

## CLÉMENT GOSSELIN's PUBLICATIONS (updated May 2020)

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### Books

1. Birglen, L., Laliberté, T. and Gosselin, C., 2008, *Underactuated robotic hands*, Springer Tracts in Advanced Robotics, Vol. 40, Springer, 244 pp.
2. Kong, X. and Gosselin, C., 2007, *Type synthesis of parallel mechanisms*, Springer Tracts in Advanced Robotics, Vol. 33, Springer, 280 pp.

### Articles in refereed journals

1. Wen, K. and Gosselin, C., 2020, 'Forward kinematic analysis of kinematically redundant hybrid parallel robots', to appear in the *ASME Journal of Mechanisms and Robotics*.
2. Arian, A., Isaksson, M. and Gosselin, C., 2020, 'Kinematic and dynamic analysis of a novel parallel kinematic Schönflies motion generator' *Mechanism and Machine Theory*, Vol. 147, 103629.
3. Xiang, S., Gao, H., Liu, Z. and Gosselin, C., 2020, 'Dynamic transition trajectory planning of three-dof cable-suspended parallel robots via linear time-varying MPC', *Mechanism and Machine Theory*, Vol. 146, 103715.
4. Xiang, S., Gao, H., Liu, Z. and Gosselin, C., 2020, 'Dynamic point-to-point trajectory planning for three-dof cable-suspended parallel robots using rapidly-exploring random tree search', to appear in the *ASME Journal of Mechanisms and Robotics*.
5. Tong, Z., Gosselin, C. and Jiang, H., 2020, 'Dynamic decoupling analysis and experiment based on a class of modified Gough-Stewart parallel manipulators with line orthogonality', to appear in *Mechanism and Machine Theory*.
6. Schreiber, L.-T. and Gosselin, C., 2019, 'Schönflies motion PARAllel robot (SPARA), a kinematically redundant parallel robot with unlimited rotation capabilities', *IEEE/ASME Transactions on Mechatronics*, Vol. 24, No. 5, pp. 2273–2281.
7. Beaudoin, J., Laliberté, T. and Gosselin, C., 2019, 'Haptic interface for handshake emulation', *IEEE Robotics and Automation Letters*, Vol. 4, No. 4, pp. 4124–4130.
8. Wen, K. and Gosselin, C., 2019, 'Kinematically redundant hybrid robots with simple singularity conditions and analytical inverse kinematic solutions', *IEEE Robotics and Automation Letters*, Vol. 4, No. 4, pp. 3828–3835.
9. Nougrou, F., Campeau-Lecours, A., Massicotte, D., Boukadoum, M., Gosselin, C. and Gosselin, B., 2019, 'Pattern recognition based on HD-sEMG spatial features extraction for an efficient proportional control of a robotic arm', *Biomedical Signal Processing and Control*, Vol. 53, August, 101550.
10. Longval, J. and Gosselin, C., 2019, 'Dynamic trajectory planning and geometric analysis of a two-dOF translational cable-suspended planar parallel robot using a parallelogram cable loop', *ASME Journal of Mechanisms and Robotics*, Vol. 11, No. 2, April, pp. 020903-1–10.

