Benjamin Planche

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green-card holder

EDUCATION

2014 – 2019 **Ph.D. in Computer Science, *summa cum laude* – Universität Passau** (Germany)
- Company-based Ph.D. in Computer Vision and Machine Learning.
- Topic: "Bridging the Realism Gap for CAD-based Visual Recognition" (simulation, domain adaptation, learning).
- Member of IRIXYS (International Research and Innovation Centre in Intelligent Digital Systems).

2014 **Master's Degree in Computer Science, with Honors – Universität Passau** (Germany)
- French-German research-oriented Double Degree (1st year spent in France, see below).
- Multimedia, Visual Analytics & Distributed Systems.

2008 – 2014 **Master's Degree in Computer Science, with Honors – National Institute for Applied Sciences** (INSA) of Lyon (France)
- "Diplôme d'Ingénieur" (Master of Science equivalency) obtained after 5 years of studies (+1 gap year).

2008-10 – Undergraduate intensive course
- Engineering sciences – Mathematics, Mechanics, Physics, Thermodynamics.
- ASINSA – Department with emphasis on cultural and scientific connections with Asia.

2010-14 – Computer science specialization
- Algorithmics, Programming techniques, Hardware, Designing methods.
- Team, Project, and Quality Management.

2013 (1 semester) ERASMUS Exchange, Computer Science Master – Luleå Tekniska Universitet (Sweden)
- Mobile Media, Distributed Systems, Web Services.

2008 Scientific Baccalaureate (high-school diploma) – Lycée Jeanne d'Arc (France)
- Graduated with first-class honor & European Grad (English).

PROFESSIONAL EXPERIENCE

2023 (current) **Expert Research Scientist** – *UII America, Inc.* (Burlington, MA, USA)
- Leads cutting-edge research and transfers results into clinical AI products.
- Provides technical guidance to research scientists, consults with customers.
- Conducts fast prototyping, feasibility studies, specification and implementation.

joint body/anatomy modeling, scene understanding, x-ray simulation, management

2021 – 2023 **Senior Research Scientist** – *UII America, Inc.* (Cambridge, MA, USA)
- Developed novel solutions toward medical scanning automation.
- Managed various research projects, product deployments, FDA/EE applications.
- Focused on scene understanding, human mesh regression, motion prediction, etc.

patient body modeling, implicit anatomy learning, DSA automation

2020 – 2021 **Research Scientist** – *Siemens Technology* (Princeton, NJ, USA)
- Conducted research toward more robust vision systems, in a multinational context.
- Specialized in the training of industrial systems on scarce visual data (images, CAD, etc.).
- Investigated, applied to, and conducted governmental projects (MxD, USDA-NIFA, etc.).

inverse problems, domain adaptation, simulation, cad-based recognition, weak supervision

2014 – 2020 **Ph.D. Researcher** – *Siemens Technology + Uni-Passau* (Munich, Germany)
- Explored new solutions for efficient sensor simulation and domain adaptation.
- Introduced to large-scale industrial projects (consulting, prototyping).
- Generated multiple patents, supervised students.

domain adaptation, simulation, cad-based recognition, image rendering

2014 (5 months) **Master's Researcher** – *Siemens + Uni-Passau + INSA-Lyon* (Passau, Germany)
- Improved a stream processing architecture for Smart Grids.
- Implemented simulation tools for performance assessment.

physics, simulation, openpdc, c#, hadoop, tex

2012 – 2013 (gap year) **Image Analysis Intern** – *Mitsubishi Electric* (Osaka, Japan)
- Conceived solutions for multi-sensor data analytics.
- Implemented applications for industrial robots.

robot vision, simulation, opencv, robotics-studio, matlab, c#

2012 (4 months) **Java Developer Intern** – *Atos Worldline* (Lyon, France)
- Implemented components for large electronic payment flows (PCI-DSS).
- Designed tasks to analyze financial flows and detect anomalies.

java, spring, scrum

2011 (3 months) **Image Analysis Intern** – *LIRIS, Imagine team* (Lyon, France)
- Researched and implemented recognition algorithms for vegetal species.
- Refined probabilistic comparison algorithms over image databases.

stats, pca, c++, qt, opencv

2010 – 2012 **Academic Tutor** – *Passerelle INSA Lyon* (Lyon, France) — teaching, math, physics, thermodynamics
- Prepared and taught science classes to undergraduate engineers (math, physics, etc.).

