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| **个人简介** | | | | | |
| 任涛，1988年生，博士，副教授，硕士生导师。2011年毕业于西南石油大学过程装备与控制工程专业，获工学学士学位；2017年毕业于西南石油大学机械工程专业，获工学博士学位。2015年9月至2016年9月在香港大学机械工程系从事科学研究。主要从事机器人技术、石油天然气装备、机械系统动力学等方面的研究工作。  近年来，作为项目负责人承担自然科学基金、四川省科技支撑计划项目、中国制造2025四川行动与创新驱动资金项目、四川省苗子工程；参与国家自然科学基金项目、香港创新及科技基金、国家重大专项、四川省科技支撑计划多项；2018年至2019年总科研经费合计344万元。  近年来，在《Soft Robotics》《IEEE/ASME Transactions on Mechatronics》等国内外顶级期刊及International Conference on Robotics and Automation等顶级会议发表论文30余篇，其中SCI 1区论文5篇，顶级国际会议论文1篇。两篇论文被机器人顶级期刊《Soft Robotics》评为高影响力论文；授权美国发明专利1项，中国发明专利11项。目前担任《IEEE/ASME Transactions on Mechatronics》《IEEE Access》《Mathematical Problems in Engineering》《Proc. IMechE., Part C: Journal of Mechanical Engineering Science》《Proc. IMechE., Part I: Journal of Systems and Control Engineering》等国际学术期刊的审稿人。。  代表性论文：  1. A variable stiffness soft continuum robot based on pre-charged air, particle jamming, and origami[C]. IEEE International Conference on Robotics and Automation, Paris, France, 2020.5.31-6.4.  2. A novel tendon driven soft actuator with self-pumping property[C]. Soft Robotics, 2019, Online, DOI: 10.1089/soro.2019.0008.  3. Experimental and theoretical investigation on synchronization of a vibration system flexibly driven by two motors[J]. ARCHIVE Proceedings of the Institution of Mechanical Engineers Part C Journal of Mechanical Engineering Science, 2020, Accepted.  4. Small-beads transmission and its application to robot joints[J]. IEEE/ASME Transactions on Mechatronics, 2019, 24(5): 2282-2292.  5. Material stiffness control of compliant tools by using electromagnetic suction[J]. ARCHIVE Proceedings of the Institution of Mechanical Engineers Part C Journal of Mechanical Engineering Science, 2019, 233(13): 4719-4728.  6. Synchronization of two eccentric rotors driven by one motor with two flexible couplings in a spatial vibration system[J]. Mathematical Problems in Engineering, 2019, Article ID 2969687.  7. Driving mechanisms, motion, and mechanics of screw drive in-pipe robots: a review[J]. Applied Sciences, 2019, 9(12): 2514-2527.  8. Development of an active helical drive self-balancing in-pipe robot based on compound planetary gearing[J]. International Journal of Robotics and Automation, 2019, 34(3): 235-242.  9. Bio-inspired robotic dog paddling: kinematic and hydro-dynamic analysis[J]. Bioinspiration & Biomimetics, 2019, 14(6): 066008.  10. Obstacle crossing and traction performance of active and passive screw pipeline robots[J]. Journal of Mechanical Science and Technology, 2019, 33(5): 2417-2427.  11. Precharged pneumatic soft actuators and their applications to untethered soft robots[J]. Soft Robotics, 2018, 5(5):567-575.  12. Design and analysis of an active helical drive downhole tractor[J]. Chinese Journal of Mechanical Engineering, 2017, 30(2):428-437.  13. Helical-contact deformation measuring method in oil-gas pipelines[J]. International Journal of Robotics and Automation, 2017, 32(1):55-62.  14. Design, analysis and innovation in variable radius active screw in-pipe drive mechanisms[J]. International Journal of Advanced Robotic Systems, 2017, 14(3):1-9.  15. Variable pitch helical drive in-pipe robot[J]. *International Journal of Robotics & Automation*, 2016, 31(3): 263-271.  16. A novel, variable stiffness robotic gripper based on integrated soft actuating and particle jamming[J]. *Soft Robotics*, 2016, 3(3):134-143.  17. A simple and novel helical drive in-pipe robot. *Robotica*, 2015, 33(4), 920-932.  18. Development of a novel oil and gas in-pipe robot[J]. International Journal of Mechatronics and Manufacturing Systems, 2015, 8(3-4): 102-115.  19. A helical drive in-pipe robot based on compound planetary gearing [J]. *Advanced Robotics*, 2014, 28(17): 1165-1175.  20. Characteristic analysis of a novel in-pipe driving robot[J]. *Mechatronics*, 2013, 23(4): 419-428.  21. Optimized inchworm motion planning for a novel in-pipe robot[J]. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 2013: 0954406213502409.  22. Mobility and eccentricity analysis of a helical belt drive in-pipe robot[C]. *Mechatronics and Automation (ICMA), 2013 IEEE International Conference on*, 2013: 1507-1512.  23. Down-hole robots: current status, challenge and innovation[C]. IEEE International Conference on Mechatronics and Automation, Takamatsu, Japan, 2013.8.4-8.7.  24. Probing while driving for oil well surface profile measurement[C]. *Computational Intelligence and Virtual Environments for Measurement Systems and Applications (CIVEMSA), 2013 IEEE International Conference on*, 2013: 122-125.  25. Basic characteristics of a novel in-pipe helical drive robot[J]. International Journal of Mechatronics and Automation, 2014, 4(2):127-136.  26. 主动螺旋驱动式管道机器人[J]. 机器人, 2014, 36(6):711-718. | | | | | |