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東京大学 大学院新領域創成科学研究科 人間環境学専攻 教授
大学院工学系研究科精密工学専攻／工学部精密工学科 (兼担)
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略歴

1996年3月 東京大学 工学部 精密機械工学科 卒業. 1998年3月 東京大学 大学院工学系研究科 精密機械工学専攻 修士課程修了. 2001年3月 同博士課程修了, 博士(工学). 2001年4月 静岡大学 工学部 機械工学科 助手, 2007年4月 同助教, 2008年4月 同准教授. 2011年10月 東京大学 大学院工学系研究科 精密工学専攻 准教授, 2022年4月 東京大学 大学院新領域創成科学研究科 人間環境学専攻 教授, 現在に至る. 2006年11月～2007年12月 カリフォルニア工科大学 客員研究員(併任). ロボットの知能化, センサ情報処理, コンピュータビジョンなどの研究に従事. ACM, IEEE, 映像情報メディア学会, 計測自動制御学会, サービス学会, 自動車技術会, 情報処理学会, 精密工学会, 電気学会, 電子情報通信学会, 土木学会, 日本機械学会, 日本ロボット学会の会員.

経歴

1992年4月 東京大学 教養学部 理科I類 入学

1994年4月 東京大学 工学部 精密機械工学科 進学

1996年3月 東京大学 工学部 精密機械工学科 卒業

1996年4月 東京大学 大学院工学系研究科 精密機械工学専攻 修士課程 入学

1998年3月 東京大学 大学院工学系研究科 精密機械工学専攻 修士課程 修了

1998年4月 東京大学 大学院工学系研究科 精密機械工学専攻 博士課程 進学

1998年4月～2001年3月 理化学研究所 工学基盤技術部 ジュニア・リサーチ・アソシエイト

2001年3月 東京大学 大学院工学系研究科 精密機械工学専攻 博士課程 修了, 博士(工学)

2001年4月 静岡大学 工学部 機械工学科 助手

2005年4月～2006年9月 静岡理工科大学 非常勤講師(ロボット工学)

2006年11月～2007年12月 カリフォルニア工科大学 機械工学科 客員研究員(併任)

2007年4月 静岡大学 工学部 機械工学科 助教

2008年4月 静岡大学 工学部 機械工学科 准教授

2008年4月～現在 青山学院大学 非常勤講師(画像処理特論)

2011年10月～2012年3月 静岡大学 工学部 機械工学科 客員准教授

2011年10月 東京大学 大学院工学系研究科 精密工学専攻 准教授

2016年10月 東京大学 大学院工学系研究科 インテリジェント施工システム 社会連携講座

特任准教授(兼任)

2018年10月 東京大学 大学院工学系研究科 i-Construction システム学 寄付講座 特任准教授(兼任)

2022年4月 東京大学 大学院新領域創成科学研究科 人間環境学専攻 教授(現職)

