A Tributes for the Legend of

NIR Spectroscopy

Phil Williams

From NIR International Community

Tribute to Phil Williams

The passing of Phil Williams is the end of an era. He was a unique and unforgettable personality.

Phil was one of the original giants of NIR. Whilst Karl Norris was the undoubted "founding father" of the technology, Phil was the first to make it work on a large scale, creating a world-wide revolution in the grain industry, with the rapid and reliable measurement of protein and moisture.

I first met Phil in Melbourne at "NIR 84", which was organised by the then Cereal Chemistry Division of the Royal Australian Chemical Institute. That was where I presented my first NIR paper (with Ian Murray) and was able to meet many of the international leaders in the field. I did not have an instrument then, but that meeting changed my life, and I was hooked!

I met Phil again in 1987 at a Pacific Scientific (later Foss) meeting in Maryland, USA, and from then on we became firm friends. He always greeted me with "G'day mate" – the Australian greeting which he picked up during his time working at Wagga Wagga Agricultural Institute in the 1960s. Phil's achievements covered the world. Born in Somerset, England and raised in Wales, Phil worked in many countries, including Syria, but finally settled in his beloved Canada.

One of Phil's greatest achievements was the famous textbook he edited with Karl Norris in 1987, "Near-Infrared Technology in the Agricultural and Food Industries", a priceless resource for students and NIR practitioners around the world.

But Phil was not a remote academic figure. He loved life and he was larger than life. He had many close friends all over the globe. He also had an iron constitution. I recall at various Chambersburg conferences, he was the last to leave the evening party in the wee

small hours, but first up next morning to chair a session or deliver a paper at 8 AM – following a vigorous run!

Phil was a practical, down-to-earth operator as well as a brilliant scientist. I always recall his short and sharp comment about NIR, during one lengthy and deeply technical discussion:

"If it works, use it!"

Phil and his "love", Diane, stayed with us at Dunkeld on a couple of occasions, but their 2016 visit occurred when Diane was battling dementia. That was not easy - for him especially. I really empathised, as my father had suffered from it as well. However it did not stop them travelling around Australia to catch up with their many friends. The last time we saw Phil was just after the 2019 ICNIRS conference in Queensland. I was retired by then and did not attend the conference. However Phil, then 86, and another colleague, Peter Tillmann, stayed with us for a couple of days. Phil was in fine form and his brain was as sharp as ever.

It was only a month after that when my wife Helena first became ill. I will never forget the numerous times Phil rang me from Canada during the following very difficult months and years.

When I last spoke to Phil by phone, his memory was failing somewhat, but he said he was "doing fine". Not bad for a 92-year-old, but it was hard to imagine him as an "old man".

Above all, Phil Williams was a decent human being and a loyal friend, with a heart of gold.

He will be sorely missed by colleagues and friends all over the world, as well as by his family.

Rest in peace, old mate.

Peter Flinn

ICNIRS Chairman 2005-2009

With him we lost one of the pioneers of the NIR and vibration spectroscopy in the USA and Canada. Lord to his memory!!!

Sincerely,

Ramon Santana

Colgate Palmolive Company

Piscataway, NJ, USA

Dear Phil – privileged to have known and worked with you. You embodied the global community of NIR, not only in how you pioneered its widespread application in agriculture but also the sharing your science based common sense approach to understanding the technique and making it work. We collectively build on your legacy.

Regards

Steve Holroyd

New Zealand

Phil, My father in NIR research!

I am truly filled with sadness at Phil's passing. To me, he was like a father. Not only was he like a father in terms of research on NIR spectroscopy, he was also a fatherly figure in a personal sense. He was an incredibly kind person who taught me many many things and encouraged me in advancing my research in NIR spectroscopy. I have known Phil for more than 30 years, and he always greeted me with a warm smile and kind words. I believe he was someone who deeply loved people as well as NIR technology.

Phil was obviously an outstanding researcher, but he was also a remarkable educator and advocate. I studied NIR spectroscopy through the book he co-authored with Karl. Phil Williams, Karl Norris eds, "Near-Infrared Technology in the Agricultural and Food Industries" 1987, American Association of Cereal Chemists. This is truly an excellent book, covering every aspect of NIR technology, from theory, instrumentation, and band assignments to chemometrics and applications. It also references a vast number of papers. Phil wrote many papers himself. He was a researcher with a firm fundamental principle of properly documenting his work in papers and sharing it with everyone.

In recent years, I exchanged emails with Phil several times a year. In addition to NIR topics, we often talked about Canada. When I was young, I worked for two and a half years as a term researcher at the National Research Council of Canada in Ottawa, so I know a bit about Canada. I think Phil liked this aspect of me, and we often got deeply engaged in discussions about Canada.

With Karl gone and now Phil too, it feels very lonely. However, I believe it is important for us to properly record the work of the first generation of people in NIR spectroscopy. At

the same time, it is crucial to overcome differences in field and nationality to cooperate with each other and further develop this wonderful technology.

Yuki (Yukihiro Ozaki)

Japan

I first met Phil in Verona, Italy, at an international conference. At that time, I regarded him as someone of such stature that it felt daunting to approach him. Yet, each time we met, he kindly spoke to me with warmth and generosity, offering valuable insights that helped me advance my research. I still vividly remember seeing him cheerfully dancing at the end of a conference party — in a style that somehow reminded me of traditional Japanese dances — a memory that continues to make me smile.

