

In Memory of Professor Yung Lung Ma 馬雲龍教授

In Memory of  
Professor Yung  
Lung Ma  
馬雲龍教授

**馬雲龍教授追悼會答謝詞**

**September 15, 2011**

**Presented by Richard Perng-Yi Ma, Ph.D Electrical Engineering**

各位親朋好友,我敬愛的父親走完了他坎坷平凡又偉大的一生,享年 92 歲。今天,我們懷著萬分悲痛的心情送別故人。在此,我謹代表母親和我們全家,向今天參加父親追悼會的各位親朋好友表示誠摯的謝意!感謝大家和我們一起向我的父親作最後的告別。

父親的離世,帶給我們深深的哀痛。作為兒女,此時我無法用言語去概括父親的一生。因為他不僅是我們慈愛的爸爸,也是教育英才辛勤的耕耘的良師。父親早期留學日本,取得京都大學電機工程學位,之後奉獻一生認教於台灣大學電機工程學系,集台灣電機精英學子而教之,今日台灣電子企業界翹楚大多為其學生。父親好學不倦,在台大電機系任教期間,多次以交換學者身份至美國哈佛大學,哥倫比亞大學,普渡大學,加州大學柏克萊分校等優秀大學研究,專攻自動控制理論及應用,其成就為國內電機自動控制領域之泰斗,指導研究生無數,並主持台大自動控制實驗室,除發表學術論文於國際期刊外,並手著無數自動控制中文教科書。父親於台大退休後更認聘於台灣文化大學電機系教授,並接任電機系系主任。

父親是妻子最盡責的好丈夫,兒孫們最慈愛的好長輩。他不但撫養我們成長,而且秉承了良好的家風,言傳身教,培養我們成人,我們為有這樣一位爸爸而感到驕傲,同時為失去這樣一位爸爸而感到萬分悲痛。敬愛的父親永遠地走了,我們再也無法親耳聆聽他的諄諄教誨,再也無法親眼面對他的音容笑貌,只能在心中深深地緬懷。父親,您安息吧,放心的走吧,我們一定竭盡全力孝順健在的母親。

最後,僅代表母親和我們全家,再次向今天出席的各位親朋好友表示誠摯的謝意!謝謝你們!

## In Memory of Professor Yung Lung Ma 馬雲龍教授

Dear friends and family, my name is Angela, the oldest grandchild in the family. I want to say a few words in memory of my grandfather.

A famous writer once said "we make a living by what we get, we make a life by what we give ."

If that is true, then my grandfather made a great life. He was the most giving person I've ever known. And judging from the nodding heads I see in front of me , it seems that many of you agree.

My sister and I were talking about what we remember most about our grandfather, our "ye -ye". There are so many good memories . Reading books together. Playing the piano for him, he loved to hear us play. The time we went to Huntington Library. Asking him for advice on college. He was a man of practical wisdom.

Today, as I stand before his funeral, I am not miserable or sad. I am happy that I have him for a grandfather. I am happy that I am able to share my memories with you. As you know, he was a professor, and so many times he was teaching me valuable lessons and I didn't realize it.

I remember once having ice cream together, we each had our own bowls and spoons . I was taking big scoops at a time until I noticed that he was barely shaving the top of his ice cream with his spoon, eating very little at a time. I was so curious and asked him why he was eating his ice cream so slow. He told me that good things in life , such as ice cream, are to be savored and enjoyed slowly, and that is how we realize how good they are.

There was another time , we were playing with toys when I was small . I was working on a puzzle, and getting really frustrated and upset because I couldn't figure it out. My grandfather told me to calm down. He said when solving a problem, one must first be calm, and then the mind will work through the problems on its own. I don't know if you guys have ever tried that one, but I use it everyday and it works!

Perhaps my favorite memory of my grandfather was a story from when he stayed with us when my sister was born. My parents were probably at the hospital delivering my sister and I was so excited my sister was coming and could not understand why they didn't take me when she was arriving!

My grandfather stayed at home to watch me, and I couldn't stop crying. He tried to comfort me and coax and soothe me, but none of it was working. Finally, he pretended to catch something in his hand. He said, "Oh! I caught something! I wonder what it is!" I looked up from my crying, and saw that he was holding and hiding something in his hand. I asked him, "What is it Ye-Ye"? He said "I don't know what it is , it's in my hand. If I open my hand to show you, it will fly away!"

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By this time , I had stopped crying, and was so curious and had to find out what he had caught in his hand. "Is it a bird, Ye -ye?"

