

# ZeruiWANG

a Ph.D. candidate who is obsessed by robotics

## about

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## languages

Chinese  
English

## programming

C++/C  
Python

## education

- since 2013 **Ph.D.** in Mechanical & Automation Engineering The Chinese Univ. of Hong Kong  
Cumulative GPA: 3.917/4  
Research interests:  
Safety mechanism design in robotic surgery  
Visual servoing in surgical robot
- 2012 **Exchange** in Europe TU Delft, VUB, U-PSUD, ECP, ISAE  
Most selective elite delegation among students (top 0.75%)
- 2009–2013 **BEng.** in Quality and Reliability Engineering Beihang University  
Overall GPA: 3.84/4 (90.04/100)  
Rank **1st** in School of Reliability & System Engineering
- 2006–2009 **Senior high school student** No. 1 Middle School of Urumqi  
Top 0.18% in the National College Entrance Examination  
The 1st Prize in National Olympiad in Informatics  
The 2nd Prize in Chinese Physics Olympiad  
Nominated as Excellent Student for **three** consecutive years

## Honors & Awards

- Aug. 2013 **Awardee of Hong Kong PhD Fellowship**
- Nov. 2012 **Champion of Innovative Underwater Robot Design  
China Robot Contest & RoboCup Open**
- Jul. 2012 **The 2nd-Prize in National University Mechanical Innovation Competition**  
(10%)
- Dec. 2010 **The 2nd-Prize in National Undergraduate Physics Competition**  
(7.5%)
- Nov. 2010 **National Scholarship for University Students**  
(2.6%)
- Nov. 2011 **Excellent Students Awards of Beijing**  
(1.1%)
- Nov. 2011 **Elite Student of Beihang University**  
(3%)
- Mar. 2012 **Outstanding Student Award, Yang Weimin Special Scholarship**  
(0.8%)
- Dec. 2011 **The 2nd-Prize Scholarship of Academic Contest**  
(3%)
- 2010-2012 **The 1st-Prize Scholarship of Science and Engineering Contest**  
(7%)
- 2010-2012 **The 1st-Prize Scholarship of Academic Performance**  
(3%)

## publications

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### Journal

#### Design of a Novel Compliant Safe Joint with Multiple Working States for Robotic Surgery

Z. Wang, H. M. Yip, D. Navarro-Alarcon, P. Li, Y.-H. Liu

*IEEE/ASME Trans. Mechatronics (2015). 2015*

#### Development of an Assistive Surgical Robot for Laparoscopic Hysterectomy

H. M. Yip, Z. Wang, D. Navarro-Alarcon, P. Li, Y.-H. Liu, T. H. Cheung, Y. Fu

*IEEE/ASME Trans. Mechatronics (2015). 2015*

#### Automatic 3D Manipulation of Soft Objects by RCM Robotic Instruments with Adaptive Deformation Model

D. Navarro-Alarcon, H. M. Yip, Z. Wang, Y.-H. Liu, P. Li

*IEEE Trans. Robot. (2015). 2015*

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### Conference

#### Design and Control of a Novel Multi-state Compliant Safe Joint for Robotic Surgery

Z. Wang, P. Li, D. Navarro-Alarcon, H. M. Yip, Y.-H. Liu, W. Lin, L. Li

*IEEE Int. Conf. Robotics and Automation, 2015*

#### A New Robotic Uterine Positioner for Laparoscopic Hysterectomy with Passive Safety Mechanisms: Design and Experiments

H. M. Yip, Z. Wang, D. Navarro-Alarcon, P. Li, Y.-H. Liu

*IEEE/RSJ Int. Conf. Intelligent Robots and Systems, 2015*

#### Gradient Descent Adaptive Methods to Automatically Position 3-DOF RCM Mechanisms with a Monocular Camera

D. Navarro-Alarcon, H. M. Yip, Z. Wang, Y.-H. Liu, W. Lin, P. Li

*IEEE/RSJ Int. Conf. Intelligent Robots and Systems, 2015*

#### A New Robotic Uterine Positioner for Laparoscopic Hysterectomy with Passive Safety Mechanisms: Design and Experiments

W. Lin, D. Navarro-Alarcon, P. Li, Z. Wang, H. M. Yip, Y.-H. Liu

*IEEE/RSJ Int. Conf. Intelligent Robots and Systems, 2015*

#### A Method to Regulate the Torque of Flexible-joint Manipulators with Velocity Control Inputs

D. Navarro-Alarcon, Z. Wang, H. M. Yip, Y. Liu, P. Li, W. Lin

*IEEE Int. Conf. Robotics and Biomimetics, 2014*

#### A new circular-guided remote center of motion mechanism for assistive surgical robots

H. M. Yip, P. Li, D. Navarro-Alarcon, Z. Wang, Y.-H. Liu

*IEEE Int. Conf. Robotics and Biomimetics, 2014*