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Selected Scholarly Contributions [Data Provided by **Scopus**]

Bejczy, A.K.

[The IEEE Robotics and Automation Society history](#)

(2009) Proceedings of 2009 IEEE Conference on the History of Technical Societies, art. no. 5337822, .

Bejczy, A.K.

[A simple method for generating smooth robot arm motion](#)

(2009) Studies in Computational Intelligence, 241, pp. 123-128.

Bejczy, A.K.

[The birth of the RAS](#)

(2007) IEEE Robotics and Automation Magazine, 14 (1), pp. 104-108.

Bejczy, A.K.

[Extreme requirements for robotics in space exploration and utilization](#)

(2006) INES 2006: 10th International Conference on Intelligent Engineering Systems 2006, art. no. 1689359, pp. 151-153.

Bejczy, A.K., Dias, J.

[Editorial: Integration of visual and inertial sensors](#)

(2004) Journal of Robotic Systems, 21 (2), pp. 41-42.

Bejczy, A.K., Dias, J.

[Editorial: Integration of visual and inertial sensors](#)

(2004) Journal of Robotic Systems, 21 (1), pp. 1-2.

Bejczy, A.K.

[Preface](#)

(2003) Autonomous Robots, 14 (2-3), pp. 101-102.

Bejczy, Antal K.

[Task-level servocontrol in robotics](#)

(1997) IEEE International Conference on Intelligent Engineering Systems, Proceedings, INES, pp. 39-47.

Rovetta, A., Bejczy, A.K., Sala, R.

[Telerobotic surgery: applications on human patients and training with virtual reality.](#)

(1997) Studies in health technology and informatics, 39, pp. 508-517.

Fijany, Amir, Bejczy, Antal K.

[New algorithmic framework for robot dynamics analysis with application to space robots dynamics simulation](#)

(1997) International Conference on Advanced Robotics, Proceedings, ICAR, pp. 799-805.

Tarn, T.-J., Bejczy, A.K., De, P.K.

[Analysis of the dynamic ability of two robot arms in object handling](#)

(1996) Advanced Robotics, 10 (3), pp. 301-315.

Xi, N., Tarn, T.-J., Bejczy, A.K.

[Intelligent planning and control for multirobot coordination: An event-based approach](#)

(1996) IEEE Transactions on Robotics and Automation, 12 (3), pp. 439-452.

Bejczy, Antal K.

[Challenges of human-robot communication in telerobotics](#)

(1996) Robot and Human Communication - Proceedings of the IEEE International Workshop, pp. 1-8.

Rovetta, A., Sala, R., Cosmi, F., Wen, X., Milanese, S., Sabbadini, D., Togno, A., Angelini, L., Bejczy, A.K.

[A new telerobotic application: Remote laparoscopic surgery using satellites optical fiber networks for data exchange](#)

(1996) International Journal of Robotics Research, 15 (3), pp. 267-279.

Bejczy, Antal K.

[Virtual reality in robotics](#)

(1996) IEEE Symposium on Emerging Technologies & Factory Automation, ETFA, 1, pp. 7-15.

Tarn, T.-J., Xi, N., Bejczy, A.K.

[Path-based approach to integrated planning and control for robotic systems](#)

(1996) Automatica, 32 (12), pp. 1675-1687.

Tarn, T.J., De, P.K., Bejczy, A.K., Li, Z.

[Visualization of dual-arm robot motion space under kinematic constraints](#)

(1995) International Journal of Robotics Research, 14 (1), pp. 9-18.

Tarn, Tzyh-Jong, Xi, Ning, Guo, Chuanfan, Bejczy, Antal K.

[Function-based control sharing for robotic systems](#)

(1995) IEEE International Conference on Intelligent Robots and Systems, 3, pp. 1-6.

Bejczy, Antal K., Kim, Won S.

[Sensor fusion in telerobotic task controls](#)

(1995) IEEE International Conference on Intelligent Robots and Systems, 3, pp. 241-249.