Phil was more than a brilliant scientist; he was a pioneer who devoted his life to advancing the practical applications of near-infrared spectroscopy, always bridging science and real-world impact. His enthusiasm and vision inspired countless researchers around the world, myself included.

I will always be deeply grateful for his kindness, his wisdom, and his unwavering passion for science.

May he rest in peace.

Satoru Tsuchikawa

Nagoya University, Japan

Phil was always looking to serve others and welcome new scientists to NIR spectroscopy. He was a very special and warm person whom I will always remember.

Phil always wanted to learn more and at the 2014 IDRC we did a session for newcomers to the field. I was surprised to see Phil in the first row among the newcomers. He just wanted to learn more.

Rodolfo J. Romañach

University of Puerto Rico at Mayaguez

Puerto Rico

Dear friends and family of Phil Williams,

It is with a heavy heart that I pen these words in tribute to Phil Williams, a brilliant scientist, a visionary in NIR spectroscopy, and above all, an exceptional human being. Phil's influence on the scientific community and on my own life has been profound and enduring.

My first encounter with Phil was in 1995 at the ICNIR conference in Montreal. At that time, I had just taken on a new role with a NIR instrument manufacturer and was invited to speak on that significant international stage. The nerves and uncertainty that accompanied my first presentation to the international NIR community were eased by Phil's warm and humorous nature. He made me feel like part of a community defined by fairness and friendship.

Phil's visionary work at the Canadian Grain Commission (CGC) revolutionized grain analysis by replacing chemical tests with fast and environmentally friendly spectroscopic methods. Alongside Karl Norris, he established NIR spectroscopy as an industrially viable method in grain analysis, showing great courage and scientific foresight.

Throughout my career, I had the privilege of crossing paths with Phil on numerous occasions. He served as a consultant, teacher, mentor, and scientific specialist at many events. His achievements and successes in the practical application of NIR spectroscopy are revolutionary, but equally significant to me were his personality and professionalism. In various everyday situations, I often found myself asking, "What would Phil have done?"

Phil's last words, which he left as a greeting and advice, still resonate with me: "These times are challenging, and the world needs good scientists – but perhaps it needs even more good people."

Phil Williams was such a person – an inspiring scientist and an outstanding individual who had a significant personal impact on my life. I miss him dearly.

Warm regards,

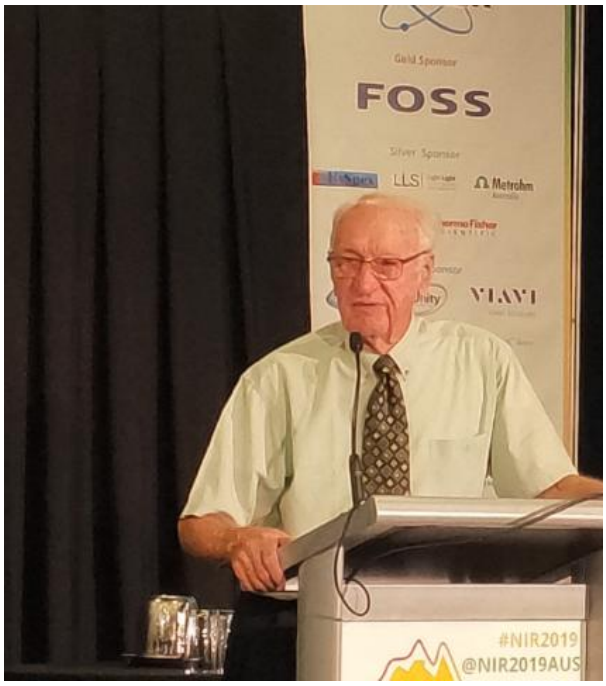
Joerg-Peter Conzen

Germany

When I was preparing my first submission to Journal of Near Infrared Spectroscopy, I asked Tony Davies, the founding Editor-in-Chief, to recommend some good articles to read in order to get a feel for style and content. He recommended I read all the articles from two authors: Karl Norris and Phil Williams. Like many of us, I learnt a lot about NIR spectroscopy from Phil, without having ever met him. It was a number of years before I finally met Phil, but instantly he made me feel like we had known each other forever – and he had read my first article. He showed interest in my area of research in forest products, and in particular the challenges I was facing. He had practical and useful suggestions, but more importantly he was encouraging. Each time we met he would want to know how things were progressing, and was always keen to discuss results. I know I will miss our meetings, and I am certain the NIR community will miss his wisdom and knowledge. Vale Dr Phil.

Roger Meder

Australia/New Zealand



I don't have any photos to share, but I do have memories of how he helped a young scientist early in his career to get a "leg-up" by offering him a chance to write a chapter in the revised version of his (and Karl Norris's) book on Agricultural and Industrial Applications of NIR Spectroscopy. But I ended up writing TWO chapters. And that really helped me jump-start my career and be better known to the broader NIR community and opened up a lot of doors. Would a written contribution be of any worth to what you are putting together? I would be honoured to be part of the tribute to a man who did such a nice thing for me when I was just a young NIR practitioner! He was such a inspiration and so open to sharing his expertise.

Paul Brimmer,

Australia

A Tribute to the Legendary Dr. Phil Williams: Remembering a Mentor, a Pioneer, and a Friend

We were deeply saddened to learn of the passing of Dr. Phil Williams on October 1, 2025. While the world remembers him as a research scientist and the pioneering figure who revolutionized the grain industry through the practical application of Near-Infrared (NIR) Spectroscopy, for those of us who had the privilege of knowing him, he was much more: a warm mentor and a beloved elder.