2010 (1 month) **Teacher-volunteer –** *RCDP* (Kathmandu, Nepal) — personal development
- Prepared and taught English classes to young Buddhist monks.

2009 (2 months) **Intern** – *Tajima Roofing* (Tokyo, Japan) — personal development, japanese
- Initiated to the Japanese business system and manufacturing work.

AWARDS & HONORS

- **Scientific Activities:**

2022 **Outstanding Reviewer** — webpage: EN
by the Chair of the European Conference on Computer Vision (ECCV).

2022 **Outstanding Reviewer** — webpage: EN
by the Chair of the Computer Vision and Pattern Recognition Conference (CVPR).

- **Education – Ph.D.:**

2022 **Best Dissertation Award** — webpage: DE, FR; speech: DE, FR
by the French-German University (UFA-DFH).

2021 **Outstanding Dissertation Award** — webpage: DE
by the University of Passau.

- **Education – Master:**

2015 **Franco-German Award of Excellence** — webpage: DE, FR
by the French-German University (UFA-DFH).

2015 **Excellence Award**
by the Faculty of Computer Science and Mathematics (University of Passau).

PUBLICATIONS (Google Scholar account)

- **Conferences**

2025 Deng, A., Gao, Z., Choudhuri, A., **Planche, B.**, Zheng, M., Wang, B., Chen, T., Chen, C. and Wu, Z., 2024. Seq2Time: Sequential Knowledge Transfer for Video LLM Temporal Grounding. In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**)*, 2025. — vision-language model, video understanding, temporal grounding

2025 Peng, Q., **Planche, B.**, Gao, Z., Zheng, M., Choudhuri, A., Chen, T., Chen, C. and Wu, Z. 3D Vision-Language Gaussian Splatting. In *International Conference on Learning Representations (**ICLR**)*, 2025. — gaussian splatting, vision-language model, open-vocabulary recognition

2025 Gao, Z., **Planche, B.**, Zheng, M., Choudhuri, A., Chen, T. and Wu, Z. 6DGS: Enhanced Direction-Aware Gaussian Splatting for Volumetric Rendering. In *International Conference on Learning Representations (**ICLR**)*, 2025. — gaussian splatting, light transport, scene modeling

2025 Wang, B., Choudhuri, A., Zheng, M., Gao, Z., **Planche, B.**, Deng, A., Liu, Q., Chen, T., Bagci, U. and Wu, Z., 2024. Order-aware Interactive Segmentation. In *International Conference on Learning Representations (**ICLR**)*, 2025. — interactive segmentation, few-shot learning, annotation

2025 Gao, Z., Sharma, A., Zheng, M., **Planche, B.**, Chen, T. and Wu, Z. Automated Patient Positioning with Learned 3D Hand Gestures. *In IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV**),* 2025. — hand recognition, scan automation

2024 Gao, Z.[EQ], **Planche, B.**[EQ], Zheng, M., Chen, X., Chen, T. and Wu, Z. DDGS-CT: Direction-Disentangled Gaussian Splatting for Realistic Volume Rendering. *In Annual Conference on Advances in Neural Information Processing Systems (**NeurIPS**). (EQ = equal contribution)* — gaussian splatting, x-ray imaging, DRR, anisotropy

