

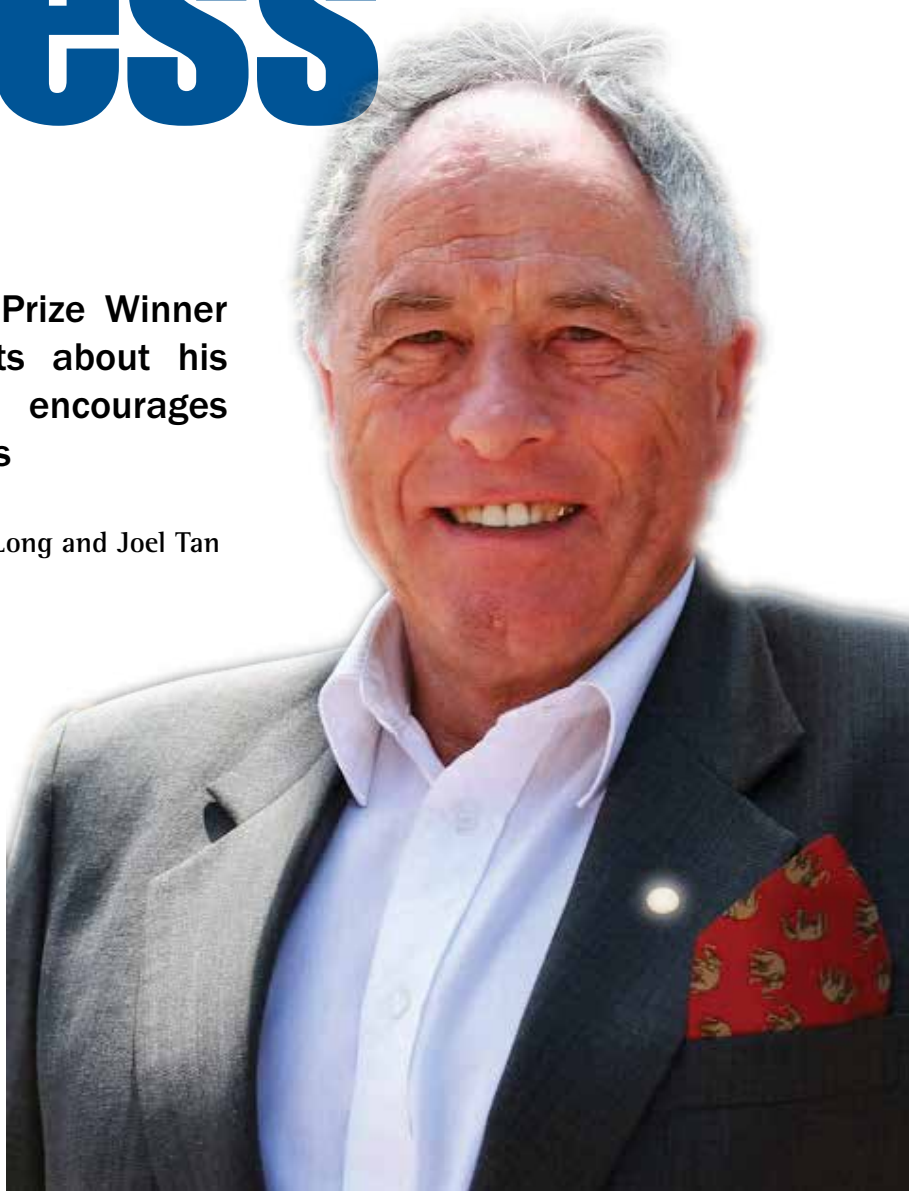
# “Scientist with a Passion for Success”

Interview with  
Professor Kurt Wuthrich

# Scientist with a Passion for Success

**Prof Kurt Wuthrich, Nobel Prize Winner in Chemistry (2002), chats about his research into NMR, and encourages students to aim for the stars**

by Darrel Long and Joel Tan





Prof Wüthrich speaking to Panorama's student writers, Joel Tan (left) and Darrel Long, about his work.

