

# Dr.-Ing. M. Ali Nasserri

1981-01-06, Tehran | Nationality: Iranian - German (PR)  
ali.nasserri@tum.de | Trogerstr. 32, 81675 München, Germany | +49 172 5230902

## EDUCATION

- **PH.D. (2014)**

**SURGICAL ROBOTICS**

TECHNISCHE UNIVERSITÄT  
MÜNCHEN (TUM)

- **M.SC. (2010)**

**MECHATRONICS**

QAZVIN AZAD UNIVERSITY (MRL)

- **B.SC. (2006)**

**ELECTRICAL ENGINEERING**

SADJAD UNIVERSITY OF  
TECHNOLOGY

## TECH-TRANSFER

**UNTERNEHMERTUM**

2012 - ENTREPRENEURIAL  
QUALIFICATION PROGRAM

<https://www.unternehmertum.de/>

## COURSEWORK

**HARVARD UNIVERSITY**

ADVANCED MOLECULAR IMAGING  
AND ITS CLINICAL TRANSLATION

**JOHNS HOPKINS UNIVERSITY**

MEDICAL/SURGICAL ROBOTICS

**POLITECNICO DI MILANO**

ADVANCEMENTS IN SURGICAL  
ROBOTICS

**IMPERIAL COLLEGE**

SAFETY IN ROBOTIC SURGERY

**UNIVERSITY OF TOKYO**

MEDICAL ROBOTICS

**SEOUL NATIONAL UNIVERSITY**

SURGICAL ROBOTICS INTERVENTIONS

## SKILLS

Robotics (Actuator, Sensor, Control) •  
Medical Imaging • C++/Matlab •  
CATIA • Rapid Prototyping • Casting  
• Robotic Laparoscopic Surgery •  
Clinical Trials • FDA/CE Certification  
• Benchmarking • Fundraising •  
Ophthalmic Surgery •

## EXPERIENCE

**CURRENT - KLINIKUM RECHTS DER ISAR** HEAD OF RESEARCH

Department of Ophthalmology

**2013:2014 - ECHORD++** SCIENTIFIC PROJECT MANAGER

European funded project with 40+ partners, coordinated by TUMünchen

- Current - External expert: Medical Projects

**2011:2013 - GSISH** SURGICAL ROBOTIC RESEARCHER

Graduate School of Information Science in Health, TUMünchen

- 2012 - Speaker of the school

**2011:2014 - INFORMATIK6** RESEARCH ASSISTANT

Robotics and Embedded system group, TUMünchen

- Project leader: High precision medical robotics

**2011:PRESENT - LECTURER** MEDICAL ENGINEERING SUBJECTS

- TUMünchen, Germany - Sun Yat-sen University, China
- 20+ Master/Bachelor/PhD thesis supervision

## RESEARCH (LAST FIVE YEARS)

**CURRENT - KLINIKUM RECHTS DER ISAR** GROUP LEADER AT

OPHTHALMOLOGY DEPARTMENT

Prof. Dr. -Med Dr. Chris P. Lohmann, Prof. Dr. Nassir Navab

- Sub-retinal Interventions for AMD treatment

**2011:2014 - ROBOTICS AND EMBEDDED SYSTEM, EYE CLINIC,**

**KLINIKUM RECHTS DER ISAR** RESEARCH ASSISTANT

Prof. Prof. Dr.-Ing. Alois Knoll, Prof. Dr. -Med Dr. Chris P. Lohmann

- Hybrid Parallel-Serial Micromanipulator for Assisting Ophthalmic Surgery

## INDUSTRY

**2006:2010 - THUNDER.R.I** RESEARCH AND DEVELOPMENT MANAGER

Manufacturer of automation and measurement systems

- Design, development and test of new products

**2014:PRESENT - SIEMENS** RUNNING JOINT PROJECT

- C-Arm calibration Based on X-Ray Projections

**2015:PRESENT - CARL ZEISS MEDITEC AG** DIRECTOR OF THE

CLINICAL STUDIES

- intra-operative OCT

## AWARDS

2015	Award	Robotdalen Innovation Award 2015
2013	Deutschland	German PR for outstanding researchers
2012	Finalist	EXIST program for startups
2012	1st	Best poster award, GSISH jubilee
2011	1st	AWARD for Most Innovative Idea, GMSI-BK21MAE
2011	Stipendium	TUM-GSISH Doctoral study scholarship
2010	top 0.64%	National entrance exam for Masters study

## SOCIETIES

Since 2010	IEEE, ARVO, DOG	Senior member/Reviewer
Since 2014	European Commission	RIA - External expert
Since 2013	ECHORD++	Board of management