Guo, Chuanfan, Tarn, Tzyh-Jong, Xi, Ning, Bejczy, Antal K.

[Fusion of human and machine intelligence for telerobotic systems](#)

(1995) Proceedings - IEEE International Conference on Robotics and Automation, 3, pp. 3110-3115.

Tarn, T.J., De, Prasanta K., Bejczy, A.K.

[Constrained motions and the analysis of the dynamic ability of manipulators](#)

(1994) IEEE/RSJ/GI International Conference on Intelligent Robots and Systems, 2, pp. 1202-1209.

Ramadorai, Arvind K., Tarn, Tzyh-Jong, Bejczy, Antal K., Xi, Ning

[Task-driven control of multi-arm systems](#)

(1994) IEEE Transactions on Control Systems Technology, 2 (3), pp. 198-206.

Tarn, T.J., Bejczy, A.K., Xi, N., Ramadorai, A.K.

[Distributed control architecture for a sensor-driven dual arm system](#)

(1994) Mechatronics, 4 (5), pp. 481-502.

Bejczy, Antal K., Kim, Won-Soo, Schenker, Paul S.

[Role of computer graphics in teleoperation](#)

(1994) pp. 1-9.

Tarn, T.J., Xi, Ning, Ramadorai, A.K., Bejczy, A.K.

[Versatile experimental system for dual-arm planning and control](#)

(1994) Proceedings - IEEE International Conference on Robotics and Automation, (pt 2), pp. 1515-1520.

De, Prasanta K., Tarn, T.J., Bejczy, A.K.

[Synthesis of trajectory planning using semi-algebraic sets and control of manipulators](#)

(1994) Proceedings - IEEE International Conference on Robotics and Automation, (pt 4), pp. 2742-2748.

Marth, G.T., Tarn, T.J., Bejczy, A.K.

[Event based approach to impact control: Theory and experiments](#)

(1994) Proceedings - IEEE International Conference on Robotics and Automation, (pt 2), pp. 918-923.

Rovetta, Alberto, Sala, Remo, Cosmi, Francesca, Wen, Xia, Sabbadini, Dario, Milanesi, Santo, Tognolo, Arianna, Angelini, Licinio, Bejczy, Antal

[First experiment in the world of robotic telesurgery for laparoscopy carried out by means of satellites networks and optical fibres networks on 7th July 1993](#)

(1993) IECON Proceedings (Industrial Electronics Conference), 1, pp. 51-56.

Kim, Won S., Schenker, Paul S., Bejczy, Antal K., Hayati, Samad

[Advanced graphics interfaces for telerobotic servicing and inspection](#)

(1993) 1993 International Conference on Intelligent Robots and Systems, pp. 303-309.

Kim, Won S., Bejczy, Antal K.

[Demonstration of a high-fidelity predictive/preview display technique for telerobotic servicing in space](#)

(1993) IEEE Transactions on Robotics and Automation, 9 (5), pp. 698-702.

Fiorini, Paolo, Bejczy, Antal K., Schenker, Paul S.

[Integrated interface for advanced teleoperation](#)

(1993) IEEE Control Systems Magazine, 13 (5), pp. 15-20.

Xi, Ning, Tarn, T.J., Bejczy, A.K.

[Event-based planning and control for multi-robot coordination](#)

(1993) Proceedings - IEEE International Conference on Robotics and Automation, 1, pp. 251-257.

Tarn, T.J., Bejczy, A.K., Ganguly, S.

[Feedback control of robot arm with discrete nonlinear model](#)

(1992) Journal of Robotic Systems, 9 (4), pp. 529-559.

Ramadorai, A.K., Tarn, T.J., Bejczy, A.K.

[Task definition, decoupling and redundancy resolution by nonlinear feedback in multi-robot object handling](#)

(1992) Proceedings - IEEE International Conference on Robotics and Automation, 1, pp. 467-474.

Schenker, Paul S., Kim, Won S., Bejczy, Antal K.