2024 Zheng, M., **Planche, B.**, Gao, Z., Chen, T., Radke, R., Wu, Z. Few-Shot 3D Volumetric Segmentation with Multi-Surrogate Fusion. *In International Conference on Medical Image Computing and Computer Assisted Intervention (**MICCAI**)*, 2024 *(**early accept**).* — 3D segmentation, few-shot learning, medical scans

2024 Luan, T., Gao, Z., Xie, L., Sharma, A., Ding, H., **Planche, B.**, Zheng, M., Lou, A., Chen, T., Yuan, J. and Wu, Z. Divide and Fuse: Body Part Mesh Recovery from Partially Visible Human Images. *In European Conference on Computer Vision (**ECCV**)*, 2024. — human mesh regression, occlusion, modularity

2024 Lou, A., **Planche, B.**, Gao, Z., Li, Y., Luan, T., Ding, H., Chen, T., Noble, J. and Wu, Z. DaReNeRF: Direction-aware Representation for Dynamic Scenes. In *IEEE/CVF Conference on Computer* — nerf, frequency analysis, dynamic scenes

*Vision and Pattern Recognition (**CVPR**)*, 2024.

2024 Gao, Z., Zhou, H., Sharma, A., Zheng, M., **Planche, B.**, Chen, T. and Wu, Z., 2024. PBADet: A One-Stage Anchor-Free Approach for Part-Body Association. In *International Conference on Learning Representations (**ICLR**)*, 2024. — human detection, part-body association

2024 Liu, Y., **Planche, B.**, Zheng, M., Gao, Z., Sibut-Bourde, P., Yang, F., Chen, T., Wu, Z. Implicit Modeling of Non-rigid Objects with Cross-Category Signals. *In AAAI Conference on Artificial Intelligence (**AAAI**)*, 2024. — implicit geometry, anatomy modeling, medical imaging

2024 Cai, Z., Gao, Z., **Planche, B.**, Zheng, M., Chen, T., Asif MS., Wu, Z. Disguise without Disruption: Utility-Preserving Face De-Identification. *In AAAI Conference on Artificial Intelligence (**AAAI**)*, 2024. — privacy, de-identification, facial images

2023 Gong, X., Song L., Zheng, M., **Planche, B.**, Chen, T., Yuan, J., Doermann, D., Wu, Z. Progressive Multi-view Human Mesh Recovery with Self-Supervision. *In AAAI Conference on Artificial Intelligence (**AAAI**)*, 2023 ***(oral)***. — human mesh recovery, self-supervision, projection

2022 Song, L. Gong, X., **Planche, B.**, Zheng, M., Doermann, D., Yuan, J., Chen, T., Wu, Z., PREF: Predictability Regularized Neural Motion Fields. *In European Conference on Computer Vision (**ECCV**)*, 2022 ***(oral)***. — motion modeling, scene understanding, implicit function, NeRF

2022 Liu, Q., Zheng, M., **Planche, B.**, Karanam, S., Chen, T., Niethammer, M., Wu, Z. PseudoClick: Interactive image segmentation with click imitation. *In European Conference on Computer Vision (**ECCV**)*, 2022. — interactive segmentation, few-shot learning, annotation

2022 Gong, X., Zheng, M., **Planche, B.**, Karanam, S., Chen, T., Doermann D., Wu, Z. Self-supervised Human Mesh Recovery with Cross-Representation Alignment. *In European Conference on Computer Vision (**ECCV**)*, 2022. — human mesh recovery, simulation, realism gap

2022 Zheng, M., **Planche, B.**, Gong, X., Yang F., Chen, T., Wu, Z. Self-supervised 3d patient modeling with multi-modal attentive fusion. *In International Conference on Medical Image Computing and Computer Assisted Intervention (**MICCAI**)*, 2022. — human mesh recovery, attention, fusion

2022 Guo, H., **Planche, B.**, Zheng, M., Karanam, S., Chen, T., Wu, Z. SMPL-A: Modeling Person-Specific Deformable Anatomy. *In IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**),* 2022. — human 3d modeling, anatomy modeling, medical imaging