研究分野

ロボット工学, センサ情報処理, コンピュータビジョン, 画像処理

受賞

- 1) 1996年03月 日本機械学会 畠山賞 受賞
- 2) 2001年03月29日 総合研究奨励会 石井学術奨励賞 受賞
- 3) 2002年12月21日 SI2002 (第3回計測自動制御学会システムインテグレーション部門講演会) ベストセッション賞 受賞
- 4) 2004年12月21日 映像情報メディア学会 研究奨励賞 受賞
- 5) 2005年06月10日 日本機械学会 ロボティクス・メカトロニクス部門 ベストプレゼンテーション表彰 受賞
- 6) 2006年09月05日 電気学会 優秀論文発表賞 受賞
- 7) 2006年09月15日 日本ロボット学会 研究奨励賞 受賞
- 8) 2007年12月09日 浜松電子工学奨励会 高柳研究奨励賞 受賞
- 9) 2009年01月15日 第4回競基弘賞学術業績賞 受賞
- 10) 2010年03月15日 第15回ロボティクスシンポジア 最優秀論文賞 受賞
- 11) 2010年12月17日 4th Asia International Symposium on Mechatronics (AISM2010), AISM2010 Best Paper Award 受賞
- 12) 2011年05月27日 日本機械学会 ロボティクス・メカトロニクス部門 ROBOMECH 表彰 受賞
- 13) 2011年05月28日 船井情報科学振興財団 船井学術賞 受賞
- 14) 2012年12月20日 SI2012 (第13回計測自動制御学会システムインテグレーション部門講演会) 優秀講演 受賞
- 15) 2013年04月19日 日本機械学会教育賞 受賞 (教科書ロボティクス出版委員会として)
- 16) 2013年12月20日 SI2013 (第14回計測自動制御学会システムインテグレーション部門講演会) 優秀講演賞 受賞
- 17) 2014年12月12日 FA 財団論文賞 受賞
- 18) 2015年10月27日 2015年度計測自動制御学会論文賞 受賞
- 19) 2015年11月25日 MHS2015 (2015 International Symposium on Micro-Nano Mechatronics and Human Science) Best Poster Award 受賞
- 20) 2015年12月07日 ICAM2015 (6th International Conference on Advanced Mechatronics) Best Paper 受賞
- 21) 2015年12月07日 ICAM2015 (6th International Conference on Advanced Mechatronics) Honorable Mention 受賞
- 22) 2015年12月16日 SI2015 (第16回計測自動制御学会システムインテグレーション部門講演会) 優秀講演賞 受賞
- 23) 2016年03月16日 2015年度精密工学会論文賞 受賞
- 24) 2016年07月05日 14th International Conference on Intelligent Autonomous Systems (IAS-14), Best Conference Paper Award Finalist 受賞
- 25) 2016年11月30日 MHS2016 (2016 International Symposium on Micro-Nano Mechatronics and Human Science) Best Poster Award 受賞
- 26) 2016年12月08日 東京大学工学部 Best Teaching Award 受賞
- 27) 2016年12月09日 FA 財団論文賞 受賞 (1件目: 複光路単眼ステレオによる直方体容器中の水中物体の3次元計測)