Our first encounter with Dr. Williams was through his remarkable textbook on NIR, which proved to be an indispensable guide in my own studies. This intellectual foundation led to the immense honor of inviting him to Thailand as the keynote speaker for our seminar, "The Quality Control of Agricultural Commodities and Industrial Product Standards by Non-destructive Evaluation Technique for Competitiveness in the World Trade," on July 4, 2007, at Maruay Garden Hotel, Bangkok. It was during this visit, and the subsequent workshop he led for our researchers and students at our NIR lab, KAPI, Kasetsart University, that we truly got to experience his profound and generous spirit.

Dr. Williams was a dedicated educator, wholeheartedly sharing his extensive experience and complex technical knowledge in a simple, easy-to-understand manner. Beyond his technical expertise, he offered valuable advice on life, speaking with a warmth that made him feel like a respected member of our own family. He was a keen observer of the world, fascinated by Thai culture—particularly the ubiquitous spirit houses—demonstrating an open heart and genuine willingness to learn and embrace new things.

Even after he returned home, our connection endured through e-mail. He continued to offer academic consultation with the utmost kindness, a generosity we remain profoundly grateful for.

Dr. Williams's legacy is immense, marked by prestigious accolades such as the Perten Prize and the replacement of the costly and non-environmentally friendly Kjeldahl test

with NIR in the Canadian grain industry. However, the most lasting tribute is the profound personal impact he had on those he mentored.

We will cherish his memory forever.

With love and respect,

Sumaporn Kasemsumran (AOR) & Warunee Thanapase (SOM)

Former Researchers, KAPI, Kasetsart University, Bangkok, Thailand

I have known Phil Williams By his name By one Book which my Advisor (Prof. Dr. Takayuki Kojima and his PhD student, Mr. Munehiro Tanaka, now Prof. Dr. Munehiro Tanaka) gave me while i was studying my PhD in Saga University. Japan. Of course, it is a book of near infrared spectroscopy and is one of reference of my thesis. My Advisor told me Phil Williams is a pioneer of NIR spectroscopy. These, i told my students and share Phil Williams Book of P. Williams, Near-infrared technology-Getting the best out of light, PDK Grain, Nanaimo, British Columbia, and Winnipeg, Manitoba, Canada (2007), which i have obtained when i was trained NIR spectroscopy course organized by **Mrs. Warunee Thanapase (Pee Som)**, former Director of Kasetsart Agricultural and Agro-Industrial Product Improvement Institute and a pioneer of NIR

Dear Pee Som and all.

As I went to attend Chambersburg conference, I got lecture from Dr. Karl Norris and news from Dr. Phil Williams and they allow to share it with all of us.
Only news from Dr. Phil is about his foot that was taken off and now he has new foot as you can see in the pictures.
He said he didn't feel pain. He can walk properly but slow.
He is still strong at this age (79). He help very much in the conference that I impress very much too.

Please consider who you would like to share this lecture and this news with.

Respectfully yours,

Pan, Pee Pan ; Saturday 8/4/2012 12:43 pm

Spectroscopy in Thailand. She introduced me in person to Phil Williams. Since then i and my students have learned his Book i obtained espectially chapter 5 and we queried to him when we had question and Phil Williams always replied with his heart of knowledge sharing. We have used his NIR spectroscopy expert consideration as a guideline of determination of model performance in our thesises, research manuscripts and papers. We have his honors to include his name in our 3 published research papers for we consulted him in methodology and result interpretation and review. There, i learn how Phil Williams is so delicate on review where we can learn his specific knowledge and in a small point where Phil Williams considers it is important which every reference has been checked whether they include in text and in the list and especially Phil Williams use turquoise letter. In 2012, Phil Williams has given me an opportunity to present our work on Studies on some

trading and quality control parameters of field and concentrated latex of Para rubber by diffuse reflectance near infrared spectroscopy in The International Diffuse Reflectance Conference (IDRC) 2012, where i have observed how Phil Williams is Beloved to NIR community and his Bravity and Dedication on sharing his contribution to the conference with his age of 79, By look photo i took while i was in a bus with Phil Williams and e-mail i wrote to Pee Som and NIR community friends when i returned.

In 2020, i and my students joined The Seventh Asian NIR Symposium (ANS2020) organized By Dr. Khunnithi Doungpueng in Rajamangala University of Technology Isan Khon Kaen Campus, Thailand during February 12-15, 2020. We have met Prof. Dr. Marena Manley and she introduced us Williams, P., Manley, M., & Antoniszyn, J. (2019). Near infrared technology: getting the best out of light. African Sun Media, and we have used this Book till now. i have met Phil Williams once again and Phil Williams told me Prof. Manley request him to revise and publish current version. i cannot confirm whether i met him in person or i read his introdction or i read his e-mail for i am 67 with my rememberance cannot compare with him. i would like to humbly code Phil Williams words of his Tribute for Karl Norris which I have considered Phil Williams love his expression and my poor English. We in NIR reserch center for agricultural product and food (www.nirsresearch.com) in King Mongkut's Institute of Technology Ladkrabang would like to humbly say 'But now he has left us, left us with a legacy that will persist. If I may paraphrase the last words of this dedication on those of Alfred, Lord Tennyson, 'It is better to have known him, and lost him, than never to have known him at all'. We will cherish our memories of him.'

GoodBye Phil Williams 'Dispeller of darkness By Near Infrared'.