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## PATENTS

- Manipulator mit serieller und paralleler kinematik  
Mohammadali Nasserri, Alois Knoll, Martin Eder, Deutsche Patentanmeldung, 2014. DE102012013511A1
- Manipulator with serial and parallel kinematics  
Mohammadali Nasserri, Alois Knoll, Martin Eder, Internationale Patentanmeldung, 2014. WO2014005583 A1
- Cannula and Instrument for Inserting a Catheter  
Mohammadali Nasserri, Mathias Maier, Chris P. Lohmann, European Patent Application, 2015. U30636EP

## PUBLICATIONS

- “Design of a Differential-Drive Wheeled Robot Controller with Pulse-Width Modulation”, F. Arvin, K. Samsudin, M. Ali Nasserri, IEEE Conference on Innovative Technologies in Intelligent Systems and Industrial Applications CITISIA'09, pp.143-147, Monash University, July 2009.
- “Control of Flocking Behavior Using informed Agents”, M. Ali Nasserri and Masoud Asadpour, IEEE Swarm Intelligence Symposium (SIS2011), pp. 1-6, Paris, April 2011.
- “Load-velocity Characteristics of a Stick-slip Piezo Actuator”, M. Pak, A. Nasserri, Proceedings der Actuator 2012. International Conference on New Actuators (ACTUATOR- 12), P. 755, Bremen, Germany, June 2012.
- “Clinical motion tracking and motion analysis during ophthalmic surgery using electromagnetic tracking system”, M. Ali Nasserri, Emmanuel Dean-Leon, Suraj Nair, Martin Eder, Mathias Maier, C. P. Lohmann, and A. Knoll in Proceedings of the 5th International IEEE Conference on BioMedical Engineering and Informatics (BMEI'12),pp. 1058 – 1062, Chongqing, China, October 2012
- “The 3d eyeball FTA model with needle rotation”, Jing Wu, M. Ali Nasserri, Martin Eder, M. Azqueta Gavaldon, C. P. Lohmann and A. Knoll APCBEE Procedia 3rd International Conference on Biomedical Engineering and Technology - ICBET 2012. Elsevier, May 2013
- “Robot-assisted vitreoretinal surgery”, M. Maier, M. Ali Nasserri, D. Zapp, M. Eder, K. Kobuch, C. P. Lohmann, and A. Knoll Investigative Ophthalmology & Visual Science (an ARVO Journal, IF: 3.661), 54(15), 3318-3318.May 2013
- “The introduction of a new robot for assistance in ophthalmic surgery”, M. Ali Nasserri, Martin Eder, Emmanuel Dean-Leon, Suraj Nair, Daniel Zapp, Mathias Maier, C. P. Lohmann, and A. Knoll, 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'13). pp.5682–5685, Japan, July 2013
- “Kinematics and dynamics analysis of a hybrid parallel-serial micromanipulator designed for biomedical applications”, M. Ali Nasserri, Martin Eder, Daniel Eberts, Suraj Nair, Mathias Maier, Daniel Zapp, C. P. Lohmann, and A. Knoll, Proceedings of the International Conference on Advanced Intelligent Mechatronics (AIM2013). Pp.293– 299, Australia, July 2013'
- “Embedded middleware and hard real-time based architecture for robot assisted ophthalmic surgery”, Suraj Nair, M. Ali Nasserri, Martin Eder, Chris P. Lohmann, and A. Knoll, The Hamlyn Symposium on Medical Robotics, London, UK,pp. 83 – 84, June 2013
- “Robot for assisting Ophthalmic Surgery”, Nasserri M. Ali, Maier M, Zapp D, Nair S, Eder M, Kobuch K, Chris P. Lohmann, and A. Knoll, International Society for Medical Innovation and Technology(iSMIT), September 2013
- “Reducing communication-related complexity in heterogeneous networked medical systems considering non- functional requirements”, M. Hashemi Farzaneh, S. Nair, M.Ali Nasserri, and A. Knoll, In IEEE International Conference on, Advanced Communication Technology (ICACT), 2014
- “Transparency optimized interaction in telesurgery devices via time-delayed communications”, Amin Mahdizadeh, M. Ali Nasserri, and A. Knoll, In Proceeding of The IEEE Haptics Symposium. IEEE, 2014
- “Virtual fixture control of a hybrid parallel-serial robot for assisting ophthalmic surgery: an experimental study”, M.A. Nasserri, P. Gschirr, D. Eberts, M. Eder, S. Nair, K. Kobuch, M. Maier, D. Zapp, C.P. Lohmann, and A. Knoll, In Proceeding of: 5th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (Biorob), August 2014
- “Haptic Interface for Robot-assisted Ophthalmic Surgery”, A. barthel, D. Trementera, M. Ali nasserri\*, D. Zapp, C. P. Lohmann, A. Knoll, M. Maier In Proceeding of: 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'15), August 2015
- “Robotic Retinal Surgery and Sub-Retinal Interventions”, M. Ali nasserri, D. Zapp, C. P. Lohmann, M. Maier In Proceeding of: 113. Kongress der Deutschen Ophthalmologischen Gesellschaft (DOG'15), October 2015