- 28) 2016年12月09日 FA 財団論文賞 受賞 (2件目: 遠隔操作ロボットのための複数RGB-Dセンサを用いた半隠消映像のオンライン生成)

- 29) 2016年12月18日 SI2016 (第17回計測自動制御学会システムインテグレーション部門講演会) 優秀講演賞 受賞
- 30) 2017年01月10日 International Workshop on Advanced Image Technology 2017 (IWAIT2017), Best Paper Award 受賞
- 31) 2017年04月20日 日本機械学会賞 (論文) 受賞
- 32) 2017年12月21日 計測自動制御学会 システムインテグレーション部門 部門研究奨励賞 受賞
- 33) 2018年04月19日 日本機械学会賞 (論文) 受賞
- 34) 2018年12月14日 FA 財団論文賞 受賞
- 35) 2018年12月17日 JRM Best Paper Award 受賞
- 36) 2019年2月21日 東京大学大学院工学系研究科長表彰 (研究) 受賞
- 37) 2019年03月05日 SI2018 (第19回計測自動制御学会システムインテグレーション部門講演会) 優秀講演賞 受賞
- 38) 2020年01月14日 2020 IEEE/SICE International Symposium on System Integration (SII2020), Best Paper Award 受賞
- 39) 2020年10月30日 5th International Conference on NeuroRehabilitation (ICNR2020), Best Paper Award 受賞
- 40) 2021年02月19日 スズキ財団 やらまいか特別賞 受賞
- 41) 2021年03月17日 精密工学会高城賞 受賞
- 42) 2021年03月22日 オンライン授業・ハイブリッド授業のグッドプラクティス 総長表彰 受賞
- 43) 2021年12月24日 SI2021 (第22回計測自動制御学会システムインテグレーション部門講演会) 優秀講演賞 受賞
- 44) 2022年10月19日 東急建設株式会社/東京大学/湘南工科大学/東京理科大学/株式会社小川優機製作所/株式会社菊池製作所, トンネル点検システム「iTOREL (アイトーレル)」, 第10回ロボット大賞優秀賞 (社会インフラ・災害対応・消防分野) 受賞
- 45) 2022年12月14日 SI2022 (第23回計測自動制御学会システムインテグレーション部門講演会) RSNP を活用したロボットサービスコンテスト ロボットサービスイニシアチブ 最優秀賞 RSi 賞 受賞
- 46) 2022年12月14日 SI2022 (第23回計測自動制御学会システムインテグレーション部門講演会) SICE システムインテグレーション部門賞優秀賞 受賞
- 47) 2022年12月23日 SI2022 (第23回計測自動制御学会システムインテグレーション部門講演会) 優秀講演賞 受賞
- 48) 2023年01月20日 2023 IEEE/SICE International Symposium on System Integration (SII2023), Best Paper Award Finalist 受賞
- 49) 2023年06月27日 2023 20th International Conference on Ubiquitous Robots (UR2023), Candidate for Best Paper Award 受賞
- 50) 2023年07月06日 18th International Conference on Intelligent Autonomous Systems (IAS-18), Best Paper Award 受賞
- 51) 2023年09月13日 Advanced Robotics Excellent paper Award 受賞

