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Employment

The Maersk Mc-Kinney Moller Institute
SDU
Odense M
24. Jun 2022 → present

Associate Professor
SDU Robotics
SDU
24. Jun 2022 → present

Postdoc
Technical University of Denmark
Kongens Lyngby, Denmark
1. May 2016 → 30. Apr 2017

PhD Stipend
Technical University of Denmark
Kongens Lyngby, Denmark
1. Sept 2012 → 14. Mar 2016

Teaching and supervision

Advanced Computer Vision
Jakob Wilm
01/02/2020 → ...

Digital 3D Geometry Processing
Jakob Wilm
01/09/2016 → 31/12/2017

Introduction to Robotics, Artificial Intelligence, and Computer Vision
Jakob Wilm
01/09/2018 → 31/01/2019

Medical Imaging 1
Thiusius R. Savarimuthu, Dirk Kraft & Jakob Wilm
01/09/2017 → 31/01/2018

Medical Imaging 1
Thiusius R. Savarimuthu, Dirk Kraft & Jakob Wilm
01/09/2018 → 31/01/2019

Medical Imaging 1

Thiusius R. Savarimuthu & Jakob Wilm
02/09/2019 → 31/01/2020

Object Oriented Programming and Software Development

Jakob Wilm
01/02/2019 → 30/06/2020

PhD Co-Supervisor, Janus Nørtoft Jensen

Jakob Wilm
01/01/2017 → 26/02/2021

PhD Co-Supervisor, Morten Hannemose

Jakob Wilm
01/12/2016 → 19/11/2020

Signal processing and industrial computer vision

Jakob Wilm
01/09/2018 → ...

Supervision, Drawing Robot

Jakob Wilm
01/04/2018 → ...

Supervision, Pole Position Project

Jakob Wilm
01/09/2016 → 31/01/2017

Supervision, Project in Advanced Robotics

Jakob Wilm
01/02/2020 → ...

Research outputs

Multi-view object pose distribution tracking for pre-grasp planning on mobile robots

Naik, L., Iversen, T. M., Kramberger, A., Wilm, J. & Kruger, N., 2022, *2022 International Conference on Robotics and Automation (ICRA)*. IEEE, p. 1554-1561 (IEEE International Conference on Robotics and Automation).

A robot sampling apparatus and a method for obtaining intra-cavity biological surface sample from patient

Savarimuthu, T. R., Petersen, H. G., Iversen, N., Kramberger, A., Iturrate, I., Wilm, J., Schmidt, M., Deniša, M., Lindvig, A. P., Buch, A. G., Winther, T. S. & Sloth, C., 18. Nov 2021, IPC No. A61B10/00, A61B10/02, G01N35/00, G16H10/40, G01N35/04, Patent No. WO2021228810 (A1), 18. Nov 2021, Priority date 14. May 2020, Priority No. EP20200174693

A robotic sampling apparatus and method for obtaining an intra-cavity biological surface sample from a patient

Savarimuthu, T., Petersen, H., Iversen, N., Kramberger, A., San Juan, I., Wilm, J., Schmidt, M., Denisa, M., Lindvig, A., Buch, A., Winther, T. & Sloth, C., 18. Nov 2021, IPC No. A61B10/00, A61B10/02, G01N35/00, G01N35/04; G16H10/40, Patent No. WO2021228810 (A1), 18. Nov 2021, Priority date 14. May 2020, Priority No. EP20200174693

A robot system arranged for autonomously obtaining biological surface samples from a patient

Savarimuthu, T. R., Petersen, H. G., Iversen, N., Kramberger, A., Iturrate, I., Wilm, J., Schmidt, M. K., Deniša, M., Lindvig, A. P., Buch, A. G., Winther, T. S. & Sloth, C., 17. Nov 2021, IPC No. A61B10/00, A61B10/02, A61B17/00, A61B17/24, A61B34/00, A61B34/20, A61B34/32, A61B90/00, Patent No. EP3909515 (A1), 17. Nov 2021, Priority date 14. May 2020, Priority No. EP20200174694

A sample obtaining device

Savarimuthu, T. R., Petersen, H. G., Iversen, N., Kramberger, A., Iturrate, I., Wilm, J., Schmidt, M. K., Deniša, M., Lindvig, A. P., Buch, A. G., Winther, T. S. & Sloth, C., 17. Nov 2021, IPC No. A61B10/00, A61B10/02, A61B34/30, A61B90/00, Patent No. EP3909538 (A1), 17. Nov 2021, Priority date 14. May 2020, Priority No. EP20200174700

Surface reconstruction from structured light images using differentiable rendering

Jensen, J. N., Hannemose, M., Bærentzen, J. A., Wilm, J., Frisvad, J. R. & Dahl, A. B., 2. Feb 2021, In: *Sensors (Switzerland)*. 21, 4, 16 p., 1068.

