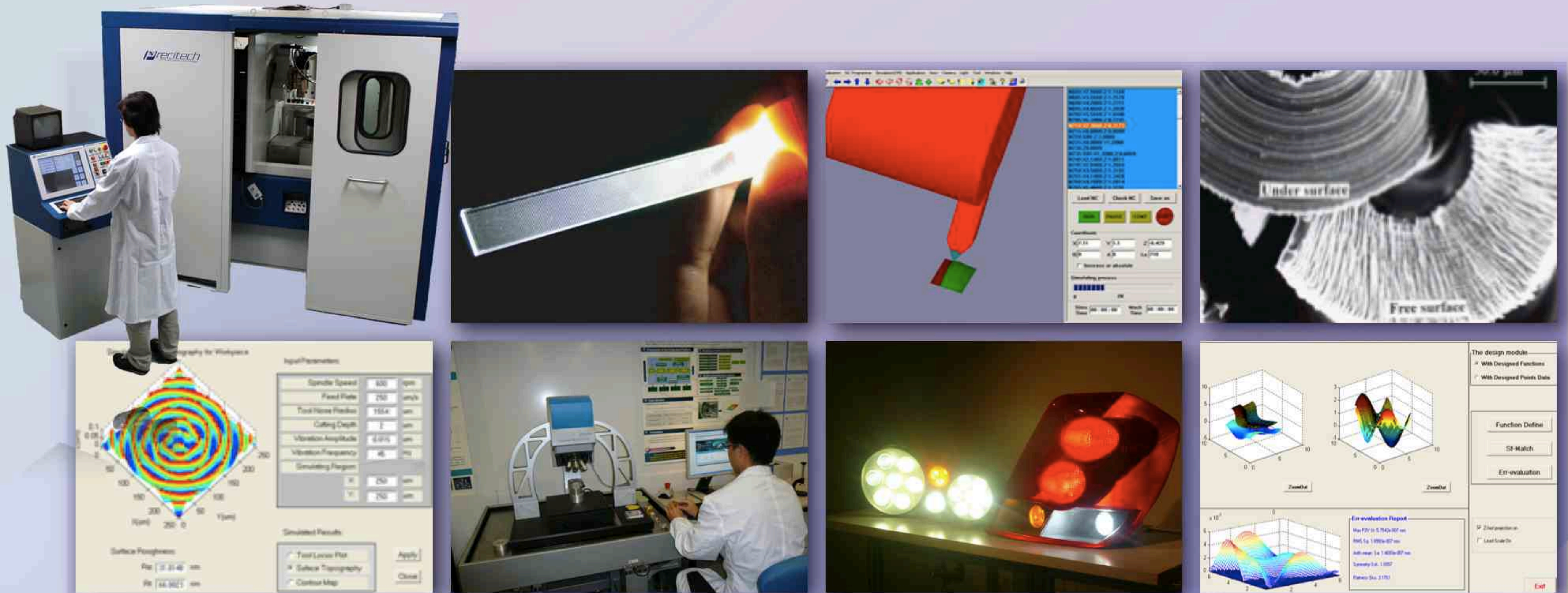


# Opportunities in Ultra-Precision Machining Research in a World-Class Laboratory



## Hong Kong PhD Fellowship Scheme 2012/13

Established by the Research Grants Council (RGC) of Hong Kong in 2009, the Hong Kong PhD Fellowship Scheme (HKPFS) aims at attracting the best and brightest students in the world to pursue their PhD studies and research in Hong Kong's institutions. In the year of 2011, 14 awardees of the Fellowship have accepted the offers from The Hong Kong Polytechnic University (PolyU).

### Eligibility

Candidates who are seeking admission as new full time PhD students at PolyU, irrespective of their country of origin, prior work experience, and ethnic background, are eligible to apply. If you are successful, you may pursue your research under supervision by one of more academic staff in the Partner State Key Laboratory of Ultra-precision Machining Technology.

### The Award

The Fellowship will provide a monthly stipend of HK\$20,000 (approx. US\$2,600), a conference and research-related travel allowance of HK\$10,000 (approx. US\$ 1,300) per year up to three years as well as a waiver of the PhD tuition fee.

## Partner State Key Laboratory of Ultra-precision Machining Technology

The main research areas in the Partner State Key Laboratory of Ultra-precision Machining Technology are as follows:

- ◆ Basic research in micro and nano-machining mechanics and technologies
- ◆ Development of advanced processes and technologies in ultra-precision machining
- ◆ Energy efficient lighting technology based on freeform optics
- ◆ Advanced optics in aeronautics, astronautics, illumination and imaging technologies
- ◆ Multi-functional and bionic structured surfaces
- ◆ Development of facilities, equipment and standards in ultra-precision machining and freeform surface metrology

RGC's Application Deadline: 1st December, 2011  
 PolyU's Application Deadline: 5th December, 2011



# Background of Partner State Key Laboratory of Ultra-precision Machining Technology

Ultra-precision machining technology (UPMT) based on Single-Point Diamond Turning (SPDT) and multi-axis freeform machining is one of the critical research areas in advanced manufacturing technology of advanced optical components and precision mechanical parts. The project team led by Professor Wing Bun Lee has conducted a great deal of research in ultra-precision machining technology since 1990 and established the Ultra-precision Machining Centre in 1995. The Centre is the first-of-its-kind in South East Asia which pioneers in the ultra-precision freeform machining of freeform surfaces and optical microstructures for photonics and optics industries. At present, the Centre is one of the most strategically important research centres for ultra-precision machining technologies and advanced optics manufacturing in South East Asia and Mainland China. With the recognition of the achievements, in 2009, the project team has been granted the approval from the Ministry of Science and Technology for the establishment of the Partner State Key Laboratory of Ultra-precision Machining Technology (SKL of UMT) in Hong Kong.

## Academic Staff Profile



### Professor Wing Bun LEE

Chair Professor and Head of the Partner State Key Laboratory of Ultra-precision Machining Technology

Prof. Wing Bun Lee is the President of the Asian Society of Precision Engineering and Nanotechnology (ASPEN). He is also the Editorial Board Member of the Journal of Engineering Manufacture (Proceedings of the Institution of Mechanical Engineers, UK), Chinese Journal of Mechanical Engineering, and Journal of Materials Processing Technology. Prof. Lee's research interests include manufacturing technology, ultra-precision machining and manufacturing strategy.

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### Dr. Chi Fai Cheung

Associate Professor and Associate Director of the Partner State Key Laboratory of Ultra-precision Machining Technology

Dr. Chi Fai Cheung's research interests in advanced manufacturing technology and precision engineering include ultra-precision machining, precision metrology, modelling and simulation of surface generation, ultra-precision freeform surface measurement, ultra-precision polishing, etc. Dr. Cheung has served as session chair and a member in various committees in a number of international conferences.

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### Dr. Suet To

Associate Professor and Associate Director of the Partner State Key Laboratory of Ultra-precision Machining Technology

Dr. Suet To is an active researcher who focuses on basic, industrial-related and applied research in Ultra-precision Machining; Advanced Optics Manufacturing; Precision Injection Moulding and Material Science. Dr. To has also been active in disseminating technology know-how of Ultra-precision Machining Technology among local and overseas industries through consultancy projects, partnerships and application research.

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More informations:

The Hong Kong PhD Fellowship Scheme: [www.rgc.edu.hk/hkphd](http://www.rgc.edu.hk/hkphd)

Phd Fellowship Scheme at PolyU: [www.polyu.edu.hk/ro/hkphd-fellowship](http://www.polyu.edu.hk/ro/hkphd-fellowship)

AOMC: <http://www.aomc.hk>

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