Panmanas Sirisomboon

Thailand

I met Phill in Australia in 2019. My heart was so excited – I met one of my superstars, a living legend – Phil Williams! The name I only knew from the papers I admired. I think I ended up spending half of the conference with him. He was such a lovely man. I got his book with a little dedication (God, how I love books! And OMG with such encouraging words!) and it got to be a book which is regularly on my desk. It is one of the most clearly written books I have ever read, so practical, no-nonsense, clear guidance, that I recommend and give it to anyone who wants to do NIRS (You really got the best of light there, Phill!)

I am so sad he is gone. I have such beautiful memories of him as a person. How we spent one evening on the top of some building, in a rotating restaurant, enjoying the sparkling city lights, drinking Shiraz while he was telling me how they made 35k profit on some conference he organized, how he lost his foot, how he wanted to write this book so that it is idiot-proof - starting with even "when you enter the lab, turn on the light, turn on the computer and make a coffee". How he loved his wife so much. How he was worried about how she is doing while he is now away. How charming, clear-minded, no-nonsense, honest, practical, funny he was. How I complained that I talked too fast during my lecture, and how he just again in that clear, honest tone (with a bit of a smirk) said, "You spoke better than . . . " . It was so no-nonsense that I instantly believed him. And laughed. It was so easy being with him. And his not-at-all funny remarks during our whale watching tour, still make me laugh :D Yeah, we were not really lucky with those whales. . .

I am so sad you are gone, Phill. Whenever I open your book and read the words you wrote I just feel your spirit here. I can literally hear the words as you are saying them, your voice, your tone. You made a change in the world. In my world, too.

Thank you for being a superstar before I met you, and being even more of a superstar after.

You had a light in you. You really got the best of light. You were the light in the world.

Thank you!

***Jelena Muncan,** USA*

Dr. Philip Carslake Williams: A man of Light et Granum

I arrived at the IDRC campus in Chambersburg in the summer of 2012.

I first met Gary and Emil, and then Dave. I still remember them saying to me, "Hey, you're from Syria. You have to meet Phil". I did not know why they were saying that until I met the man himself. He started introducing himself politely and with unforgettable smile, when I introduced myself, He greeted me in pleasant Arabic Syrian Accent which was a warm surprise.

From that moment on, I listened to his advice and stories about NIR; the world and Syria. The man was a walking source of knowledge and a force of nature. He invited me and the other members of IDRC attendants to an American breakfast at a nearby diner. I will never forget how he listened to each one of us and answered all our questions so warmly.

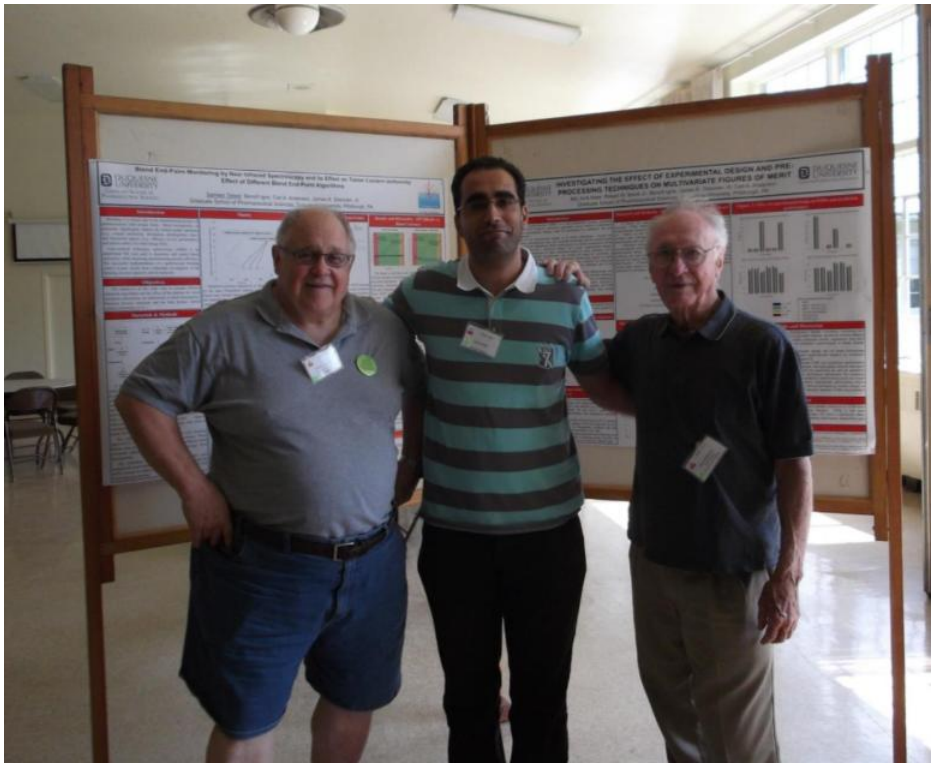
In 2014, 2015 and 2016, I exchanged many emails and phone calls with him, and he was as warm, empathic and precise as ever. He once sent me a note with a few suggestions or observations in case I had the chance to continue at NIR as a short-term postdoc or sabbatical fellow.

I shared a few photos with him and the other members of the IDRC.

Also, I left a few comments on the photos, which meant a lot to me, especially those taken at the IDRC and at his ceremony at the Canadian Agriculture Hall of Fame in 2021, where he shared a few photos of Syria. Unfortunately, I was unable to reach out to him to ask about them, but they are still worth mentioning in this tribute to him, because he meant so much to me and to many others around the world. I would like to comment on those photos as a gesture to remember his efforts and the contributions he made to the people of my homeland and other countries.