*Bringing together individuals of diverse cultures united by a common passion in science and research, the 6th International Science Youth Forum (ISYF) 2014 provided participants with a rare and unique experience of close interactions with the world's renowned scientists and researchers. The Forum was held from 19 to 23 January 2014 in Singapore and was jointly organized by Hwa Chong Institution (HCI) and the Institute of Advanced Studies, Nanyang Technological University.*

*The 6th ISYF saw the largest number of top scientists – 11 Nobel Laureates and Fields Medalists, and 90 top science students from more than 28 schools in 14 different countries across 4 continents.*

*HCI students, Darrel Long and Joel Tan, were privileged to interview one of the Nobel Laureates, Prof Kurt Wüthrich, and they share their experience.*

Prof Kurt Wüthrich is, unquestionably, a scientist at heart. We had hardly settled down to interview him, notebooks at the ready, when he began shooting us questions of his own: What level of education are you at? What are you studying? What kind of sports do you play?

This affable curiosity certainly befits an academic of his standing. He currently holds distinguished professorial positions at

both the Swiss Federal Institute of Technology (ETH) in Zürich and the Scripps Research Institute (TSRI) in California. He is perhaps best known for his contributions to the field of Nuclear Magnetic Resonance (NMR) spectroscopy – a method of studying molecules – for which he won the 2002 Nobel Prize for Chemistry.

To call his work a mere “contribution” might be an understatement. NMR spectroscopy – named for its reliance on magnetic properties of nuclei – was a fairly nascent area of research when Prof Wüthrich first encountered it in 1957. Then a student at the University of Bern, he completed his doctoral thesis by investigating Electron Paramagnetic Resonance (EPR) spectroscopy, which though similar to NMR, was nevertheless a rather limited field at the time.

Today, thanks to Prof Wüthrich, NMR spectroscopy has carved out a niche for itself in scientific practice. Currently one of the most advanced tools available for studying molecules in solution, it not only reveals the structure of proteins, but often their function in a living cell as well. Beyond giving us deeper insights into the building blocks of life, real-world applications of NMR spectroscopy range from chemical analysis to pharmaceutical development, and perhaps even the early diagnosis of breast and prostate cancers.

For all the discoveries his work has brought, however, Dr. Wüthrich views his achievements with surprising equanimity. Ask him about his discoveries in NMR, for example, and he will dismiss them as mere “coincidence”.

“The instruments were available,” he said nonchalantly, referring to a high-resolution NMR spectrometer – one of the first of its kind at the time – belonging to the Bell Laboratories in Murray Hill, New Jersey. Upon joining Bell Labs as a biophysicist in 1967, he was given responsibility for the maintenance of the instrument, but was otherwise free to use it for his own research, much to his delight.

Interestingly, Prof Wüthrich’s other interests are comparatively down-to-earth. Despite early inclinations toward a scientific profession, he had long thought his true calling to be in sports. During his time at Bern, he would spend part of each winter as a ski instructor at Swiss mountain resorts; and later take up part-time teaching jobs in high schools, his specializations ranging from chemistry to gymnastics. To date, skiing remains an annual tradition for him.

For the professor, sport is more than a diversion. Sometimes, it even informed his more scholarly pursuits. While at Bell Labs, his background in sports gave him the “wild idea” of using NMR spectroscopy to study his own blood sample. The compounds found in blood proved particularly suitable for study using NMR and this paved the way for future discoveries which would reverberate through the field.


Whether out of a love for sport and physical activity, or driven by an intense yen for knowledge, Prof Wüthrich is not one to remain sessile. Since 1974, he has been to foreign locales the world over, with visiting faculty appointments to the University of California, Berkeley, the Chinese University of Hong Kong and Yonsei University, among others. These travels, as Prof Wüthrich puts it, are a “give-and-take” process, and the interaction is never strictly one-way: he is just as happy sharing about his own culture and scientific experiences as he is learning about someone else’s. The local students and professors he befriends also often pay visits to ETH Zurich where he is based.

