

List of Publications
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URL: <http://www.diag.uniroma1.it/deluca/publications>

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ISI-WoK ResearcherID: [F-3835-2011](#)

YouTube: [RoboticsLabSapienza](#) (video channel for all listed [multimedia*](#) materials)

Edited Books

- [B-1] B. Siciliano, A. De Luca, C. Melchiorri, G. Casalino (Eds.), *Advances in Control of Articulated and Mobile Robots*, Springer Tracts in Advanced Robotics, vol. 10, Springer Verlag, Berlin, 2004. DOI:10.1007/b10628

Edited Proceedings

- [P-1] A. Isidori, S. Bittanti, E. Mosca, A. De Luca, M.D. Di Benedetto, G. Oriolo (Eds.), *Proceedings of the 3rd European Control Conference (ECC 95)*, Roma, ITA, Sep 1995.

International Journals

- [J-61] G. Turrisi, M. Capotondi, C. Gaz, V. Modugno, G. Oriolo, A. De Luca, “On-line learning for planning and control of underactuated robots with uncertain dynamics,” *IEEE Robotics and Automation Letters*, vol. 7, no. 1, pp. 358–365, 2022 [online since 12 Jul 2021]. DOI:10.1109/LRA.2021.3126899 (with [multimedia*](#))
- [J-60] A. Sciutti, F. Battaglia, M.R. Fossati, V. Calderai, M.G. Catalano, G. Antonelli, G.M. Di Nunzio, N. Dubbini, L. Giarré, E. Menegatti, F. Negrello, F. Pascucci, M. Pivetti, A.M. Zanchettin, A. Baroncelli, S. Majorana, C. Marchisio, B. Siciliano, P. Rocco, G. Metta, C. Melchiorri, C. Laschi, E. Guglielmelli, A. De Luca, P. Dario, A. Bicchi, “Making an opportunity out of a crisis: The inclusive approach of the Italian robotics community,” *IEEE Robotics and Automation Magazine*, vol. 28, no. 4, 2021 [online since 16 Sep 2021]. DOI:10.1109/MRA.2021.3105639
- [J-59] M. Khatib, K. Al Khudir, A. De Luca, “Human-robot contactless collaboration with mixed reality interface,” *Robotics and Computer-Integrated Manufacturing*, vol. 67, 102030, 2021 [online since 5 Aug 2020]. DOI:10.1016/j.rcim.2020.102030 (with [multimedia*](#))
- [J-58] A. Cristofaro, A. De Luca, L. Lanari, “Linear-quadratic optimal boundary control of a one-link flexible arm,” *IEEE Control Systems Letters*, vol. 5, no. 3, pp. 833–838, 2020 [online since 2 Jul 2020]. DOI:10.1109/LCSYS.2020.3006714

- [J-57] M. Khatib, K. Al Khudir, A. De Luca, “Task Priority Matrix at the acceleration level: Collision avoidance under relaxed constraints,” *IEEE Robotics and Automation Letters*, vol. 5, no. 3, pp. 4970–4977, 2020 [online since 25 Jun 2020]. DOI:10.1109/LRA.2020.3004771 (with [multimedia*](#))
- [J-56] A. Palleschi, R. Mengacci, F. Angelini, D. Caporale, L. Pallottino, A. De Luca, M. Garabini, “Time-optimal trajectory planning for flexible joint robots,” *IEEE Robotics and Automation Letters*, vol. 5, no. 2, pp. 938–945, 2020 [online since 13 Jan 2020]. DOI:10.1109/LRA.2020.2965861 (with [multimedia*](#))
- [J-55] E. Magrini, F. Ferraguti, A.J. Ronga, F. Pini, A. De Luca, F. Leali, “Human-robot coexistence and interaction in open industrial cells,” *Robotics and Computer-Integrated Manufacturing*, vol. 61, 101846, 2020 [online since 5 Aug 2019]. DOI:10.1016/j.rcim.2019.101846 (with [multimedia*](#))
- [J-54] C. Gaz, M. Cognetti, A. Oliva, P. Robuffo Giordano, A. De Luca, “Dynamic identification of the Franka Emika Panda robot with retrieval of feasible parameters using penalty-based optimization,” *IEEE Robotics and Automation Letters*, vol. 4, no. 4, pp. 4147–4154, 2019 [online since 25 Jul 2019]. DOI:10.1109/LRA.2019.2931248 (with [multimedia*](#) and source codes)
- [J-53] K. Al Khudir, G. Halvorsen, L. Lanari, A. De Luca, “Stable torque optimization for redundant robots using a short preview,” *IEEE Robotics and Automation Letters*, vol. 4, no. 2, pp. 2046–2057, 2019 [online since 15 Feb 2019]. DOI:10.1109/LRA.2019.2899667 (with [multimedia*](#))
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- [J-51] K. Al Khudir, A. De Luca, “Faster motion on Cartesian paths exploiting robot redundancy at the acceleration level,” *IEEE Robotics and Automation Letters*, vol. 3, no. 4, pp. 3553–3560, 2018 [online since 9 Jul 2018]. DOI:10.1109/LRA.2018.2853806 (with [multimedia*](#))
- [J-50] C. Gaz, E. Magrini, A. De Luca, “A model-based residual approach for human-robot collaboration during manual polishing operations,” *Mechatronics* (Special Issue on Human-Robot Collaboration in Industrial Applications), vol. 55, pp. 234–247, 2018 [online since 17 Mar 2018]. DOI:10.1016/j.mechatronics.2018.02.014 (with [multimedia*](#))
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- [BC-16] A. Spada, M. Cagnetti, A. De Luca, “Locomotion and Telepresence in Virtual and Real Worlds,” in F. Ficuciello, F. Ruggiero, A. Finzi (Eds.) *Human-Friendly Robotics*, Springer Proceedings in Advanced Robotics, vol. 7, pp. 85–98, Springer Verlag, Berlin, 2019 (Proc. 10th International Workshop on Human-Friendly Robotics, Napoli, ITA, Nov 2017) [online since 2 Jun 2018]. DOI:[10.1007/978-3-319-89327-3_7](https://doi.org/10.1007/978-3-319-89327-3_7)
- [BC-15] A. De Luca, W. Book, “Robots with Flexible Elements,” in B. Siciliano, O. Khatib (Eds.) *Springer Handbook of Robotics* (2nd Edition), Chapter 11, pp. 243–282, Springer Verlag, Berlin, 2016. DOI:[10.1007/978-3-319-32552-1_11](https://doi.org/10.1007/978-3-319-32552-1_11)
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Stand-alone Videos (in conference proceedings)

- [V-1] F. Flacco, A. De Luca, “Safe physical human-robot collaboration,” *2013 IEEE/RSJ International Conference on Intelligent Robots and Systems*, Tokyo, JPN, p. 2072, Nov 2013. [IROS 2013 Best Video Award Finalist DOI:10.1109/IROS.2013.6696635](#) (with [multimedia*](#))

International Conferences (peer reviewed)

*Papers presented in workshops or without peer review have their code [C-*nnn*] in italics.*

- [C-153] A. Kazemipour, M. Khatib, K. Al Khudir, A. De Luca, “Motion control of redundant robots with generalised inequality constraints,” *3rd Italian Conference on Robotics and Intelligent Machines*, Roma, ITA, Oct 2021. [DOI: \(open access, with multimedia*\)](#)
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