学術論文

- 1) 山下 淳, 太田 順, 河野 功, 福地 正樹, 新井 民夫, 浅間 一: "複数移動ロボットによる協調物体操作計画", 電気学会論文誌 C, Vol. 121, No. 3, pp. 549-556, March 2001.

- 2) Atsushi Yamashita, Tatsuya Kanazawa, Hajime Asama, Hayato Kaetsu, Isao Endo, Tamio Arai and Kazumi Sato: "Development of a Holonomic Omni-Directional Mobile Robot with Step-Climbing Ability", *Journal of Robotics and Mechatronics*, Vol. 13, No. 2, pp. 160-167, March 2001. [doi:10.20965/jrm.2001.p0160]
- 3) 山下 淳, 福地 正樹, 太田 順, 新井 民夫, 浅間 一: "移動ロボット群による大型物体搬送計画", *日本機械学会論文集 (C 編)*, Vol. 68, No. 665, pp. 165-172, January 2002. [doi:10.1299/kikaic.68.165]
- 4) 蔵本 昌之, 山下 淳, 金子 透, 三浦 憲二郎: "画像中の視野妨害となる水滴の除去", *映像情報メディア学会誌*, Vol. 56, No. 5, pp. 853-857, May 2002. [doi:10.3169/itej.56.853]
- 5) 川原子 淳, 山下 淳, 金子 透, 三浦 憲二郎: "ステレオビジョンシステムによる表面湾曲書籍の文字認識", *映像情報メディア学会誌*, Vol. 56, No. 5, pp. 858-862, May 2002. [doi:10.3169/itej.56.858]
- 6) Kenjiro T. Miura, Junji Sone, Atsushi Yamashita, Toru Kaneko, Minoru Ueda and Minetada Osano: "Adaptive Refinement for B-spline Subdivision Curves", *The Journal of Three Dimensional Images*, Vol. 16, No. 4, pp. 74-78, December 2002.
- 7) Atsushi Yamashita, Tamio Arai, Jun Ota and Hajime Asama: "Motion Planning of Multiple Mobile Robots for Cooperative Manipulation and Transportation", *IEEE Transactions on Robotics and Automation*, Vol. 19, No. 2, pp. 223-237, April 2003. [doi:10.1109/TRA.2003.809592]
- 8) 山下 淳, 浅間 一, 新井 民夫, 太田 順, 金子 透: "ロボットの移動機構に関する研究動向", *日本ロボット学会誌*, Vol. 21, No. 3, pp. 282-292, April 2003. [doi:10.7210/jrsj.21.282]
- 9) Atsushi Yamashita, Toru Kaneko, Shinya Matsushita, Kenjiro T. Miura and Suekichi Isogai: "Camera Calibration and 3-D Measurement with an Active Stereo Vision System for Handling Moving Objects", *Journal of Robotics and Mechatronics*, Vol. 15, No. 3, pp. 304-313, June 2003. [doi:10.20965/jrm.2003.p0304]
- 10) 山下 淳, 金子 透, 西村 正樹, 三浦 憲二郎: "カメラの方向変化を利用した悪天候時の視野明瞭化～首振りカメラを用いた画像中の視野妨害となる水滴の除去～", *映像情報メディア学会誌*, Vol. 57, No. 10, pp. 1347-1353, October 2003. [doi:10.3169/itej.57.1347]
- 11) Kenjiro T. Miura, Masashi Adachi, Tsuneo Ikedo, Atsushi Yamashita and Toru Kaneko: "View-Dependent Refinement by Two-Stepped Catmull-Clark Subdivision", *The Journal of Three Dimensional Images*, Vol. 17, No. 4, pp. 33-38, December 2003.
- 12) Atsushi Yamashita, Toru Kaneko, Shinya Matsushita and Kenjiro T. Miura: "Region Extraction with Chromakey Using Stripe Backgrounds", *IEICE Transactions on Information and Systems*, Vol. 87-D, No. 1, pp. 66-73, January 2004.
- 13) Atsushi Yamashita, Toru Kaneko, Masaki Nishimura and Kenjiro T. Miura: "Removal of View-Disturbing Waterdrops in Images Using a Pan-Tilt Camera", *The Journal of Three Dimensional Images*, Vol. 18, No. 1, pp. 47-52, March 2004.
- 14) Atsushi Yamashita, Akihisa Nishimoto, Toru Kaneko and Kenjiro T. Miura: "Automatic Generation of Stereogram by Using Stripe Backgrounds", *The Journal of Three Dimensional Images*, Vol. 18, No. 1, pp. 53-58, March 2004.
- 15) Atsushi Yamashita, Tomoaki Harada, Toru Kaneko and Kenjiro T. Miura: "Virtual Wiper -Removal of Adherent Noises from Images of Dynamic Scenes by Using a Pan-Tilt Camera-", *Advanced Robotics*, Vol. 19, No. 3, pp. 295-310, March 2005. [doi:10.1163/1568553053583643]
- 16) Susumu Kato, Atsushi Yamashita, Toru Kaneko and Kenjiro T. Miura: "Three-dimensional Sensing in Underwater Environments with a Stereo Camera System", *The Journal of Three Dimensional Images*, Vol. 19, No. 4, pp. 102-107, December 2005.
- 17) 山下 淳, 原 隆浩, 金子 透: "画像処理と音響処理の融合による打音検査", *日本機械学会論文集 (C 編)*, Vol. 72, No. 715, pp. 772-779, March 2006. [doi:10.1299/kikaic.72.772]
- 18) 山下 淳, 林本 悦一, 金子 透: "レーザレンジファインダを用いた水中物体の 3 次元形状計測", *日本機械学会論文集 (C 編)*, Vol. 72, No. 717, pp. 1506-1513, May 2006. [doi:10.1299/kikaic.72.1506]