His zeal for the unfamiliar may have begun in early adulthood, when he gained exposure to the French language, literature and theatre. This knowledge proves useful to date: nowadays, his professional visits often include France as a destination. While there, however, he is not above having a little “fun”, and will on occasion treat himself – naturally – to French cuisine and wine.

This easygoing exterior, in fact, belies a formidable spirit. As with any kind of seminal work, his breakthroughs have met their fair share of initial resistance. He persevered for several more years, demonstrating that his results could be reproduced and allowing other scientists to independently confirm his findings before managing to silence his critics. For this reason, he says, the most important qualities a scientist should have are “self-confidence”

and “a strong character” to weather any criticism.

During his visit to Singapore this year, Prof Wüthrich took part in a Panel Discussion at the Nanyang Technological University and had a dialogue with educators at Hwa Chong Institution for the 6th International Science Youth Forum (ISYF). He has high hopes for this year’s cohort of ISYF participants, whom he wishes will embody that confidence, pushing boundaries in their chosen fields – especially since, he says, he is as normal as the rest of us.

“[Nobel Laureates] walk on two legs, work with two hands, just like everyone else,” he makes clear. “[The ISYF participants] have all they need to succeed as the next generation of scientists, industrialists and entrepreneurs.” 

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*Professor Wüthrich’s research interests are in molecular structural biology and structural genomics. His specialty is nuclear magnetic resonance (NMR) spectroscopy with biological macromolecules, where he contributed the NMR method of three-dimensional structure determination of proteins and nucleic acids in solution. The Wüthrich groups have solved more than 70 NMR structures of proteins and nucleic acids, including the immunosuppression system cyclophilin A–cyclosporin A, the homeodomain–operator DNA transcriptional regulatory system, and prion proteins from a variety of species.*



**“Life is not very serious,”  
Prof Wüthrich says, cracking  
a smile.**

# “Poetry Festival Singapore 2019: Looking Back to Move Forward”

Press Release for the  
2019 Poetry Festival Singapore

## Poetry Festival Singapore 2019: Looking Back to Move Forward

*Singapore – 21 June 2019*

POETRY Festival Singapore (PFS) 2019, centred around the theme of 'Metamorphosis', will celebrate the transformative power of poetry and showcase the diversity of Singapore's linguistic traditions and poetic forms. In keeping with the island's ongoing bicentennial commemorations, the festival will take stock of how far Singapore poetry has come, while also providing a stage for new voices to explore exciting new territory. PFS will take place from July 19 to 21 at The Arts House.

The five-year-old literary fest will offer critical surveys of published verse and spoken word in all the island's official languages. It will also look ahead by giving a platform to rising poetic stars and migrant worker poets. A highlight this year is a workshop on yoga and poetry conducted by yoga master and writer Vicky Chong.

The festival will officially open on 19 July 2019 with Senior Minister of State Chee Hong Tat as Guest-of-Honor. Prof. Arun Mahizhnan from the Institute of Policy Studies will then deliver a keynote address on the metamorphosis of Tamil poetry in Singapore.

The address will be followed by one of the highlights of the festival: the premiere of *PALINDROMES*, a poetic play with music starring Giovanni Ortega and Zora Imani Smith. The play follows two strangers, seemingly worlds apart, struggling to find their roots and discovering just how in tune they are with each other. Notably, the play features songs penned by Ortega and scored by José Promis, as well as classics from regional music icons Saloma and Sudirman. As writer and actor Ortega affirms, "Songs are poetry"; and the music of the play promises to, in his words, "take you to a different world". The play will be performed throughout the festival.

Perennial festival fare such as open mic poetry will be on hand. PFS 2019 will also see other art forms and traditions - from film to even yoga - merged with poetry. Finally, in keeping with the theme, there will be an Instagram marathon reading of poems depicting the island's various historical periods in the *Contour* anthology. In addition, eight haunting short films inspired by classic Singapore poems will be screened throughout the festival, with the filmmakers from LASALLE College of the Arts in attendance for a Q&A session on 20 July.