He said, "Maybe. But I can't show you, it will fly away." I reached for his hand with my small hands and tried to pry his fingers open. "Do you want to see what it is but it will escape, or do you want to keep it but not be able to see it?" I said I wanted to see it . "Are you sure?" I nodded my head. And like that, he opened his hand, and released this imaginary bird. He says, "oh no, it escaped, it flew upstairs! Should we go look for it?" I eagerly ran up the stairs and we must have spent the next few hours looking for some imaginary bird that never existed!

By the time I had figured out I had been tricked, I was impressed and humored by my grandpa's little stunt. That man was clever. But by then, I had forgotten all about crying, and all about what I was crying about . My grandfather loved me, and didn't want me to cry or be sad. And he loved us all, and I am sure that he would not want us to be sad today. I am sure that each one of us has our own individual memories of him, and are lucky to have shared those moments with him.

We should all be happy that we can honor him today and remember his life.

Ye-ye, thank you for being a part of our lives . We are all going to miss you.

## In Memory of Professor Yung Lung Ma 馬雲龍教授

From: Mae Ma

To:

Sent: Sunday, September 11, 2011 9:16 PM

Subject: Professor Yung Lung Ma, Department of EE

Hi,

I am Professor Yung Lung Ma's daughter in-law. Just like to pass this information. Our family will be appreciated if any of Professor Ma's students would like to go. 電機工程學系馬雲龍教授 追悼儀式 Professor Yung Lung Ma  
Department of Electrical Engineering Service: 10:00 AM September 15, 2011  
13625 41st Avenue  
Flushing, NY 11355-2433

From: Ski Tai

To: Mae

Sent: Tuesday, September 13, 2011 6:16 PM

Subject: Re: Professor Yung Lung Ma, Department of EE

Hi Mae,

Sorry about your loss. We have compiled an emailing list of all our EE Alumni and they are Bcc'd here.

EE Alumni,

A sad news that Professor Ma has passed away. Please see the service info below. Thx.

Ray Tai

Executive Director, NTUAA-GNY

From: ShuennJyi Wang

To: Mae Ma

Cc: Ski Tai

Sent: Wednesday, September 14, 2011 5:31 AM

Subject: Re: Professor Yung Lung Ma, Department of EE

Hi, Mrs. Ma,

I would like offer the greatest condolence to you and your family.

Professor Ma was the Department Chair when I was the student in the Department.

Unfortunately, I cannot attend the memorial service of Professor Ma.

I won't be back to NY area until 9/16 later evening.

Wish you and your family recover well.

Sherwin Wang

NTUEE77

## In Memory of Professor Yung Lung Ma 馬雲龍教授

From: Mae Ma

To: Ski Tai; ShuennJyi Wang <shuennjyi111@yahoo.com

Sent: Wednesday, September 21, 2011 1:36 AM

Subject: Re: Professor Yung Lung Ma, Department of EE

Dear EE Alumni,

We just came back to Los Angeles from NY. My father is now rest in peace.

While we are still in deepest sorrow we also feel so proud of our father who is respected by his students and school. We like to show our sincere appreciation

to Dr. 涂進益 (who is my father's Ph.D student) for flying out in one day from

Taiwan to attend the ceremony and "hand carried" 空運the 輓聯 from電機資訊學

院院長李琳山 and 電機工程學系系主任顏嗣鈞; to 李院長and 顏主任 for making

the 輓聯 possible in one day; to Mr. 廖世民 and Mrs. 陳重慶(維肇) for sparing the

time coming to the service; and to many of my father's students for sending

condolence from different locations. I have attached 馬雲龍教授追悼會答謝詞

from my husband and my daughter. Thank you all from my family.

Mr. Tai,

Please forward the attachment to other Alumni if possible. Thanks.

Richard and Mae-Hwa Ma

From: Ski Tai

To: Info NTUAA-GNY

Cc: Mae

Sent: Thu, Sep 22, 2011 1:27 am

Subject: Fw: Professor Yung Lung Ma, Department of EE

Dear EE Alumni of NTUAA\_GNY,

I'm forwarding an email from professor Ma's daughter-in-law. Thx.

Ray Tai

Executive Director, NTUAA-GNY

From: Edmond Ho

Date: Fri, Sep 23, 2011 at 6:45 AM

Subject: Fwd: Professor Yung Lung Ma, Department of EE

To: [Shing](#) Lin

From: Shing Lin

To: AJ Chen

Sent: Saturday, September 24, 2011 12:03 AM

Subject: Fwd: Professor Yung Lung Ma, Department of EE

Hi, AJ,

I got this message from Edmond Ho. Instead of sending condolence from each of us, it is more proper to designate a person to send it to Professor Ma's family.