Iyas Aldib

Syria/Austria


INVESTIGATING THE EFFECT OF EXPERIMENTAL DESIGN AND PRE-PROCESSING TECHNIQUES ON MULTIVARIATE FIGURES OF MERIT

It was with deep sadness that I learned of the loss of another NIRS pioneer.

Phil Williams meant a lot to me and my colleagues, students. His warm and friendly attitude, his genuine character made him a very approachable person. I had the pleasure to meet him several times at conferences and exchange emails in some issues. He was always helpful and open to assist, which obviously means a lot to a young researcher and gives a perfect example how we must develop our own personality. He shared his experiences openly in personal discussions and in his articles and books, drawing our attention on possible mistakes and challenges.

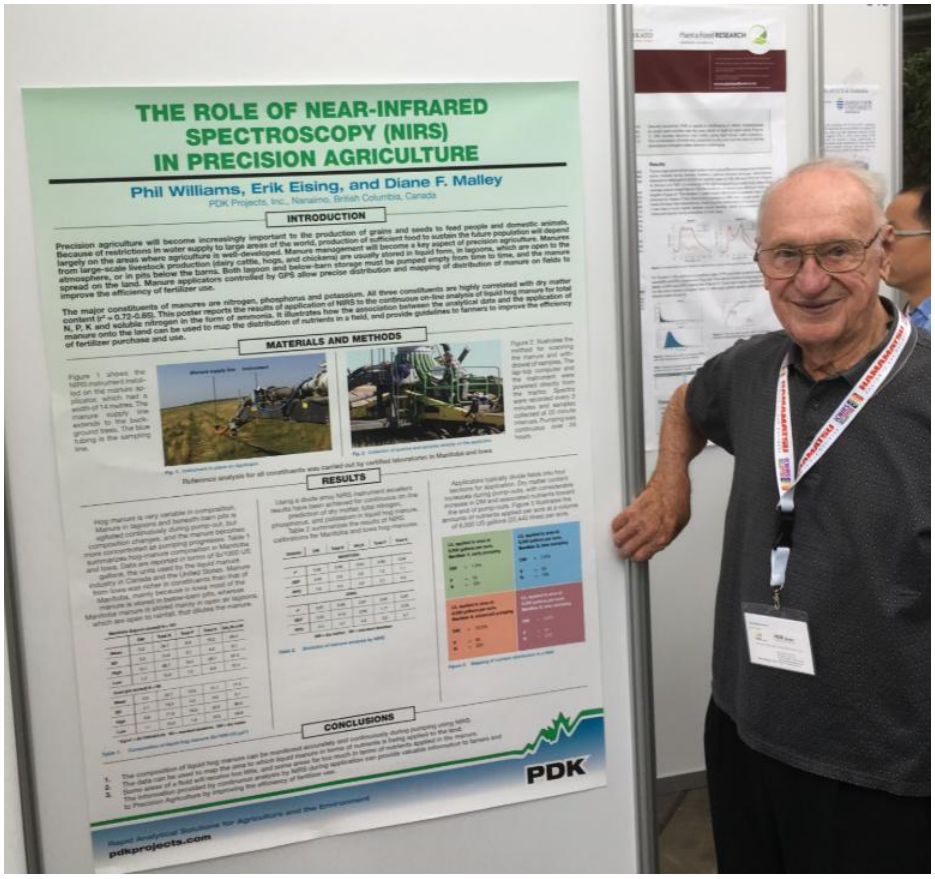
George Bazar

Hungary

I first met Phil in Umea, 2009 and have lucky enough to have known him and have a drink or 3 with him.

Nick Glover

Australia



Over the past 50 years, I highly valued my friendship with Dr Phil Williams. I was fortunate to meet with him in Winnipeg, and at international and Australian conferences, including one held in Fremantle, Western Australia in 2006, at which he was an invited speaker but also conducted an NIRS workshop. His expertise in NIRS proved of immense value in assisting us to develop calibrations for use in our quality testing of wheat and barley at the Western Australian Department of Agriculture and Food.

Dr Graham Crosbie,

Crosbie Grain Quality Consulting

(formerly Manager, Grain Foods Research, Dept of Agriculture and Food, WA, Australia)

Here are my cherished memories of Dr. Phil Williams. At this moment, repeating his importance to NIRS and agriculture would feel redundant. If you work in these fields, knowing his contributions is simply a duty.

And that brings me to my first memory of him.

My journey with IR spectroscopy began in 2012. Everything was completely new to me. By the end of 2013, the lab where I worked kept two reference books on the shelf: Handbook of Near-Infrared Analysis and Near-Infrared Spectroscopy in Food Science and Technology. Yes, actual books in the modern era! I loved the chapters written by Dr. Williams. His writing felt friendly, clear, and easy to follow. I always thought that reading his work felt like having him sitting right there, talking to me.

Remember, at that time I was just starting out, and I didn't have the habit of Googling what people looked like, only their papers and books.

In 2015, I was given the opportunity to attend the 17th International Conference on Near Infrared Spectroscopy, NIR 2015, in Brazil. I was thrilled, not only because it was my first time attending, but also because I would finally meet others around the world working in the same field.