Design of Automated Robotic System for Draping Prepreg Composite Fabrics

Ellekilde, L. P., Wilm, J., Nielsen, O. W., Krogh, C., Kristiansen, E., Gunnarsson, G. G., Stenvang, T. S., Jakobsen, J., Kristiansen, M., Glud, J. A., Hannemose, M., Aanæs, H., De Kruijk, J., Sveidahl, I., Ikram, A. & Petersen, H. G., Jan 2021, In: *Robotica*. 39, 1, p. 72-87

Alignment of rendered images with photographs for testing appearance models

Hannemose, M., Doest, M. E. B., Luongo, A., Gregersen, S. K. S., Wilm, J. & Frisvad, J. R., 1. Nov 2020, In: *Applied Optics*. 59, 31, p. 9786-9798

Will it Crease or Cease? A study of debulking of air pockets in automated prepreg composite layup

Krogh, C., Jakobsen, J. & Wilm, J., Nov 2020, In: *Composites Part A: Applied Science and Manufacturing*. 138, November , 106052.

Rapid Estimation of Optical Properties for Simulation-Based Evaluation of Pose Estimation Performance

Iversen, T. M., Wilm, J. & Kraft, D., Nov 2019, *Proceedings of the 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, p. 2030-2037 (I E E E International Conference on Intelligent Robots and Systems. Proceedings).

Superaccurate camera calibration via inverse rendering

Hannemose, M., Wilm, J. & Frisvad, J. R., 1. Jan 2019, *Modeling Aspects in Optical Metrology VII*. Bodermann, B. & Frenner, K. (eds.). USA: SPIE - International Society for Optical Engineering, 9 p. 1105717. (Proceedings of SPIE, the International Society for Optical Engineering, Vol. 11057).

Video Frame Interpolation via Cyclic Fine-Tuning and Asymmetric Reverse Flow

Hannemose, M., Jensen, J. N., Einarsson, G., Wilm, J., Dahl, A. B. & Frisvad, J. R., 2019, *Image Analysis - Proceedings of the 21st Scandinavian Conference, SCIA 2019*. Felsberg, M., Forssén, P-E., Unger, J. & Sintorn, I-M. (eds.). Springer, p. 311-323 (Lecture Notes in Computer Science, Vol. 11482).

Effects of subsurface scattering on the accuracy of optical 3D measurements using miniature polymer step gauges

Wilm, J., Madruga, D. G., Jensen, J. N., Gregersen, S. S., Doest, M. E. B., Guerra, M. G., Aanæs, H. & De Chiffre, L., 2018, *European Society for Precision Engineering and Nanotechnology, Conference Proceedings - 18th International Conference and Exhibition, EUSPEN 2018*. Riemer, O., Savio, E., Billington, D., Leach, R. K. & Phillips, D. (eds.). euspen , p. 449-450 (European Society for Precision Engineering and Nanotechnology, Conference Proceedings - 18th International Conference and Exhibition, EUSPEN 2018).

A performance assesment of a 2 axis scanning mirror galvanometer for powder bed fusion

Pedersen, D. B., Andersen, S. A., Nielsen, J. S., Eiriksson, E. R., Nielsen, J. B., Wilm, J., Aanæs, H. & Hansen, H. N., 2017, *Proceedings of the Joint Special Interest Group meeting between euspen and ASPE*.

An Error Analysis of Structured Light Scanning of Biological Tissue
Jensen, S. H. N., Wilm, J. & Aanæs, H., 2017, *Image Analysis*. Springer, p. 135-145

In-line 3D print failure detection using computer vision
Lyngby, R. A., Wilm, J., Eiriksson, E. R., Nielsen, J. B., Jensen, J. N., Aanæs, H. & Pedersen, D. B., 2017, *Dimensional Accuracy and Surface Finish in Additive Manufacturing*. 4 p.

Photogrammetry for Repositioning in Additive Manufacturing
Jensen, J. N., Lyngby, R. A., Aanæs, H., Eiriksson, E. R., Nielsen, J. B., Wilm, J. & Pedersen, D. B., 2017, *Joint Special Interest Group meeting between euspen and ASPE*.

