



VESALIUS ROBOT

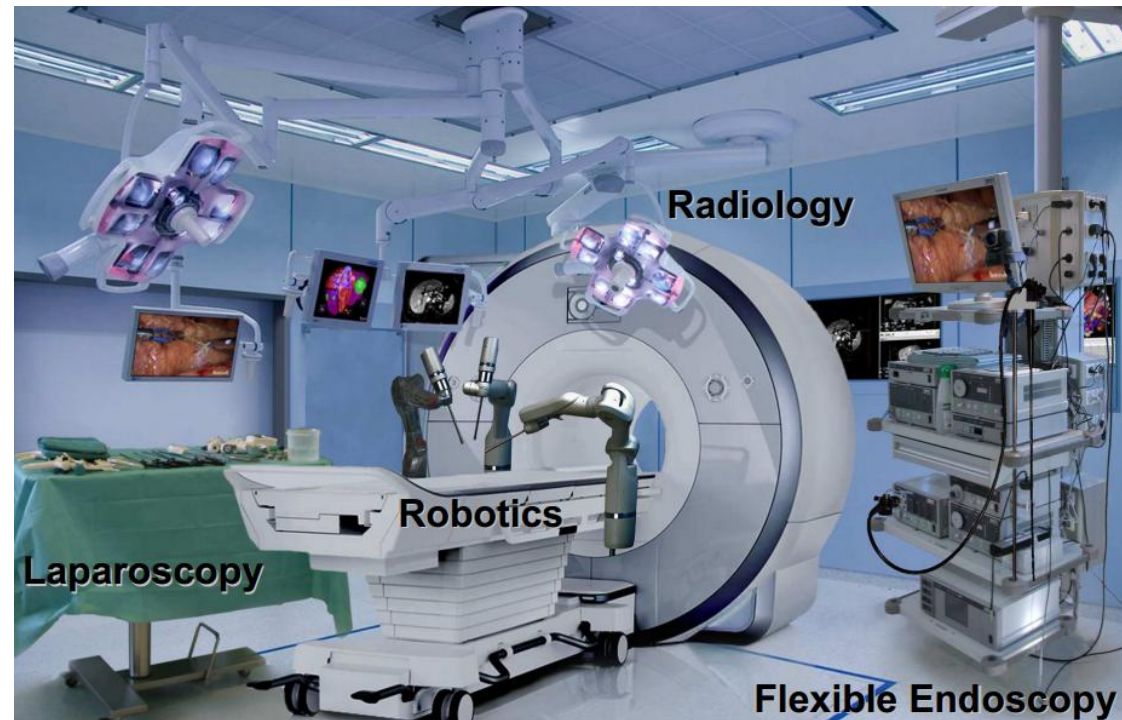
華陀機器人

A seed for the future

Hsiao-Wei Tang

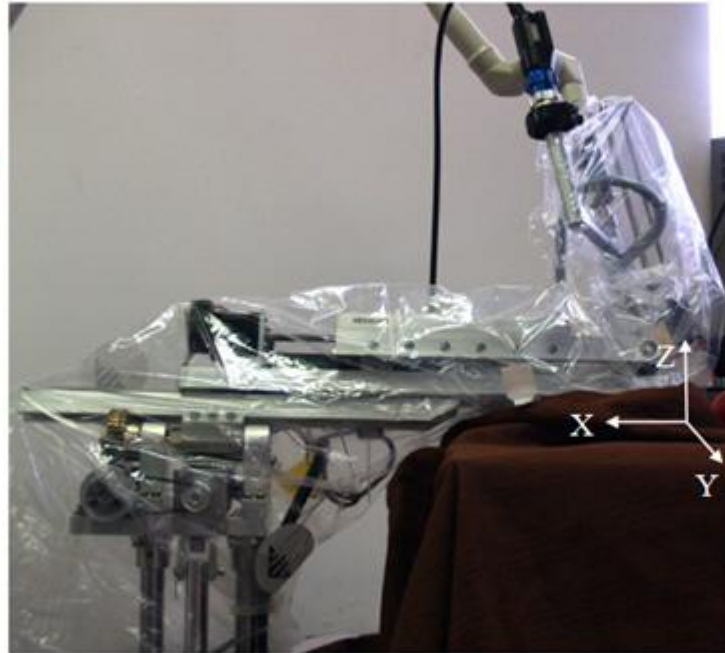
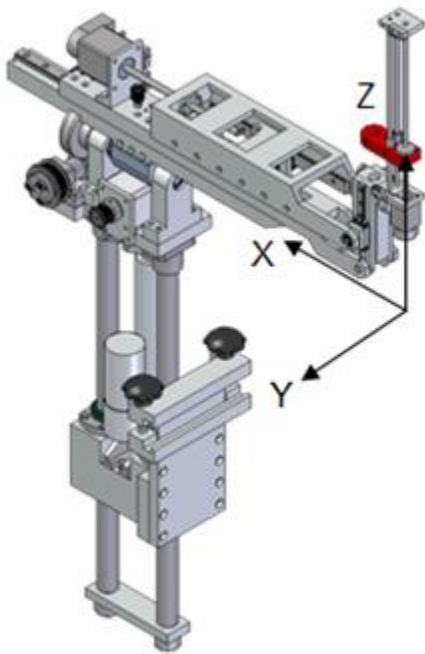
VISION AND MISSION

