New ICRA paper – go to for authors section, download the outline

From template ~900 words/page \* 6 pages = ~5400 words

Video clip to complement the submission

<http://www.icra2018.org/initial-call-papers/>

<http://www.ieee-ras.org/publications/ra-l>

1. Introduction:

* Why make miniature joints?
* What are compliant joints
* Benefits of compliant joints (list examples of compliant notched tube joints)
* Fundamental trade-off between stiffness and range of motion
* What are contact-aided compliant mechanisms?
* In this paper we present notched tube contact-aided compliant mechanism that addresses these issues
* Paper is organized as follows

1. Design Concept
   1. Notch tube joint design
      * The contact aid changes the shape that it takes on and increases the stiffness of the tip.
      * Schematic that shows geometry – labeled ccm joint + a bent one and explain how it works
   2. Roll Pitch Roll Wrist design overview

* Schematic: How the pitch is incorporated with roll and roll

1. Kinematics Modeling
   1. Kinematics of the notch tube
   2. Kinematics of the RPR wrist
2. Prototype fabrication
   1. RPR Wrist
   2. DVRK base
3. Experimental validation of kinematics modeling
   1. Assessment of Contact-Aided Joint
      * Stiffness and articulation plot of the joint
   2. Accuracy of Roll Pitch Roll Wrist vs. Kinematics Model
      * EM tracker to measure the tip position of the RPR wrist vs. expected modeling from kinematics
4. Discussion