Here comes the interesting part. On the first day, as is tradition, there was a welcome reception with dinner for all attendees. Earlier that day, I had met several people, including Estefanía Pérez, who was doing her postdoc in Scotland. When dinner time came, Estefanía and I were looking for a place to sit. The only open seats were at a table slightly set apart from the others, where a very friendly couple sat, yet no one else seemed to approach or sit with them. We asked if we could join them, and they kindly said yes. Imagine my surprise the next morning when the conference's first keynote speaker was Dr. Williams, and he turned out to be the kind gentleman from the night before. The woman beside him was his wife. I had eaten dinner next to my idol and never realized it, simply because I had never Googled his photo. That memory has stayed with me ever since,

especially because when he gave his presentation, he spoke with the same warm, relaxed, and friendly style that I loved in his books and papers.

My last interaction with him was in 2019 at the 19th Biennial Meeting of the International Council for NIR Spectroscopy (ICNIRS) in Australia. At that time, I was doing my PhD in Biochemistry at Mississippi State University with Dr. Carrie Vance. Dr. Marena Manley was promoting Near Infrared Technology: Getting the Best Out of Light, Dr. Williams's latest book, and mentioned she only had a few copies for sale at the conference. Of course, I immediately reserved one.

As soon as I had it in my hands, my mission became clear: get his signature and a photo to remember the moment. I waited patiently until, during a conference break, I found him alone, enjoying a snack. I asked Carrie to please take the photo. What happened next lives forever in an Instagram post for posterity:

When you meet your idol, you buy his latest book and ask for his signature. You hand him a pen, and he tests it first on a napkin and says: "I have to test it first because I'm a scientist." Yes, Dr. Williams—you are. And one of the best.

I keep that signed book on my desk as a precious possession.

Dr. Williams, I will always remember you, your kindness, your gentle way of writing, and the warmth with which you treated people.

Mariana Santos-Rivera

Colombia

Marcia

I hope ~~that~~ you enjoy,
as well as learn!

Phil convened the 2nd and the 7th IDRC. A summary from the IDRC 25th anniversary commemorative book from his conferences are below, and his contributions to the book is attached to this email. Phil recounts the organization and experiences of the first and second IDRC conferences, highlighting their significance and attendee engagement.

The first IDRC conference, initially called the Diffuse Reflectance Spectroscopy Conference, prompted discussions about a subsequent event, leading to Phil Williams volunteering to organize the second conference. The inaugural conference featured 64 attendees and a included memorable hike along the PYOT course, marking a unique experience for participants.

Following the conference, Williams surveyed attendees on topics discussed, receiving a 72% response rate, which informed the planning of future sessions. The first conference comprised nine sessions held over several days, covering diverse topics such as Physics, Chemistry, Instrumentation, and Data Processing.

For the seventh conference, Phil recounted his experiences and preparations for the Seventh IDRC Conference, highlighting key events, participants, and organizational insights. The IDRC conferences had grown significantly, over attracting 150 attendees by IDRC VI, with sports events and a banquet becoming integral parts of the schedule.

Phil Williams was elected as convener for IDRC VII, expressing surprise and gratitude, especially since he had previously organized the 1995 International NIRS Congress. Kathy Lehman served as Conference Coordinator, contributing positively to the planning process. Mayor Robert Morris's welcoming address included a historical anecdote about the impact

Phil left his mark on IDRC by establishing the important tradition of sharing fellowship following the daily symposia in Laird Hall. My first memory of Phil was the sessions that were held at the The Norland Grille, affectionately called The Norland Institute of NIR! This was followed by more fellowship at the now famous Phil's Place in Laird Hall.

Phil was an important contributor to NIR in many ways, but most impressive was his unique skills he possessed as a teacher. His enthusiasm was infectious. He was one of many personalities that drew me to NIR. Finally, he welcomed and urged one and all to pick up the NIR mantle and carry it forward. I accepted the challenge. With his (and many of you as well) blessing and support, I was able to chair and convene the 13th IDRC.

The moments that I treasure the most was hanging out and working with Phil daily to prepare for the evenings at Phil's place in Laird Hall. Getting the ice from the cafeteria downstairs, pulling and pushing the ice containers to Laird Hall. Riding with him to the store, stopping for some refreshments, chewing the fat. All this and me having no idea that he was doing this at the later conferences he attended as an amputee, never giving any signs of this. He was a giant in many ways for sure. But for me, this knowledge of him elevated him to a superman, a great and an admirable human being. As he would say in that mild, soft spoken voice, "Carry on and don't let any obstacles stand in your way." He not only changed NIR forever, he changed lives!

Gary Ritchie

CNIRS Newsletter Editor, USA


IDRC
Phil's Place


Norland
Grille

I am very sad to hear that Dr. Phil Williams passed away on October 1st, 2025.

That is the first that I met him at the Chambersburg Meeting, USA in 1988. I felt he was very friendly.

He was an outstanding researcher in the research field of near-infrared (NIR) spectroscopy, one of its first generation of people such as K. Norris (USA), F. McClure (USA), M. Iwamoto (Japan), K. Kaffka (Hungary), and A. M.C. Davies (UK).

He was the first researcher in the world to introduced NIR spectroscopy to analyze wheat protein content as an official testing method.