- **Vision:**
 - Medical Robots will provide services in every hospital by 2020
- **Mission:**
 - Develop and implement safe, customized, quality and affordable robot assisted surgical solutions
 - Answer to market needs with simple and useful products



Courtesy of IHU IRCAD Strasbourg

PLATFORM TECHNOLOGY



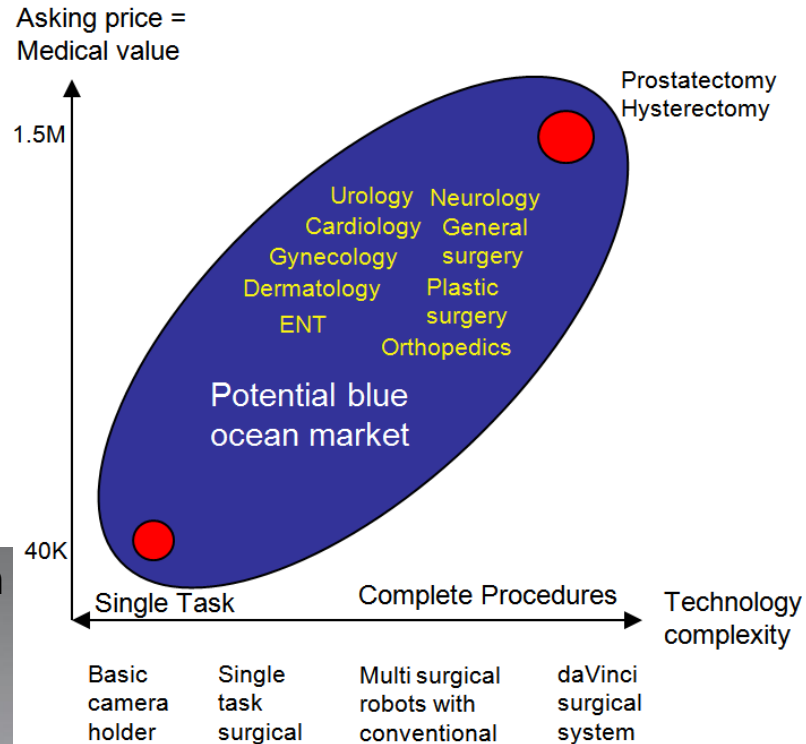
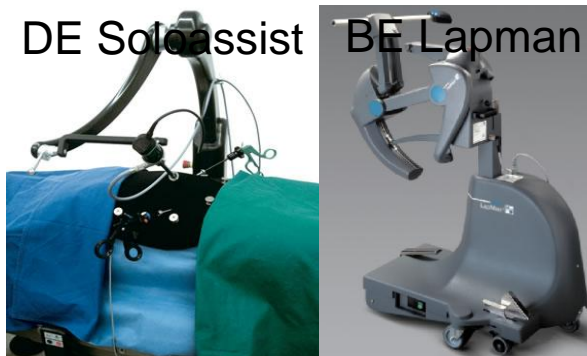
- **Remote center of motion mechanism**
 - X-rotation: $\pm 60^\circ$
 - Y-rotation: $\pm 60^\circ$
 - Z-translation: 170 mm
- **Movement speed** limits to $25^\circ/\text{s}$ and 25mm/s
- **Adjustment of remote center position**
 - X-translation: 100mm stroke
 - Z-translation: 100mm stroke
 - Movement speed: 10 mm/s
 - Y-axis is obtainable via sliding on the surgical rail
- **Maximum Payload: 5NM**
- **Resolution: 0.05 degree/ 0.05 mm**
- **Control Interfaces**
 - Intuitive writing interface (w/o constant Z-position control)
 - Joystick interface
 - Computer control in each axis and in Cartesian coordinates
 - Foot Joystick
 - Voice command
 - Emergency button

A safe, accurate and economic platform to apply in surgeries

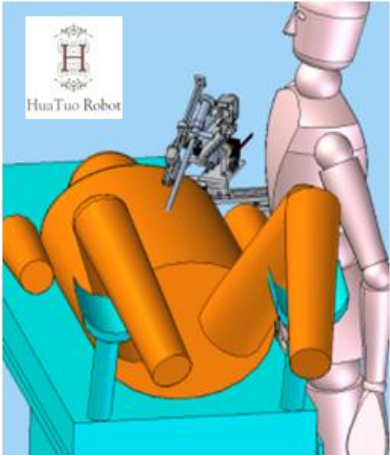
POTENTIAL APPLICATIONS

- Camera holder \$ 30~60K

- *da Vinci* Surgical system \$ 1~2 million



TECHNICAL PROGRESS



2011. 8



2011. 11



2011. 11



2012. 4



NETWORKING



STB IN PALO ALTO

- Start up:
 - Learning the Stanford entrepreneurial model
 - Building team of success
 - Strategy and business planning
 - Fund raising and leveraging resources
- New ideas: Taiwan + USA + Europe
 - Healthcare Automation
 - ICEMR(IRCAD) for partnership, market analysis, clinical evaluation and business development

COMMENT AND QUESTION?