2021 **Planche, B.,** Singh, R.V. Physics-based Differentiable Depth Sensor Simulation. *In IEEE/CVF International Conference on Computer Vision (**ICCV**),* 2021. — differentiable rendering, simulation, depth sensor

2021 Akiva, P.[EQ], **Planche, B.**[EQ], Roy, A., Dana, K., Oudemans, P., & Mars, M. AI on the Bog: Monitoring and Evaluating Cranberry Crop Risk. *In IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV**),* 2021 *(EQ = equal contribution).* — semantic segmentation, visual flow, weak supervision, timeseries, precision agriculture

2019 **Planche, B.**, Rong, X., Wu, Z., Karanam, S., Kosch, H., Tian, Y., Hutter, A. and Ernst, J., Incremental Scene Synthesis. *In Annual Conference on Advances in Neural Information Processing Systems (**NeurIPS**),* 2019. — neural memory, novel view synthesis, scene understanding, slam

2019 **Planche, B.**[EQ], Zakharov, S.[EQ], Wu, Z., Hutter, A., Kosch, H. and Ilic, S., Seeing Beyond Appearance – Mapping Real Images into Geometrical Domains for Unsupervised CAD-based Recognition. *In IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**),* 2019. *(EQ = equal contribution)* — domain adaptation, realism gap, multi-task autoencoder, distillation

2018 Zakharov, S.[EQ], **Planche, B.**[EQ], Wu, Z., Hutter, A., Kosch, H. and Ilic, S., Keep it Unreal: Bridging the Realism Gap for 2.5 D Recognition with Geometry Priors Only. *In International Conference on 3D Vision (**3DV**),* 2018. *(EQ = equal contribution)* — domain adaptation, realism gap, gan

2017 **Planche, B.**, Wu, Z., Ma, K., Sun, S., Kluckner, S., Lehmann, O., Chen, T., Hutter, A., Zakharov, S., Kosch, H. and Ernst, J., Depthsynth: Real-time Realistic Synthetic Data Generation from CAD Models for 2.5D Recognition. *In International Conference on 3D Vision (**3DV**),* 2017. — simulation, depth sensor, 3D data, realism gap, noise study

2017 Zakharov, S., Kehl, W., **Planche, B.**, Hutter, A. and Ilic, S., 3D object instance recognition and pose estimation using triplet loss with dynamic margin. *In IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**),* 2017. — triplet network, classification, pose estimation, domain adaptation

2014 **Planche, B.**, Malyn, B.I., Blanco, D.B. and Bermejo, M.C., The Brightnest Web-Based Home Automation System. *In International Conference on Ubiquitous Computing and Ambient Intelligence,* 2014. — web of things, home automation, inference system

- **Journals**

2022 Akiva, P., **Planche, B.**, Roy, A., Oudemans, P., Dana, K. Vision on the bog: Cranberry crop risk evaluation with deep learning. *Computers and Electronics in Agriculture*. 2022 Dec 1. — semantic segmentation, visual flow, timeseries, precision agriculture

2022 Gong, X., Song L., Vedula R., Sharma A., Zheng, M., **Planche, B.**, Innanje A., Chen, T., Yuan J., Doermann D., Wu, Z. Federated Learning with Privacy-Preserving Ensemble Attention Distillation. *IEEE Transactions on Medical Imaging (**TMI**)*. 2022 Oct 10. — federated learning, patient data, privacy

- **Theses**

2020 **Planche, B.**, Bridging the Realism Gap for CAD-Based Visual Recognition. **PhD thesis**. *Advisors: Prof. Dr. Kosch, H., Dr. Hutter, A.* — domain adaptation, simulation

2014 **Planche, B.**, PMU Data Processing for Smart Grids. **Master's thesis**. *Advisors: Prof. Dr. Kosch, H., Dr. Bäse, G.* — smart grid, pmu, openpdc, hadoop, physics, simulation