[High-dexterity teleoperation in real and virtual environments](#)

(1992) Proceedings of SPIE - The International Society for Optical Engineering, 1611, pp. 278-280.

Kim, Won S., Bejczy, Antal K.

[Graphics displays for operator aid in telemanipulation](#)

(1991) Proceedings of the IEEE International Conference on Systems, Man and Cybernetics, 2, pp. 1059-1067.

Schenker, P.S., Bejczy, A.K., Kim, W.S., Lee, S.

[Advanced man-machine interfaces and control architecture for dexterous teleoperations](#)

(1991) Oceans Conference Record (IEEE), 3, pp. 1506-1525.

Fijany, Amir, Bejczy, Antal K.

[Parallel computation of manipulator inverse dynamics](#)

(1991) Journal of Robotic Systems, 8 (5), pp. 599-635.

Li, Zuofeng, Tarn, Tzyh-Jong, Bejczy, Antal K.

[Dynamic workspace analysis of multiple cooperating robot arms](#)

(1991) IEEE Transactions on Robotics and Automation, 7 (5), pp. 589-596.

Tarn, Tzyh-Jong, Bejczy, Antal K., Yun, Xiaoping, Li, Zuofeng

[Effect of motor dynamics on nonlinear feedback robot arm control](#)

(1991) IEEE Transactions on Robotics and Automation, 7 (1), pp. 114-122.

Fijany, Amir, Bejczy, Antal K.

[Parallel algorithms and architecture for computation of manipulator forward dynamics](#)

(1991) Proceedings - IEEE International Conference on Robotics and Automation, 2, pp. 1156-1162.

Ganguly, S., Tarn, T.J., Bejczy, A.K.

[Control of robots with discrete nonlinear model: Theory and experimentation](#)

(1991) Proceedings - IEEE International Conference on Robotics and Automation, 1, pp. 528-533.

Tarn, T.J., Ganguly, S., Ramadorai, A.K., Marth, G.T., Bejczy, A.K.

[Experimental evaluation of the nonlinear feedback robot controller](#)

(1991) Proceedings - IEEE International Conference on Robotics and Automation, 2, pp. 1638-1644.

Bejczy, A.K., Szakaly, Z.F.

[A harmonic motion generator for telerobotic applications](#)

(1991) Proceedings - IEEE International Conference on Robotics and Automation, 3, pp. 2032-2039.

Bejczy, Antal K., Venema, Steven, Kim, Won S.

[Role of computer graphics in space telerobotics. Preview and predictive displays](#)

(1991) Proceedings of SPIE - The International Society for Optical Engineering, 1387, pp. 365-377.

Lee, Sukhan, Bejczy, A.K.

[Redundant arm kinematic control based on parameterization](#)

(1991) Proceedings - IEEE International Conference on Robotics and Automation, 1, pp. 458-465.

Schenker, Paul S., Kim, Won S., Venema, Steven C., Bejczy, Antal K.

[Fusing human and machine skills for remote robotic operations](#)

(1991) Proceedings of SPIE - The International Society for Optical Engineering, 1383, pp. 202-223.

Bejczy, Antal K., Kim, Won S., Venema, Steven C.

[The phantom robot: Predictive displays for teleoperation with time delay](#)

(1990) pp. 546-551.

Tarn, T.J., Bejczy, A.K., Ganguly, S., Li, Z.

[Nonlinear feedback method of robot control: A preliminary experimental study](#)

(1990) pp. 2052-2057.

Lee, Paul, Bejczy, Antal, Schenker, Paul, Hannaford, Blake

[Telerobotic Configuration Editor](#)

(1990) Proceedings of the IEEE International Conference on Systems, Man and Cybernetics, pp. 121-126.

Fijany, Amir, Bejczy, Antal K.

[Efficient algorithm for computation of manipulator inertia matrix](#)

(1990) Journal of Robotic Systems, 7 (1), pp. 57-80.

Ganguly, S., Ghosh, B., Tarn, T.J., Bejczy, A.K.

