

Hua-Khee Chan

Design Engineer | Undercover Scientist | Aspiring Tech-entrepreneur

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Summary

I am an enthusiastic and outgoing engineer, who is passionate in solving problems that affect humanity in the area of sustainability and circular economy. I am aspired to be a successful tech-entrepreneur. I developed a strong background in materials technology and electronic systems engineering, through my doctorate training in extreme environment electronics and my degree in Power Electronic Engineering. I strongly believe that solving today's problem requires harmonising different field of study, my scientific and technical background enables me to fuse multi-disciplinary knowledge to generate solutions which many people deem impossible.

Experience

Electronics System Architect at TeamTao

August 2016 - Present

Co-developing an unconventional yet scientifically proved approach to solve the great challenges in ocean exploration. I am the core team member for the finalist and the only UK team in the Shell Ocean Discovery XPrize. Our work has been featured in BBC's Science and Environment.

Resident Scientist/Engineer

July 2016 - Present

Pushing the boundaries of extreme environment electronics in high-pressure condition, notably for subsea application. My typical day job involved design, fabricate and testing of electronic systems that are pressure passive. I am involved in shaping the operation of the centre and managing research partners.

Characterisation Lab Manager at Newcastle University

September 2014 - February 2017 (2 years 6 months)

I was running the "Emerging Material and Technologies" group multi-million pounds microelectronic characterisation lab. My typical duty involved in the maintenance, requisition and management of instrumentation, through the help of graduate students and research associates. I provide tailored-made semiconductor metrology services and customised training for using Keysight and Keithley system. I developed in-house systems for Hall Effect, Magnetoresistance, Quasi-Static CV, 1/f noise characterisation system and written custom control system and instrumentation firmware using labview.

Research Scientist fo Extreme Environment Electronics at Newcastle University

August 2014 - July 2016 (2 years)

Developed SiC analogue electronics for high temperature (350°C-500°C) and high radiation environment. I designed and manufactured variants of amplifier such as differential amplifier, 3 stages operational amplifier, and desktop demonstrator (both hardware and software) to exhibit the electronic performances. My work help the commercialisation of NU SiC research, that translated into a £8.5k EPSRC Impact Acceleration Grant, a PhD program, and generate interests for prospective commercial partners.

Lab demonstrator/Teaching assistant at Newcastle University

January 2011 - July 2013 (2 years 7 months)

I assisted 6 modules leader in demonstrating and guiding undergraduate students in practical laboratory sessions ranging from electronics design to semiconductor device physics. Through my teaching experience, I have trained and provide guidance to undergraduate and master students for their dissertation.

Society President at Malaysian Society in Newcastle University

May 2012 - May 2013 (1 year 1 month)

I have transformed and reengineered the society into a organised and professionally run student body with the help of 8 highly enthusiastic young Malaysian. My team and I have pioneered and inspired regional based collaborations between other Malaysian societies, involving students from 4 regional universities in North East, England. Our legacy North East Malaysian Night still live up until today (2017). Our society has been nominated as one of the top 5 best societies in Newcastle University for 2012/13 term.

Student Mentor

January 2007 - May 2007 (5 months)

- Obtained teaching experience by conducting tutorial classes for first year diploma students
- Enhanced my mentee learning experience and helped them to achieve better score.

Education

University of Newcastle-upon-Tyne

Doctor of Philosophy (PhD), Electrical and Electronics Engineering, 2010 - 2014

Activities and Societies: IEEE Student Branch, School of Electrical and Electronics Engineering
Annual Research Conference Organising Committee, ACTION 2012

University of Newcastle-upon-Tyne

BEng (Hons), Electrical & Electronic Engineering, 2008 - 2010

Activities and Societies: AIESEC, Malaysian Society

INTI International College Penang

Diploma, Electrical & Electronic Engineering, 2006 - 2008

Chung Ling High School

High School Certificate, 2001 - 2006

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