- **Book**

2019 **Planche, B.**[EQ], Andres, E.[EQ], Hands-On Computer Vision with TensorFlow 2. (372 pages) *Packt Publishing Ltd (EQ = equal contribution).* — tensorflow2, keras, python, ML theory, teaching

- **Preprint**

2025 Choudhuri, A., Gao, Z., Zheng, M., **Planche, B.**, Chen, T. and Wu, Z. PolypSegTrack: Unified Foundation Model for Colonoscopy Video Analysis. *arXiv preprint arXiv:2503.24108*. — segmentation, foundation model, video tracking

2025 Dutta, A., Zheng, M., Gao, Z., **Planche, B.**, Choudhuri, A., Chen, T., Roy-Chowdhury, A.K. and Wu, Z. CHROME: Clothed Human Reconstruction with Occlusion-Resilience and Multiview-Consistency from a Single Image. *arXiv preprint arXiv:2503.15671*. — 3D human modeling, occlusion, gaussian splatting, diffusion model

2025 Gao, Z., **Planche, B.**, Zheng, M., Choudhuri, A., Chen, T. and Wu, Z. 7DGS: Unified Spatial-Temporal-Angular Gaussian Splatting. *arXiv preprint arXiv:2503.07946*. — gaussian splatting, light transport, scene modeling

2025 Zheng, M., Zhang, J., **Planche, B.**, Gao, Z., Chen, T. and Wu, Z. Anatomy-Aware Conditional Image-Text Retrieval. *arXiv preprint arXiv:2503.07456*. — vision-language model, image-text retrieval, clinical application

2024 Lou, A., **Planche, B.**, Gao, Z., Li, Y., Luan, T., Ding, H., Zheng, M., Chen, T., Wu, Z. and Noble, J. DaRePlane: Direction-aware Representations for Dynamic Scene Reconstruction. *arXiv preprint arXiv:2410.14169*. — nerf, gaussian splatting, frequency analysis, dynamic scenes

2024 Ding, H., Gao, Z., Planche, B., Luan, T., Sharma, A., Zheng, M., Lou, A., Chen, T., Unberath, M. and Wu, Z. Neural Finite-State Machines for Surgical Phase Recognition. *arXiv preprint arXiv:2411.18018*. — video understanding, phase recognition, finite-state machine

2024 Yang, F.[EQ], **Planche, B.**[EQ], Zheng, M., Chen, C., Chen, T. and Wu, Z. Automating Catheterization Labs with Real-Time Perception. *arXiv:2403.05758. (EQ = equal contribution)* — patient modeling, scan automation, interventional radiology

2023 Liu, Q., Zheng, M., **Planche, B.**, Gao, Z., Chen, T., Niethammer, M., Wu, Z. Exploring Cycle Consistency Learning in Interactive Volume Segmentation. *arXiv:2303.06493*. — segmentation, annotation, medical images

- **Patents (+9 applications pending)**

2022 (granted) **Planche, B.**, Wu, Z., Zheng, M. System and method for recording medical environment. *US12014815B2 + CN116994722A*. — scene understanding, 4D modeling

2021 (granted) **Planche, B.**, Singh, R.V. Training of differentiable renderer and neural network for query of 3d model database. *WO2021178000A1 + EP4097604A1 + CN115605862A*. — 3D model querying, differentiable rendering

2020 (granted) **Planche, B.**, Zakharov, S., Wu, Z., Slobodan, I. Segmenting and Denoising Depth Images for Recognition Applications Using Generative Adversarial Neural Networks. *US11403737B2 (granted) + WO2019090213A1 (published) + EP3688666A1 (published) + CN111316291A (published)*. — simulation, depth sensor, 3D data, gan, domain adaption

2019 (granted) **Planche, B.**, Zakharov, S., Wu, Z., Slobodan, I., Hutter A. Object recognition from images using CAD models as prior. *US11403491B2 (granted) + WO2019192744A1 (published) + EP3759649B1 (published) + CN112236778A (published) + KR102419011B1 (published)*. — 3D data, domain adaption, recognition