I think 孫芳德 may be the best person to do it since his 電機機械 is the best in our class.

## In Memory of Professor Yung Lung Ma 馬雲龍教授

From: AJ Chen  
To: Classmates  
Subject: Professor Yung Lung Ma, Department of EE  
Date: Sat 24 Sep 2011 17:03:39 +0800  
Dear Classmates:

I guess that many of our classmates received the message about Prof. Ma from Edmond. I fully agree with S. F. that David Sun is most qualified classmate to represent our class to send a condolence letter to Prof. Ma's family. Besides David ranked the highest in the course of Electrical Machineries, some of our classmates, included myself, also copied the solutions of the course assignments by Prof. Ma. I hope that David can accept our request.  
Cheers,  
AJ Chen

From: Tselin Wang  
To: Classmates  
Sent: Saturday, September 24, 2011 8:56 AM  
Subject: RE: Professor Yung Lung Ma, Department of EE  
Yes, I hope David can accept our request too.  
It's sad to hear the news. My thoughts and prayers are with their family.  
Tse Lin Wang

Sent: Sun, Sep 25, 2011 12:44 am  
Subject: Re: Professor Yung Lung Ma, Department of EE

From: Paul Tien  
To: Classmates  
Sent: Sun, Sep 25, 2011 12:44 am  
Subject: Re: Professor Yung Lung Ma, Department of EE  
Dear All,  
My sincere condolence to Prof. Ma and his family and appreciate that David can convey our collective thoughts.  
Best Regards,  
Paul Tien

From: Tselin Wang  
Sent: Saturday, September 24, 2011 10:57 AM  
To: Classmates  
Subject: RE: Professor Yung Lung Ma, Department of EE  
Yes, I hope David can accept our request too.  
It's sad to hear the news. My thoughts and prayers are with their family.  
Tse Lin Wang

From: Wei Chen  
Sent: Saturday, September 24, 2011 9:30 AM

## In Memory of Professor Yung Lung Ma 馬雲龍教授

To: Classmates  
Subject: RE: Professor Yung Lung Ma, Department of EE  
Prof. Ma was an outstanding teacher who genuinely cared about his students.  
We will miss him.  
Wei

From: Shing Lin  
Sent: Thursday, October 06, 2011 1:16 PM  
To: Classmates  
Subject: 馬雲龍 與 電機機械  
Dear Classmates,  
I just wrote something about our professor Ma in our blog  
<http://ntuee64.blogspot.com/>  
If you are interested, please take a look.

From: Gus Chang  
Sent: Friday, October 07, 2011 1:21 PM  
To: Classmates  
Subject: Re: 馬雲龍 與 電機機械

Hi Shing ,  
How lucky we were that could solve electro-mechanical problems several rounds; the dc, and ac motors, the selectric and daisy wheel typewriters, and now is the turn with the semiconductor disks and the i-phone controllers.  
In each generation, we learned basic concepts and kept the best disciplinary results applying it to the new environments and conditions by our due diligence and creativity.  
I admire your achievements in the type writer cases and think we can apply it to solve my SCMOS problems. I need your skills to guide my engineers to do the work right in data processing, transportation, and controls. The only difference is that the tools and mediums are different. ....

From: Mo, Charles T (TASC)  
Sent: Thursday, October 06, 2011 4:35 PM  
To: Classmates  
Subject: RE: 馬雲龍 與 電機機械  
SF and all young fellow classmates,  
Thanks SF for the article. It renewed and enhanced at least my electric motor knowledge. Ma is a serious teacher and take his stuff very seriously, even though perhaps not superbly eloquent or effective. Admittedly maybe it is just a lack of devoted attention attributable to dancing parties and other exciting undergraduate follies etc prevented me from really fully understanding/appreciate his class materials.  
Yes the non-relativistic Lorentz force  $q*(E+vXB)$ , which is actually just the one Coulomb force  $q*E$ , indeed has tremendous tremendous engineering

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applications to all aspects of all of our daily lives from the generator/motor to robotics to nano electro-mechanical interfaces and beyond to lab and space plasmas (e.g. the earth and the sun) behaviors.

See you guys at 2012 reunion.