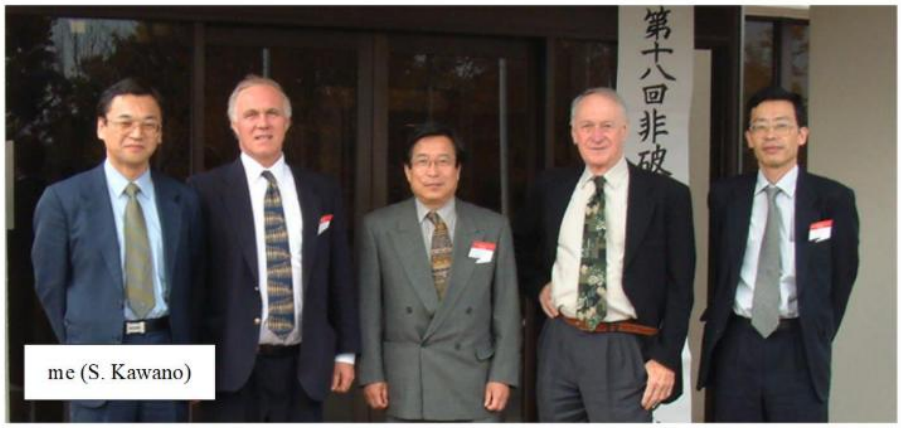
He was invited many times to NIR Tsukuba Meeting in Japan, say, as a keynote speaker in 1996 and in 2002. In 2006, he was selected as an awardee of "Karl Norris Award" organized by the JCNIRS (Japan Council of NIR Spectroscopy) and invited to the 22 NIR Forum held in Tsukuba, Japan. He made an award presentation on "Large-scale testing of wheat for protein content by Near-Infrared Spectroscopy: networking, monitoring and data-handling."

We learned NIR spectroscopy very much from his presentation.

May Dr. Phil Williams rest in peace.

Sumio Kawano

Former chairman of JCNIRS, Japan



me (S. Kawano)

(November 2002)

It is with deep sorrow that we learned of the passing of Dr. Phil Williams, a renowned near-infrared spectroscopy expert and a dear friend to the Chinese scientific community. Many of us in China first had the privilege of meeting Dr. Williams in person during the 2nd National Near-Infrared Spectroscopy Conference, held in Changsha, Hunan, from November 19–22, 2008. His plenary lecture, titled "Near-infrared Spectroscopy: the past, the present, and the future," left a profound impression on all attendees. With remarkable clarity, he traced the historical development of NIR technology, offering insightful commentary on the evolution of calibration models across eighteen distinct stages. He eloquently highlighted the unique advantages of NIR spectroscopy—its low operational cost, reliability, and rapid analysis speed.

Our connection with Dr. Williams was renewed over a decade later at the 19th International Conference on Near-Infrared Spectroscopy (NIR2019) in Gold Coast, Australia. During that conference, he once again demonstrated his characteristic warmth and generosity, engaging in extensive and profound exchanges with Chinese scholars. He kindly took pictures with many of us, creating cherished mementos of his friendly and supportive spirit.

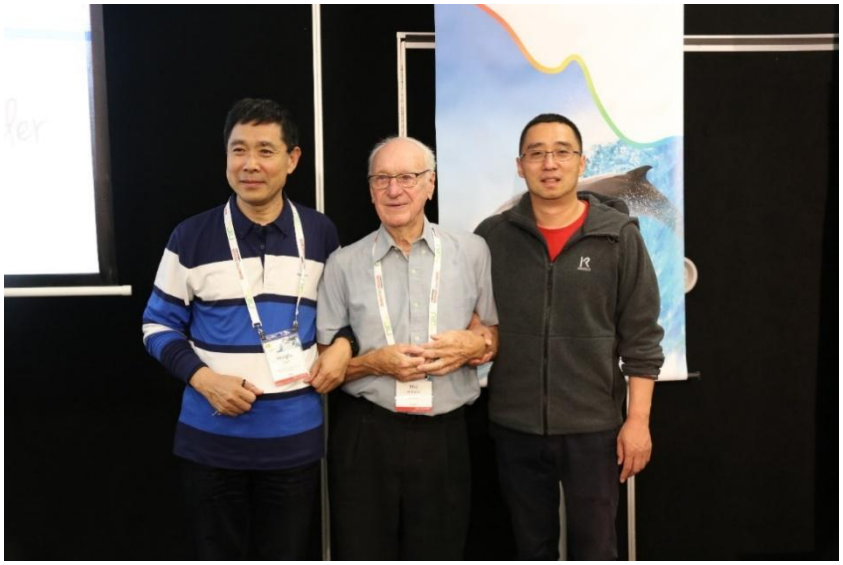
Dr. Phil Williams with Chinese near-infrared spectroscopy scholars in Gold Coast, Australia, 2019 (Left: Prof. Hongfu Yuan, President of the China Council of Near Infrared Spectroscopy; Right: Prof. Xiaoli Chu, Secretary-General and Vice President of the China Council of Near Infrared Spectroscopy)

Though Dr. Phil Williams is no longer with us, his voice, his smile, and his unwavering encouragement remain clear in our hearts. His profound contributions to near-infrared spectroscopy and his enduring friendship with the Chinese scientific community will continue to inspire us on our path forward.

He will be deeply missed and fondly remembered.

Xiaoli Chu

China



After gaining first class honours in 1954, Phil Williams submitted his PhD thesis in 1958 with the title "Studies on the phosphorus compounds of oats, with particular reference to phytic acid" at Aberystwyth University. Phil did not attend his graduation ceremony because he was on a ship on his way to take up a research position as a cereal chemist at the Wagga Wagga Research Institute (WWARI) in NSW Australia. Phil worked closely with the plant breeders and bakers at WWARI on factors affecting the milling and baking quality of Australian wheat. He developed the biuret method to determine the protein in grains and this was used until the 1970's for research and commercial analyses. In 1964 Phil went to Canada for a sabbatical year that only ended on 1 October 2025.

