and nominations (4)

ICPRAM 2020: Best Paper Award (nomination): Paper: "Comparison of Algorithms for Tree-top Detection in Drone Image Mosaics of Japanese Mixed Forests."

Programming Challenge: Second Position at ACM SIGSPATIAL GIS Cup 2017 (Paper Efficient trajectory queries under the fréchet distance. K. Buchin, Y. Diez, T. van Diggelen, and W. Meulemans)

Visap 2017: Best Paper Award (nomination): Paper: "Hierarchical Techniques to Improve Hybrid Point Cloud Registration."

Conference Scolarship: ESRI Scholarship at GiScience conference 2008 for outstanding student paper.

h) Others (1)

Spanish Ministry of Education "honour student" scolarship for university due to oustanding academic results in high school.

Programming Languages

Basic: Ruby, Perl, SPM, Matlab, Mevislab,opencv

Intermediate: Itk, java

Advanced: C++, Python, Bash Shell

Languages

Spanish: **Native Speaker**

Catalan: **Native Speaker**

English: **Native Speaker level** — *Proficiency title (Cambridge University CPA) since 1996.*

Japanese: **Advanced** — *JLPT N2 July 2018, (currently studying for N1)*

Shiheimachi 15-19-2, Aoba ku – Sendai, Miyagi 984-0032 (Japan)
(0081) 80 84737084 • yagodiezdonoso@gmail.com
*http://yagodiez.com/ • * 18-03-1978*