Best regards,

AhMo

## In Memory of Professor Yung Lung Ma 馬雲龍教授

### 馬雲龍 與 電機機械

Shing Lin, Thursday, October 6, 2011



馬雲龍 just passed away. It is sad to hear the news. However, we are all getting old. Inevitably our professors will all fade away eventually. It was about the time of 1961 that we took his course "Electric Machinery" in NTU. I never really did well in this class for some reason. Perhaps I hated the details of intricate winding method related to the designs of motors & generators. I think this course should come with a lab work to get us familiar with the actual hardware. I think hand on experience in this course is important. We had some outdated machines operated by a technician who looked like a 退伍軍人 with a poker face & we got to see the machine only once a year. It was really a joke. I had seen many types of motors in that four years of NTU life, but never really took them apart except the one in the old electric phonograph at home. That was a little motor with black metal housing. I was particularly fascinated to see the speed control mechanism. Get back to our class, it was the assignment problems at the end of each chapter that really gave me headaches. The problems usually were quite hard & required extensive use of slide rules. I still remember the endless weekend spending time on tinkering those problems. I usually worked with 蔡宗元 as he lived nearby (長安東路 & 吉林路) at that time. However, sometime we just couldn't figure out the way to solve the problems. Here was the final backup, wait for Apo finishing his assignment & got some inside track information from him.

## In Memory of Professor Yung Lung Ma 馬雲龍教授

As far as I can remember, professor Ma got above average quality in teaching with some interest in his students. I rated him (teaching quality) above 凌霄, 江德曜, 許振發, 楊進順 & 白光弘. I once walked with him along 新生南路 & found that he was actually pretty easy to talk to & would listen to my concern & opinion. Like old soldiers, eventually our professors will all fade away & the best way to memorize professor Ma perhaps is to talk about motor & generator, his main subjects in teaching. Electric Machine is generally considered a branch of EE, Power. But Power actually consists of generation, transmission, distribution & control. Some of us switched the field & ventured into non-EE disciplines. I think very few of us actually work in the field of Power later in our career. With the coming of digital technology & semiconductor applications, the opportunities were wide open to most of us in the decade of 1970. I happened to have the opportunity to work on motors, especially step motors, dc motors & ac synchronous motors in the printers. It sounds ancient now to talk about daisy wheel printer. But between 1973 & 1987, daisy wheel printers were widely used. It actually replaced IBM's Selectric Typewriters (IST) & the famous Teletype work station at that time. Teletype was an electronic controlled communication terminal & IST were the workhorse in corporate offices. I used IST to type my Ph.D dissertation with several metal balls (font). The problems of Teletype & IST are that they got too many mechanical movable parts. Teletype has more than 600 movable parts & IST more than 300. The new Daisy Wheel Printer (DWP) got only about 10 movable parts. That is the total difference, reliability matters. What are those movable parts? Alas, they are motors: carriage, print wheel, paper feed & ribbon advance etc. These motors work hard to the moment that requires a final step of the printing: Hammer. Hammer actually is a solenoid relay. From the paper, it seems quite complicate to make a simple printing. In fact, it is hard to figure out how Teletype with so many movable parts can accomplish the task in a reasonable time. Fortunately, when I worked on DWP, I had microprocessors at my command. We found a way to convert those intricate sequence of movements to some sequential instructions, ie computer software program. After debug & check out the logic, we put the software instructions onto memory of a microprocessor. We call it firmware instead of software as we can't change the instructions after burning them onto the chip. I remember we used two Intel 8041 chips, one controls carriage & paper feed motors & the other one controls print wheel & ribbon motors. Carriage & print wheel motors are DC motors with close loop servo. Paper feed & ribbon are step motors with open loop control. Nowadays two types of printers rule the market: Ink Jet Printer (JP) & Laser Printer (LP). Why? It is the print font. Only matrix type printers can handle the font effectively. JP & LP are matrix type, construct font electronically & print it with matrix dots. It should also be mentioned that the similar motors are used widely in the disk drives to position the read/write head.

Let's get back to our main subject, motors & generators. There are three major types of electric machines: DC, AC Synchronous & AC Induction. The step motors & VRM (Variable Reluctance Machine) are similar to AC motor with no winding in the rotor (rotor is a permanent magnet). Interestingly, transformer &

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motor are very close in concept. If the secondary winding is cut out from the transformer (mount in the air gap) with terminals shorted, it becomes a rotor of an induction motor. The energy transfer is from the primary winding to the motor instead of going to some device like bulb. The main difference is the energy transfer to mechanical energy instead of heat & light. From the historical view point, we always think of Michael Faraday & Joseph Henry when it comes to motor & generator for their work on the interaction of electricity & magnetism. Farad (capacitance) & Henry (inductance) are the units in honor of them. With the passing of 馬雲龍, We thank him for teaching us the engineering aspect of electric machinery & enhancing us the understanding behind the physical theory.