PicPrint: Embedding pictures in additive manufacturing
Nielsen, J. B., Eiriksson, E. R., Lyngby, R. A., Wilm, J., Jensen, J. N., Aanæs, H. & Pedersen, D. B., 2017, *Joint Special Interest Group meeting between euspen and ASPE*.

Scene reassembly after multimodal digitization and pipeline evaluation using photorealistic rendering
Stets, J. D., Corso, A. D., Nielsen, J. B., Lyngby, R. A., Jensen, S. H. N., Wilm, J., Doest, M. B., Gundlach, C., Eiriksson, E. R., Conradsen, K., Dahl, A. B., Bærentzen, J. A., Frisvad, J. R. & Aanæs, H., 2017, In: *Applied Optics*. 56, 27, p. 7679-7690

Precision and Accuracy Parameters in Structured Light 3-D Scanning
Eiriksson, E. R., Wilm, J., Pedersen, D. B. & Aanæs, H., Apr 2016, In: *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. XL-5/W8, p. 7-15

Real Time Structured Light and Applications

Wilm, J., 2016

VirtualTable: a projection augmented reality game
Corso, A. D., Olsen, M. D., Steenstrup, K. H., Wilm, J., Jensen, S. H. N., Paulsen, R. R., Eiriksson, E. R., Nielsen, J. B., Frisvad, J. R., Einarsson, G. & Kjer, H. M., 2. Nov 2015, *SIGGRAPH Asia 2015 Posters, SA 2015*. a40

Method for Surface Scanning in Medical Imaging and Related Apparatus

Olesen, O. V., Larsen, R., Wilm, J. & Jensen, R. R., 21. May 2015, Patent No. WO2015071369

An MRI Compatible Surface Scanner

Olesen, O. V., Wilm, J., Kouwe, A. V. D., Jensen, R. R., Larsen, R. & Wald, L. L., 2015.

Correction of Motion Artifacts for Real-Time Structured Light

Wilm, J., Olesen, O. V., Paulsen, R. R. & Larsen, R., 2015, *Image Analysis - 19th Scandinavian Conference, SCIA 2015, Proceedings*. Pedersen, K. S. & Paulsen, R. R. (eds.). p. 142-151

Quality Assurance Based on Descriptive and Parsimonious Appearance Models

Nielsen, J. B., Eiriksson, E. R., Kristensen, R. L., Wilm, J., Frisvad, J. R., Conradsen, K. & Aanæs, H., 2015, *MAM2015: Eurographics Workshop on Material Appearance Modeling: Issues and Acquisition*.

Structured Light Scanning of Skin, Muscle and Fat

Wilm, J., Jensen, S. H. N. & Aanæs, H., 2015

A Unified Approach to Diffusion Direction Sensitive Slice Registration and 3-D DTI Reconstruction From Moving Fetal Brain Anatomy

Hansen, M. F., Seshamani, S., Kroenke, C., Cheng, X., Chapman, T., Wilm, J., Rousseau, F. & Studholme, C., Feb 2014, In: *IEEE Transactions on Medical Imaging*. 33, 2, p. 272-289

Accurate and Simple Calibration of DLP Projector Systems

Wilm, J., Olesen, O. V. & Larsen, R., 2014, In: Proceedings of SPIE, the International Society for Optical Engineering.

DLP technology application: 3D head tracking and motion correction in medical brain imaging

Olesen, O. V., Wilm, J., Paulsen, R. R., Højgaard, L. & Larsen, R., 2014, In: Proceedings of SPIE, the International Society for Optical Engineering.

SLStudio: Open-source framework for real-time structured light

Wilm, J., Olesen, O. V. & Larsen, R., 2014, *Proceedings of the 4th International Conference on Image Processing Theory, Tools and Application (IPTA 2014)*.

Adapting Parcellation Schemes to Study Fetal Brain Connectivity in Serial Imaging Studies

Cheng, X., Wilm, J., Seshamani, S., Fogtmann, M., Kroenke, C. & Studholme, C., 2013, *2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*. p. 73-76

Fast and Practical Head Tracking in Brain Imaging with Time-of-Flight Camera

Wilm, J., Olesen, O. V., Jensen, R. R., Højgaard, L. & Larsen, R., 2013, *Proceedings of 2013 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)*.

Real Time Surface Registration for PET Motion Tracking

Wilm, J., Olesen, O. V., Paulsen, R. R., Højgaard, L., Roed, B. & Larsen, R., 2011, *Image Analysis*.

Prizes**Otto Mønsted Bright Idea**

Eiriksson, Eythor Runar (Recipient), Wilm, Jakob (Recipient) & Pedersen, David Bue (Recipient), 2019