[Identification of motion parameters of a rigid body from its orthogonal and perspective projections](#)

(1989) Proceedings of the IEEE Conference on Decision and Control, 3, pp. 2153-2154.

Fijany, Amir, Bejczy, Antal K.

[Efficient method for computation of the manipulator inertia matrix](#)

(1989) pp. 1366-1373.

Li, Zuofeng, Tarn, T.J., Bejczy, A.K., Ghosh, B.

[Motion space analysis of an object handled by two robot arms](#)

(1989) Proceedings of the IEEE Conference on Decision and Control, 3, pp. 2487-2493.

Ding, X., Tarn, T.J., Bejczy, A.K.

[General dynamic model of flexible robot arms for control](#)

(1989) pp. 1678-1683.

Yun, Xiaoping, Tarn, T.J., Bejczy, A.K.

[Dynamic coordinated control of two robot manipulators](#)

(1989) Proceedings of the IEEE Conference on Decision and Control, 3, pp. 2476-2481.

Ganguly, S., Ghosh, B., Tarn, T.J., Bejczy, A.K.

[Estimation of motion parameters for a rigid body from its orthogonal projection](#)

(1989) pp. 2609-2614.

Fijany, Amir, Bejczy, Antal K.

[Class of parallel algorithms for computation of the manipulator inertia matrix](#)

(1989) pp. 1818-1826.

Tarn, T.J., Li, Zuofeng, Bejczy, A.K., Yun, X.

[Nonlinear robot arm control through third order motor model](#)

(1989) IFAC Proceedings Series, (10), pp. 53-58.

Fijany, Amir, Bejczy, Antal K.

[Class of parallel algorithms for computation of the manipulator inertia matrix](#)

(1989) IEEE Transactions on Robotics and Automation, 5 (5), pp. 600-615.

Ding, Xuru, Tarn, Tzyh-Jong, Bejczy, Antal K.

[Novel approach to the modelling and control of flexible robot arms](#)

(1988) Proceedings of the IEEE Conference on Decision and Control, pp. 52-57.

Tarn, T.J., Bejczy, A.K., Li, Zuo-Feng

[Dynamic workspace analysis of two cooperating robot arms.](#)

(1988) Proceedings of the American Control Conference, 88 pt 1-3, pp. 489-498.

Tarn, T.J., Bejczy, A.K., Yun, X.

[New nonlinear control algorithms for multiple robot arms](#)

(1988) IEEE Transactions on Aerospace and Electronic Systems, 24 (5), pp. 571-583.

Tarn, T.J., Bejczy, A.K., Yun, Xiaoping

[ROBOT ARM FORCE CONTROL THROUGH SYSTEM LINEARIZATION BY NONLINEAR FEEDBACK.](#)

(1988) pp. 1618-1625.

Fijany, Amir, Bejczy, Antal K.

[EFFICIENT JACOBIAN INVERSION FOR THE CONTROL OF SIMPLE ROBOT MANIPULATORS.](#)

(1988) pp. 999-1007.

Bejczy, A.K., Dotson, R.S., Szakaly, Z.

[COMPUTING ARCHITECTURE FOR TELEROBOTS IN EARTH ORBIT.](#)

(1987) Proceedings of SPIE - The International Society for Optical Engineering, 729, pp. 172-177.

Bejczy, Antal K., Szakaly, Zoltan

[UNIVERSAL COMPUTER CONTROL SYSTEM \(UCCS\) FOR SPACE TELEROBOTS.](#)

(1987) pp. 318-324.

Tarn, T.J., Bejczy, A.K., Yun, X.

[DESIGN OF DYNAMIC CONTROL OF TWO COOPERATING ROBOT ARMS: CLOSED CHAIN FORMULATION.](#)

(1987) pp. 7-13.

Fiorini, Paolo, Hannaford, Blake, Jau, Bruno, Kan, Edwin, Bejczy, Antal

[HAND TRIGGER SYSTEM FOR BI-LATERAL GRIPPING CONTROL IN TELEOPERATION.](#)

(1987) pp. 586-592.