My first research position was at the WWARI. When I started in 1970 Phil was regularly remembered every time grain protein analysis was mentioned. His name came up more frequently when NIR was discussed. This was in part because of the enormous benefits of using NIR spectroscopy that offered rapid, user-friendly determinations and produced accurate data and partly because we were confident in Phil's determination to get it right.

Phil was always generous with his time and knowledge. He valued every opportunity to interact with people. When he had reason to be in Australia Phil went out of his way to visit staff of the WWARI and rekindle friendships with research, technical, support and field staff. A most amicable person in every respect.

In 2003 Phil welcomed Lyn and me to his home in Winnipeg, shortly before he and Dianne moved to Nanaimo. It was in Winnipeg that Phil showed me a copy of his PhD thesis. As one who became intrigued by phytate in grains in 1970 (and still interested in it today) it was an honour to actually hold the thesis in my hand.

NIR spectroscopy has dominated my working life. The impetus for my continued attention to NIR-based technology is the sincere, family-like feeling across the NIR community. Instrument manufacturers, instrument distributers, researchers, teachers and

those applying the technology all have a common goal to make the world a better place. By working happily together we are more productive.

Phil, as a pioneer and giant of NIR science, was a leader in developing and applying NIR technology but, progress was enhanced because Phil was a mentor to many through his lecturing, teaching, training and face-to-face discussions; many late into the night. For this we owe him dearly and is how I will remember him.

I have many lasting memories of Phil. The most recent for me was at NIR-2019 where Phil sat with me and we had a one-on-one discussion on several NIR-related topics. It was an honour to have this time with Phil. He was a true pioneer, a mentor and an absolute gentleman whose contributions have improved the lives of humans and the environment across the globe.

Graeme Batten

Australia

In 1994, I met Phil when he visited the Seale-Hayne Campus of the University of Plymouth (UK), where I was completing my PhD on wheat hardness using NIR spectroscopy - Phil was the first person to have explored this very early in his own career. He suggested that I attend the International Diffuse Reflectance Conference in Chambersburg, which he was hosting that year (and which my supervisor gladly sponsored). He also invited me to visit his laboratory at the Canadian Grain Commission, in Winnipeg after the conference – particularly fitting since my project was grain-based. It turned into a week of learning, during which he even took me out in his yellow van, the canoe strapped on top, for a memorable morning of rowing on Lake Winnipeg.

From then on, our paths crossed at many subsequent conferences. Phil visited Stellenbosch twice, presenting his 'NIR Technology – Getting the Best out of Light' course in our Department of Food Science. I have such fond memories of those times. When I took him out to dinner, the waiter would arrive and, without hesitation, Phil would simply say, "Windhoek" — his favourite (Namibian) beer whenever he visited.

I was fortunate not only to learn from Phil about NIR spectroscopy and calibration development, but also about cereal science. One of the highlights for me was his willingness to be involved in an MSc project on 'test weight'. The results were impactful and were eventually used to change the equipment used in our wheat grading regulations in South Africa.

But perhaps most meaningful to me was when Phil trusted me to help bring his course notes into book form. In 2018, while working through his course notes again, I was struck by how much of Phil's deep knowledge and many years of experience in using NIR

spectroscopy were captured in those pages. It immediately felt important to make his work more widely available in a formal way.

In 2018 my husband, Gerrit, and I travelled to Nanaimo to meet Phil and Diane, and I received his blessing to publish the course notes as a book – provided I could secure funding, which I later did. Speaking to Phil regularly throughout that process was another tremendous learning experience. When I give the book to my students, they always tell me how much they enjoy reading it – it even becomes their bedtime reading! To this day, when I read sections of his book, it is so authentically him that I can hear his voice.

It was also very special that Gerrit, had the opportunity to meet Phil and Diane. He even picked up one of Phil's habits – at the end of dinner, Phil would do a little drum-roll on the table using both index fingers, one from each hand, signalling that it was time to leave the table. Now, when Gerrit does it, I cannot help but think of Phil and those moments we shared over the years.

I will always remember him fondly.

Marena Manley

Stellenbosch, South Africa

Winnepeg, Canada, 1994

NIR2019,

Gold Coast, Australia

I first met Phil in November 2000. My professor, Sumio Kawano, told me I was a very lucky person. At that moment, I didn't fully realize it—but over the years, as I got to know Phil more and more, I understood how true that was.

For years, Phil has been a mentor to me. He taught me how to do NIR, how to be a happy person, how to enjoy a drink, and even how to be an organizer. My success today would not have been possible without Phil Williams.

One day, Phil told me, "You know nothing because you don't drink." Later, when I had mastered the art of drinking, he sent me a detailed manual on how to organize a drinking session at the Chambersburg (IDRC) meeting—including everything from which kind of beer to buy, how many cartons, where to get them, which glasses to use, and even where to find ice to keep the beer cold. That was Phil.

I can still hear Phil calling me "Mui-chan" (meaning little Mui) when he taught me about repeatability and reproducibility in NIR prediction, or when he explained how to calculate the number of wine bottles needed for the conference banquet in Bangkok.

Phil stood by me on the day I was lost in my career and guided me back to where I am today. I will never forget what he said one day on the road in Tokyo:
"Mui-chan, I never get sad. When something good happens, like now, I move to the excited stage. But if something bad happens, I just move back to the ground stage—so never sad."
This has been my life motto ever since.

I will remember you until the day we meet again, my Canadian Father.

With all my love—and of course, hugs,

Mui Saranwong

Thailand

Our picture taken in 2007