11. Côté-Allard, U., Fall, C.L., Drouin, A., Campeau-Lecours, A., Gosselin, C., Glette, K., Laviolette, F. and Gosselin, B., 2019, 'Deep learning for electromyographic hand gesture signal classification using transfer learning', *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, Vol. 27, No. 4, April, pp. 760–771.
12. Babin, V., St-Onge, D. and Gosselin, C., 2019, 'Stable and repeatable grasping of flat objects on hard surfaces using passive and epicyclic mechanisms', *Robotics and Computer-Integrated Manufacturing*, Vol. 55, pp. 1–10.
13. Campeau-Lecours, A., Côté-Allard, U., Vu, D.-S., Routhier, F., Gosselin, B. and Gosselin, C., 2019, 'Intuitive adaptive orientation control for enhanced human-robot interaction', *IEEE Transactions on Robotics*, Vol. 35, No. 2, pp. 509–520.
14. Schreiber, L.-T. and Gosselin, C., 2019, 'Exploiting the kinematic redundancy of a (6+3)-dof parallel mechanism', *ASME Journal of Mechanisms and Robotics*, Vol. 11, No. 2, April, pp. 021005-1–10.
15. Vu, D.-S., Barnett, E. and Gosselin, C., 2019, 'Experimental validation of a three-dof cable-suspended parallel robot for spatial translation with constant orientation', to appear in the *ASME Journal of Mechanisms and Robotics*.
16. Mottola, G., Gosselin, C. and Carricato, M., 2019, 'Dynamically feasible motions of a class of purely-translational cable-suspended parallel robots', *Mechanism and Machine Theory*, Vol. 132, February, pp. 193–206.
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19. Babin, V. and Gosselin, C., 2018, 'Picking, grasping or scooping small objects lying on flat surfaces: A design approach', *The International Journal of Robotics Research*, Vol. 37, No. 12, pp. 1484–1499.
20. Dion-Gauvin, P. and Gosselin, C., 2018, 'Dynamic point-to-point trajectory planning of a three-dof cable-suspended mechanism using the hypocycloid curve', *IEEE/ASME Transactions on Mechatronics*, Vol. 23, No. 4, pp. 1964–1972.
21. Lévesque, F., Sauvet, B., Cardou, P. and Gosselin, C., 2018, 'A model-based scooping grasp for the autonomous picking of unknown objects with a two-fingered gripper', *Robotics and Autonomous Systems*, Vol. 106, pp. 14–25.
22. Gallant, M. and Gosselin, C., 2018, 'Singularities of a planar 3-RPR parallel manipulator with joint clearance', *Robotica*, Vol. 36, No. 7, pp. 1098–1109.
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25. Landuré, J. and Gosselin, C., 2018, 'Kinematic analysis of a novel kinematically redundant spherical parallel manipulator', *ASME Journal of Mechanisms and Robotics*, Vol. 10, No. 2, April, pp. 021007-1–10.

26. Gosselin, C. and Schreiber, L.-T., 2018, ‘Redundancy in parallel mechanisms: A review’, *ASME Applied Mechanics Review*, Vol. 70, No. 1, pp. 010802-1–15.
27. Jiang, X., Barnett, E. and Gosselin, C., 2018, ‘Periodic trajectory planning beyond the static workspace for six-DOF cable-suspended parallel robots’, *IEEE Transactions on Robotics*, Vol. 34, No. 4, pp. 1128–1140.
28. Jiang, X., Barnett, E. and Gosselin, C., 2018, ‘Dynamic point-to-point trajectory planning beyond the static workspace for six-DOF cable-suspended parallel robots’, *IEEE Transactions on Robotics*, Vol. 34, No. 3, pp. 781–793.
29. Mottola, G., Gosselin, C. and Carricato, M., 2018, ‘Dynamically feasible periodic trajectories for generic spatial three-degree-of-freedom cable-suspended parallel robots’, *ASME Journal of Mechanisms and Robotics*, Vol. 10, No. 3, pp. 031004-1–10.
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35. Campeau-Lecours, A., Belzile, P.-L., Laliberté, T., Foucault, S., Mayer St-Onge, B., Gao, D. and Gosselin, C., 2017, ‘An articulated assistive robot for intuitive hands-on-payload manipulation’, *Robotics and Computer-Integrated Manufacturing*, Vol. 48, December, pp. 182–187.
36. Sauvet, B., Laliberté, T. and Gosselin, C., 2017, ‘Design, analysis and experimental validation of an ungrounded haptic interface using a piezoelectric actuator’, *Mechatronics*, Vol. 45, pp. 100–109.
37. Isaksson, M., Gosselin, C. and Marlow, K., 2017, ‘Singularity analysis of a class of kinematically redundant parallel Schönflies motion generators’, *Mechanism and Machine Theory*, Vol. 112, pp. 172–191.
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