Tarn, T.J., Bejczy, A.K., Yun, X.

[DYNAMIC COORDINATION OF TWO ROBOT ARMS.](#)

(1986) Proceedings of the IEEE Conference on Decision and Control, pp. 1267-1270.

Bejczy, A.K., Tarn, T.J., Li, Z.F.

[TASK DRIVEN FEEDBACK CONTROL OF ROBOT ARMS: A STEP TOWARD INTELLIGENT CONTROL.](#)

(1986) Proceedings of the IEEE Conference on Decision and Control, pp. 1256-1261.

Tarn, T.J., Bejczy, A.K., Yun, X.

[COORDINATED CONTROL OF TWO ROBOT ARMS.](#)

(1986) pp. 1193-1202.

Fong, C.P., Dotson, R.S., Bejczy, A.K.

[DISTRIBUTED MICROCOMPUTER CONTROL SYSTEM FOR ADVANCED TELEOPERATION.](#)

(1986) pp. 987-995.

Bejczy, Antal K., Kan, Edwin P., Killion, Richard R.

[INTEGRATED MULTI-SENSORY CONTROL OF SPACE ROBOT HAND.](#)

(1985) AIAA Paper, pp. 253-259.

Bejczy, Antal K.

[CONTROL OF REMOTE MANIPULATORS.](#)

(1985) Handb of Ind Rob, pp. 320-333.

Bejczy, A.K., Tarn, T.J., Yun, X., Han, S.

[NONLINEAR FEEDBACK CONTROL OF PUMA 560 ROBOT ARM BY COMPUTER.](#)

(1985) Proceedings of the IEEE Conference on Decision and Control, pp. 1680-1688.

Bejczy, A.K., Corker, K.

[MANUAL CONTROL COMMUNICATION IN SPACE TELEOPERATION.](#)

(1985) pp. 223-232.

Bejczy, A.K.

[ROBOTS AS MAN-EXTENSION SYSTEMS IN SPACE.](#)

(1985) IFAC Proceedings Series, pp. 2411-2416.

Bejczy, A.K., Corker, K.

[ROLE OF DATA DRIVEN AUTOMATION IN SPACE TELEOPERATION.](#)

(1984) Computers in Engineering, Proceedings of the International Computers in Engineering Conference and, pp. 319-324.

Bejczy, Antal K., Lee, Sukhan

[GENERALIZED BILATERAL CONTROL OF ROBOT ARMS.](#)

(1984) Proceedings of the American Control Conference, 3, pp. 1883-1892.

Tarn, T.J., Bejczy, A.K., Isidori, A., Chen, Y.

[NONLINEAR FEEDBACK IN ROBOT ARM CONTROL.](#)

(1984) Proceedings of the IEEE Conference on Decision and Control, pp. 736-751.

Bejczy, A.K., Corker, K.

[AUTOMATION IN TELEOPERATION FROM A MAN-MACHINE INTERFACE VIEWPOINT.](#)

(1984) AIAA Paper, pp. 108-113.

Bejczy, Antal K.

[DATA-DRIVEN AUTOMATION IN REMOTE APPLICATIONS OF ROBOTS.](#)

(1984) pp. 903-916.

Bejczy, Antal K., Lee, Sukhan

[ROBOT ARM DYNAMIC MODEL REDUCTION FOR CONTROL.](#)

(1983) Proceedings of the IEEE Conference on Decision and Control, 3, pp. 1466-1476.

Bejczy, Antal K.

[DYNAMIC ANALYSIS FOR ROBOT ARM CONTROL.](#)

(1983) Proceedings of the American Control Conference, 2, pp. 503-504.

Heer, E., Bejczy, A.K.

[Control of robot manipulators for handling and assembly in space](#)

(1983) Mechanism and Machine Theory, 18 (1), pp. 23-35.

Bejczy, Antal K.

[REMOTE APPLICATIONS OF ROBOTS.](#)

(1983) p. 57.