2019 (granted) **Planche, B.**, Wu, Z. Synthetic depth image generation from CAD data using generative adversarial neural networks for enhancement. *US10901740B2 (granted) + WO2019032481A1 (published) + CN111512344A (published)*. — simulation, depth sensor, 3D data, gan

2022 (published) Zheng, M., Cui, W., Wu, Z., Innanje, A., **Planche, B.**, Chen, T. Systems and methods for automatic data annotation. *US20240135737A1*. — 3D segmentation, few-shot learning

2025 **Planche, B.**, Wu, Z., Zheng, M., Gao, Z. and Sharma, A., Predicting a position of an object over — object tracking, pose

(published)	time. *US20250117959A1*.	estimation
2024 (published)	**Planche, B.**, Sibut-Bourde, P., Wu, Z., Zheng, M., Gao, Z., Sharma, A. Systems and methods for determining anatomical deformations. *US20240394870A1*.	anatomy modeling, implicit function
2024 (published)	Gao, Z., Sharma, A., Zheng, M., **Planche, B.**, Wu, Z. and Chen, T. Motion detection associated with a body part. *US20240378731A1*.	pose estimation, tracking
2024 (published)	Zheng, M., Wang, J., **Planche, B.**, Gao, Z. and Wu, Z. Systems and methods for multi-person pose estimation. *US20240346684A1*.	pose estimation
2023 (published)	**Planche, B.**, Cai, Z., Gao, Z., Wu, Z., Zheng, M. and Chen, T. Systems and methods for anonymizing images. *US20240256707A1*.	face obfuscation, diffusion model
2022 (published)	Wu, Z., Sun, S., Innanje, A., **Planche, B.**, Sharma, A., Zheng, M. Systems and methods for generating patient models based on ultrasound images. *US20240164758A1 + CN117523096A*.	anatomy modeling, scan automation, ultrasound
2022 (published)	Zheng, M., **Planche, B.**, Wu, Z., Chen, T. Systems and methods for surgical task automation. *US20240099774A1 + CN117257463A*.	surgical automation, scene understanding
2022 (published)	Wu, Z., Zheng, M., **Planche, B.**, Sharma, A., Innanje, A., Sun, S., Chen, T. Systems and methods for surgery planning. *US20240074810A1 + CN117045351A*.	augmented reality, surgery planning, 4D modeling
2022 (published)	Wu, Z., **Planche, B.**, Zheng, M., Innanje, A., Chen, T. Systems and methods for visualizing anatomical structure of patient during surgery. *US20240074811A1 + CN117357275A*.	augmented reality, patient modeling
2022 (published)	Chen, T., Wu, Z., Sun, S., Innanje, A., Zheng, M., **Planche, B.**, Sharma, A. Methods, systems and mediums for surgical automation. *US20240071076A1 + CN117045348A*.	surgical automation, video understanding
2022 (published)	Chen, T., Wu, Z., Sun, S., Innanje, A., **Planche, B.**, Sharma, A., Zheng, M. Systems and methods for medical assistant. *US20240065799A1 + CN117017490A*.	augmented reality, patient modeling
2022 (published)	**Planche, B.**, Wu, Z., Zheng, M., Sharma, A. Systems and methods for determining 3d human pose. *US20240070905A1 + CN116994335A*.	patient modeling, detection, triangulation
2022 (published)	Innanje, A., Sharma, A., **Planche, B.**, Zheng, M., Sun, S., Wu, Z., Chen, T. Patient care record management system. *US20240061951A1 + CN117037986A*.	database, medical scans, privacy, NFT
2022 (published)	**Planche, B.**, Wu, Z., Zheng, M. Systems and methods for visualization of medical records. *US20240062857A1 + CN116955742A*.	augmented reality, anatomy modeling
2022 (published)	**Planche, B.**, Wu, Z., Zheng, M., Chen, T. Non-invasive biometric system and method for encoding anatomical features as biometric data. *US20230419740A1*.	anatomy modeling, biometrics