- 19) Yuu Tanaka, Atsushi Yamashita, Toru Kaneko and Kenjiro T. Miura: "Removal of Adherent Waterdrops from Images Acquired with a Stereo Camera System", IEICE Transactions on Information and Systems, Vol. 89-D, No. 7, pp. 2021-2027, July 2006. [doi:10.1093/ietisy/e89-d.7.2021]
- 20) Hiroki Agata, Atsushi Yamashita and Toru Kaneko: "Chroma Key Using a Checker Pattern Background", IEICE Transactions on Information and Systems, Vol. 90-D, No. 1, pp. 242-249, January 2007.
- 21) 山下 淳, 樋口 裕和, 金子透: "光切断法による水中物体の3次元計測", 精密工学会誌, Vol. 73, No. 2, pp. 265-269, February 2007. [doi:10.2493/jjspe.73.265]
- 22) 山下 淳, 原田 知明, 金子 透: "全方位カメラ搭載移動ロボットによる Structure from Motion を用いた3次元環境モデリング", 日本機械学会論文集 (C編), Vol. 73, No. 726, pp. 512-519, February 2007. [doi:10.1299/kikaic.73.512]
- 23) 山下 淳, 縣 弘樹, 金子 透: "動的輪郭モデルを用いたストライプ状クロマキー", 映像情報メディア学会誌, Vol. 61, No. 2, pp. 189-197, February 2007. [doi:10.3169/itej.61.189]
- 24) 山下 淳, 蔵本 昌之, 金子 透: "複数カメラを用いた画像中の視野妨害ノイズ除去", 電気学会論文誌 C, Vol. 127, No. 4, pp. 480-488, April 2007. [doi:10.1541/ieejc.127.480]
- 25) 福地 功, 山下 淳, 金子 透, 三浦 憲二郎: "時空間画像処理による雨天時画像からの視野妨害ノイズ除去", 映像情報メディア学会誌, Vol. 62, No. 5, pp. 771-777, May 2008. [doi:10.3169/itej.62.771]
- 26) Atsushi Yamashita, Masayuki Kuramoto and Toru Kaneko: "Removal of Adherent Noises in Images by Using Multiple Cameras", Electrical Engineering in Japan, Vol. 164, No. 3, pp. 50-59, August 2008. [doi:10.1002/eej.20697]
- 27) Atsushi Yamashita, Takahiro Hara and Toru Kaneko: "Hammering Test with Integration of Image and Sound Signal Processing", Journal of Environment and Engineering, Vol. 3, No. 2, pp. 363-373, 2008. [doi:10.1299/jee.3.363]
- 28) Ryosuke Kawanishi, Atsushi Yamashita and Toru Kaneko: "Three-Dimensional Environment Model Construction from an Omnidirectional Image Sequence", Journal of Robotics and Mechatronics, Vol. 21, No. 5, pp. 574-582, October 2009. [doi:10.20965/jrm.2009.p0574]
- 29) 川西 亮輔, 山下 淳, 金子 透: "全方位画像列からの特徴点および直線エッジ情報を併用した Structure from Motion による3次元環境モデル生成", 電気学会論文誌 C, Vol. 130, No. 9, pp. 1494-1503, September 2010. [doi:10.1541/ieejc.130.1494]
- 30) 松井 建樹, 山下 淳, 金子 透: "全方位レーザ・全方位カメラからなるレンジファインダの自己位置推定と配管の3次元モデル生成", 電気学会論文誌 C, Vol. 130, No. 9, pp. 1504-1512, September 2010. [doi:10.1541/ieejc.130.1504]
- 31) 長田 典子, 大城 英裕, 加藤 邦人, 輿水 大和, 佐川 立昌, 藤原 孝幸, 山下 淳, 橋本 学: "メディア分野における多次元センシング技術の現状と動向", 電気学会論文誌 D, Vol. 131, No. 4, pp. 433-440, April 2011. [doi:10.1541/ieejias.131.433]
- 32) 久野 素有, 山下 淳, 金子 透: "ステレオカメラを用いたタッチパネル操作支援システムの構築", 電気学会論文誌 D, Vol. 131, No. 4, pp. 458-465, April 2011. [doi:10.1541/ieejias.131.458]
- 33) 宮木 理恵, 山下 淳, 金子 透: "プロジェクタ・カメラシステムを用いた色覚障害者への色情報提示", 電気学会論文誌 D, Vol. 131, No. 4, pp. 497-504, April 2011. [doi:10.1541/ieejias.131.497]
- 34) Atsushi Yamashita, Masaaki Kitaoka and Toru Kaneko: "Motion Planning of Biped Robot Equipped with Stereo Camera Using Grid Map", International Journal of Automation Technology, Vol. 5, No. 5, pp. 639-647, September 2011. [doi:10.20965/ijat.2011.p0639]
- 35) 川西 亮輔, 山下 淳, 金子 透: "全方位画像中の特徴点と直線エッジの同時拘束と基線長の自動決定に基づく Structure from Motion による三次元環境モデル生成", 日本ロボット学会誌, Vol. 30, No. 4, pp. 399-410, May 2012. [doi:10.7210/jrsj.30.399]
- 36) Guanghui Li, Yusuke Tamura, Atsushi Yamashita and Hajime Asama: "Moving Task Allocation and

- Reallocation Method Based on Body Expansion Behaviour for Distributed Multi-robot Coordination", *International Journal of Mechatronics and Automation*, Vol. 2, No. 4, pp. 240-261, 2012. [doi:10.1504/IJMA.2012.050495]
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