One of the festival's key aims is to nurture the next generation of poets. In keeping with this, a slew of events on 21 July will be aimed at youth. Students from the 2018-2019 batch of the Creative Arts Programme will be showcasing their original poems, while "Singapore's Emerging Poetic Voices" - moderated by Crispin Rodrigues - will see recently published poets Marylyn Tan, Natalie Wang and Andrea Yew, as well as spoken word artist Max Pasakorn reading their recent works and discussing the meaning of "millennial poetry". Students from all secondary schools in Singapore are also invited to participate in the "SG Poetry By Heart" competition on

21 July, where participants will memorize and perform selected local poems; the best oratorical interpretations stand to win attractive prizes.

The festival will also shine a spotlight on the poetic voices of women. In “Sisters Are Doing It for Themselves II”, poets from Sanrakshan and the Writing Enthusiasts’ Club of the Indian Women’s Association Singapore will pour out their feelings in verse. The session will not only feature poems in English but also in the poets’ Mother Tongues.

Many other events are aimed at celebrating linguistic diversity as well, including a panel discussion on translation, a Chinese-language keynote, and a Tamil poetry reading. In particular, “Sanggam: The Confluence of Beauty” on 20 July will feature poetry readings in Malay and Tamil, followed by a forum on how each of Singapore’s main literary traditions engage, in their own ways, with deeply human concerns. The forum, moderated by Dr. Azhar Ibrahim, will feature four panellists - Sithuraj Ponraj, Muhammad Andi Zulkepli, Dr. Fan Jinghua and Dr. Loh Chin Ee - each representing one of Singapore’s major literary traditions.

The work of migrant poets, a key feature of last year’s festival, will also make a return this year in the “Carnival of Poetry” concert on 21 July. With poetry readings as well as song and dance performances by the Migrant Writers of Singapore, this event promises to be a joyous affair for all.

In view of Singapore’s bicentennial commemorations, 2019 is also a time for reflection on how far we have come. Accordingly, in “Exploring History through Poetry” on 21 July, Poet Desmond Kon Zhicheng-Mingde will facilitate an illuminating discussion on the influence of history on poetry - and vice versa - with distinguished authors Christine Chia, Gwee Li Sui, and Robert Yeo. In addition, a *CONTOUR* Marathon Reading will commence from 12 July and last throughout the festival. The reading consists of videos of poets reciting their poems from the anthology, *CONTOUR: A Lyric Cartography of Singapore*, to be featured on PFS’s Instagram page. The poems, which speak to various episodes in Singapore’s 700-odd years of history, are a testament to our metamorphosis as a nation - but more importantly, what it took to get to where we are now.

Poetry Festival Singapore (FPS) was a recipient of the National Arts Council’s Seed Grant from 1 April 2016 to 31 March 2019. It received the NAC’s presentation grant for the July festival. PFS promotes poetry in all the island’s official languages and other art forms through programmes such as public readings, keynote addresses, craft workshops, panel discussions and literary anthologies. Its primary aim is to promote literary excellence in a multilingual, multicultural, multi-generational setting.

This project is shared with strategic partners, the National Arts Council, the National Library Board, the National Gallery Singapore, the Singapore Botanic Gardens, LASALLE College of the Arts as well as the National University of Singapore’s Faculty of Arts and Social Sciences,

with which it organizes events as well as conferences. The festival also co-organizes workshops with various private partners such as the Haque Centre of Acting & Creativity.

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For more information, please visit:

Website: <https://www.poetryfestival.sg/>

Facebook: <https://www.facebook.com/poetryfestivalsg/>

Instagram: <https://www.instagram.com/poetryfestivalsg/>

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*Also available at*

*<https://www.poetryfestival.sg/news-and-events>*

*(under the section labelled "Poetry Festival Singapore 2019 - Press Release")*