

Accessibility and system reduction of nonlinear time-delay control systems

Bartosiewicz, Zbigniew; **Kaldmäe, Arvo**; Kawano, Yu; **Kotta, Ülle**; Pawluszewicz, Ewa; **Simha, Ashutosh**; Wyrwas, Małgorzata
IEEE Transactions on Automatic Control 2021 / p. 3781–3788 <https://doi.org/10.1109/TAC.2020.3028566> [Journal metrics at Scopus](#)
[Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Event-based control for differentially flat systems: application to autonomous underwater vehicle

Kaldmäe, Arvo; **Kotta, Ülle**; Meurer, Christian; **Simha, Ashutosh** IFAC-PapersOnLine 2019 / p. 180-185
<https://doi.org/10.1016/j.ifacol.2019.11.775> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Extended observer form for nonlinear system with disturbances : Algorithm and application

Kaparin, Vadim; **Simha, Ashutosh**; Chowdhury, Nilanjan Roy; **Kotta, Ülle**; Levron, Yoash; **Belikov, Juri** 2024 18th International Conference on Control, Automation, Robotics and Vision (ICARCV) 2024 <https://doi.org/10.1109/ICARCV63323.2024.10821609>

Extended observer form with vector fields

Mullari, Tanel; **Kotta, Ülle**; **Kaldmäe, Arvo**; **Kaparin, Vadim**; **Simha, Ashutosh** International journal of control 2024 / p. 2399 - 2412
<https://doi.org/10.1080/00207179.2023.2274060> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Extended observer forms for submersive discrete-time systems

Simha, Ashutosh; **Kaparin, Vadim**; **Mullari, Tanel**; **Kotta, Ülle** IEEE Transactions on Automatic Control 2023 / p. 2684 - 2688
<https://doi.org/10.1109/TAC.2023.3336253> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A flapped paddle-fin for improving underwater propulsive efficiency of oscillatory actuation

Simha, Ashutosh; **Gkliva, Roza**; **Kotta, Ülle**; **Kruusmaa, Maarja** IEEE robotics and automation letters 2020 / p. 3176-3181
<https://doi.org/10.1109/LRA.2020.2975747> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

FLHex: a flapped-paddle hexapod for all-terrain amphibious locomotion

Burzynski, Piotr; **Simha, Ashutosh**; **Kotta, Ülle**; Pawluszewicz, Ewa; Sastry, Shivakumar Bulletin of the Polish Academy of Sciences Technical Sciences 2021 / art. e139007, 9 p. : ill <https://doi.org/10.24425/bpasts.2021.139007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A geometric approach to position tracking control of a nonholonomic planar rigid body : case study of an underwater vehicle

Simha, Ashutosh; **Kotta, Ülle** Proceedings of the Estonian Academy of Sciences 2020 / p. 215-227 : ill
<https://doi.org/10.3176/proc.2020.3.05> https://kirj.ee/public/proceedings_pdf/2020/issue_3/proc-2020-3-215-227.pdf [Journal metrics at Scopus](#)
[Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Intrinsic conditions for extended observer forms for nonlinear systems

Simha, Ashutosh; Respondek, Witold; **Kaldmäe, Arvo**; **Kaparin, Vadim**; **Kotta, Ülle** 2018 IEEE Conference on Decision and Control (CDC), 17-19 Dec. 2018, 17-19 Dec. 2018 : proceedings 2018 / p. 1373-1378 <https://doi.org/10.1109/CDC.2018.8619122>
[Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Iterative Learning based feedforward control for Transition of a Biplane-Quadrotor Tailsitter UAS

Raj, Nidhish; **Simha, Ashutosh**; Kothari, Mangal; Abhishek; Banavar, Ravi N. 2020 IEEE International Conference on Robotics and Automation (ICRA), 31 May-31 Aug. 2020, Paris, France : proceedings 2020 / p. 321-327 : ill
<https://doi.org/10.1109/ICRA40945.2020.9196671> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

A linear filtering framework for nonlinear systems based on extended output injection

Simha, Ashutosh; **Kotta, Ülle** IFAC-PapersOnLine 2019 / p. 274-279 <https://doi.org/10.1016/j.ifacol.2019.11.791> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Motor failure tolerant control system with self diagnostics for unmanned multirotors

Ambroziak, Leszek; **Simha, Ashutosh**; Pawluszewicz, Ewa; **Kotta, Ülle** 2019 24th International Conference on Methods and Models in Automation and Robotics (MMAR) 2019 / p. 422–427 : ill <https://doi.org/10.1109/MMAR.2019.8864726>

Nonlinear orientation controller for a compliant robotic fish based on asymmetric actuation

Meurer, Christian; **Simha, Ashutosh**; **Kotta, Ülle**; **Kruusmaa, Maarja** 2019 International Conference on Robotics and Automation : ICRA 2019, Palais des Congres de Montreal, Canada, 20-24 May, 2019 2019 / Art. 8793892 ; p. 4688-4694
<https://doi.org/10.1109/ICRA.2019.8793892> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

A Riemannian geometric approach to output tracking for nonholonomic systems

Simha, Ashutosh; Raha, Soumyendu IFAC-PapersOnLine 2019 / p. 144-149 <https://doi.org/10.1016/j.ifacol.2019.11.769> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Structure preserving reduced attitude control of gyroscopes

Raj, Nidhish; Colombo, Leonardo J.; **Simha, Ashutosh** Automatica 2021 / art. 109471, 7 p. : ill
<https://doi.org/10.1016/j.automatica.2020.109471> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

