

## Dedication to research pays off

Persistence is the key to success. HKCC Lecturer Dr Yu Fu-wing is a good example of this. His dedication to research has won him the CPCE “Dean’s Award for Outstanding Research-Scholarly Performance” (2011-2012).

Dr Yu has been engaged in chiller system research for more than 10 years. While he was an undergraduate in Building Services Engineering (BSE) at PolyU, he made his first shot at it. “At that time I was dealing with a final year project on fresh airflow rate and I found it very interesting. I started to wonder if I have the capability to carry out regular research projects.”

Upon graduation from PolyU, Dr Yu became an Engineering Graduate in the Electrical and Mechanical Services Department (EMSD) of the Hong Kong SAR Government. “I got an offer to stay longer in the EMSD after the 2-year contract where I was able to live a stable life, but I chose not to. This was triggered by my Final Year Project supervisor who suggested I do a PhD,” recalled Dr Yu, who then completed his doctoral degree study at PolyU BSE in 2004.

After completing his doctoral degree, Dr Yu stayed at the BSE and contributed to various research projects on developing

optimum operation and control for various chiller systems until 2008. “I know that in the research field, success seldom comes easily in just one or two years. However, if you really like it, just keep going and you’ll have nothing to lose.”

Dr Yu said, “In 2008, I joined HKCC as a lecturer. While I chose to pursue a teaching profession, I never stop doing research because this is what I really like. Although doing research is never easy, sometimes even frustrating, it helps me to be more far-sighted and persistent.”

Now, more than 10 years on, his dedication brings ideas to fruition. Dr Yu became the only awardee of the CPCE Dean’s Award for Outstanding Research Scholarly Performance in 2011-2012. His main research project is about how to improve the energy performance of air-cooled chiller systems by mist pre-cooling. Dr Yu explained, “This will be beneficial to our society, because this new technique can save around 6% to 10% of the electricity consumption, compared to the existing chiller systems. More importantly, it can also be of widespread use in the future. The technique is especially useful in places facing shortage of water, like the Middle East.”



Definitely, Dr Yu’s research is beneficial to his teaching. “Improving chiller system performance by mist pre-cooling is not a common practice. But if you think out of the box, there are always other ways around a problem. I hope that by sharing with students my process of research, they will be inspired to think in a more creative way,” he added.

Another thing worth mentioning is that Dr Yu has published over 70 papers in international journals and conference proceedings. What’s more, he is now trying hard to apply his research results in real life and benefit the general public. While having a heavy commitment to teaching, he keeps on doing research. If you ask him “What are you going to do this summer?”, his answer will definitely be: “Doing research!”

## 研究成果獲表揚

持之以恆是成功的基石，這道理聽來雖像老生常談，然而，CPCE「院長特設研究及學術卓越表現獎 (2011-2012年度)」得獎者—香港專上學院(HKCC)講師余富榮博士，繫說他十年來對製冷系統的研究工作，親身演繹了堅持的重要。

余博士於理大屋宇設備工程學系(BSE)完成學士學位課程，早於求學期間便開始研究製冷系統。「當時我的畢業專題項目是研究新風系統的氣流量問題，過程中萌生了對研究的興趣。我不期然地想，我能定期進行研究活動嗎？」

自理大畢業後，余博士投身政府機電工程署任見習工程師。「這是一份很穩定的工作，我完成首兩年合約後再獲續聘，但我卻作了另一個選擇—聽從前畢業專題項目導師的建議，在理大BSE學系修讀博士學位課程。」

2004年取得博士學位後，余博士繼續留在BSE埋首不同的研究，包括鑽研不同製冷系統在操控技術方面的優化工作。「在研究領域裡，你不能盼望只花一至兩年時間便能獲得成果。如你真的享受研究，便須不斷向前，過程中沒所謂犧牲了什麼。」

他續說：「2008年，我加入了HKCC任職講師。在漸漸朝教學方向發展的同時，我卻沒有把研究停下來，因為這是我真正喜歡的工作。雖然研究工作一點也不容易，過程中亦難免遇上沮喪的時候，但研究卻讓我的目光變得更遠大，處事更堅持。」

隨著十年過去，余博士對研究的努力已獲得肯定—他成為了2011-2012年度CPCE「院長特設研究及學術卓越表現獎」的唯一得獎者。余博士的主要研究項目是利用霧預冷卻技術，改善風冷式冷水機系統的能源效益。

他說：「這技術可為社會帶來很多益處，與現時風冷式製冷系統比較，新技術可節省用電量約6%至10%，尤其對乾旱地區如中東而言，新技術將來的用途可能很廣泛。」

研究與教學相輔相成，余博士補充：「利用霧預冷卻技術改善風冷式冷水機的能源效益，並不是一貫常用的方法。可是，如你突破思維框框，便會發現解決問題其實有很多不同方法。透過與同學分享我的研究過程，可刺激他們更創意地思考。」

此外，余博士已在國際期刊和會議論文中，發表了逾70篇研究報告。他在投入教學工作之餘，繼續致力研究，並希望把研究成果付諸實行，造福社會。如你問及余博士在暑期的計劃時，他必定會回答：「進行研究活動！」