2022 (published)	**Planche, B.**, Song, L., Zheng, M., Wu, Z. Systems and methods for motion estimation and view prediction. *US20230419507A1*.	motion estimation, nerf, scene modeling
2022 (published)	Sharma, A., Innanje, A., **Planche, B.**, Zheng, M., Sun, S., Wu, Z., Chen, T. System and method for providing rehabilitation in a virtual environment. *US20230414132A1*.	metaverse, ar/vr, rehabilitation
2022 (published)	**Planche, B**. Training systems for surface anomaly detection. *WO2023149888A1*.	anomaly detection, synthetic data
2021 (published)	Roy, A., Kundu, S., **Planche, B.**, Method for understanding and synthesizing differentiable scenes from input images. *WO2021203076A1*.	graph neural networks, scene understanding
2021 (published)	**Planche, B.**, Singh, R.V., Differentiable pipeline for simulating depth scan sensors. *WO2021173637A1*.	simulation, depth sensor, differentiable rendering
2021 (published)	**Planche, B.**, Rong, X., Karanam, S., Wu, Z., Ernst J., Topographic memory model for localization, retrieval, and new view synthesis. *WO2020096881A1*.	neural memory, scene understanding
2019 (published)	**Planche, B.**, Zakharov, S., Hutter, A., Slobodan, I., Wu, Z. Image rendering from texture-less cad models. *WO2019192746A1*.	simulation, rendering, 3D data, rgb image
2019 (published)	**Planche, B.**, Zakharov, S., Wu, Z., Slobodan, I., Hutter, A., Object recognition from images using cad models as prior. *WO2019192745A1*.	rgb image, 3D data, domain adaption, recognition
2019 (published)	Hutter A., Slobodan, I., **Planche, B.**, Wu, Z., Zakharov, S., Mapping images to the synthetic domain. *US20210232926A1 + WO2020035453A1 + CN112534440A* .	depth data, 3D data, domain adaption, multi-task
2018 (published)	Wu, Z., **Planche, B.**, Sun, S., Kluckner, S., Chen, T., Ernst, J., Real-time generation of synthetic data from multi-shot structured light sensors for 3d object pose estimation. *(published) + IL268639A (published).*	simulation, depth sensor, 3D data
2018	Wu, Z., Ma, K., **Planche, B.**, Sun, S., Singh, V.K., Kluckner, S., Chen, T., Ernst, J., Real-time	simulation, depth sensor,

(published) generation of synthetic data from structured light sensors for 3d object pose estimation. *WO2018080533A1*. 3D data

LANGUAGES

French: Mother tongue
English: **Fluent** – Advanced classes, years spent abroad – TOEIC : 990 out of 990
German, Japanese: Good skills, both written and oral
Chinese, Russian: Basic knowledge

ACTIVITIES

Chair:

- Workshop on Advanced Perception for Autonomous Healthcare (APAH)

Reviewer:

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)
- Advances in Neural Information Processing Systems (NeurIPS)
- European Conference on Computer Vision (ECCV)
- International Conference on Computer Vision (ICCV)
- International Conference on Learning Representations (**ICLR**)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- Computer Vision and Image Understanding
- IEEE Access Journal

StackOverflow member (username: benjaminplanche, reputation > 15k):

- Among top 15 answerers for: *pytorch*
- Among top 1% answerers for: *tensorflow*
- Among top 5% answerers for: *conv-neural-network, dataset, deep-learning, keras*, *python*, *python-3.x, tensor*
- Among top 10% answerers for: *3d, image-processing, loss-function, machine-learning, neural-network, projection, reshape*

Amateur photographer:

- Events (concerts, weddings), Travels, Landscapes.

References available upon request.