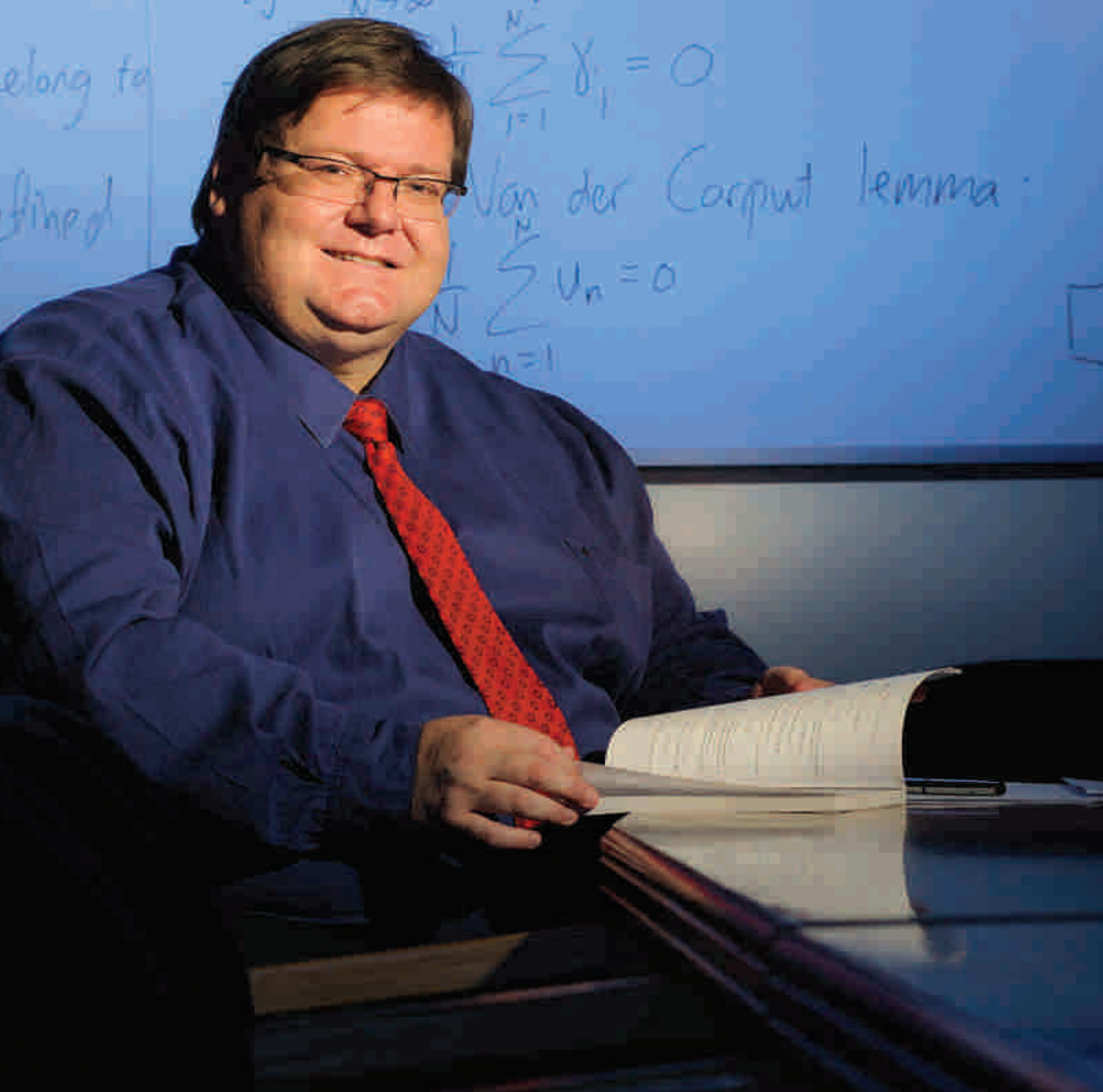


$n \in \mathbb{N}$
 $L^2(\mu)$ by the mean ergodic theorem
 Suppose now $a \in A$. Consider $U_n :=$
 and observe that $\langle U_n, U_{n+1} \rangle = \mathbb{E}(a^* \Phi^i)$
 The ergodicity of the system implies

$$\gamma_j := \lim_{N \rightarrow \infty} \frac{1}{N} \sum_{n=1}^N |\langle U_n, U_{n+1} \rangle| = \mathbb{E}(a^* \Phi^i(a))$$

$$\frac{1}{N} \sum_{i=1}^N \gamma_i = 0$$
 Van der Corput lemma.

$$\frac{1}{N} \sum_{n=1}^N U_n = 0$$



Prof Ströh beklee reeds sedert Mei 2004 die pos van Dekaan van die Fakulteit Natuur- en Landbouwetenskappe. Hy behaal die graad PhD in 1989 op die ouderdom van 24. In 2000 word hy Voorsitter van die Skool vir Wiskundige Wetenskappe en in 2009 Voorsitter van die Nasionale Forum van Natuurwetenskapdekane (NSDF). In 2010 is hy tot lid van die Staande Komitee van die Universiteitsraad verkies.

In 1994 is prof Ströh genooi om vir ses maande navorsing te doen aan die beroemde Banach-sentrum in Warskau, Pole. Tydens dié besoek het hy daarin geslaag om 'n volledige Riesz-dekomposisieteorie met betrekking tot geslote ideale in operator algebras te ontwikkel deur, in samewerking met prof L Zsido van die Universiteit van Rome II, 'n oplossing in die mees algemene vorm te verkry vir die vraagstuk van ideale strukture in operator algebras.

In die afgelope tien jaar het prof Ströh betekenisvolle bydraes op die navorsingsterrein van funksionaal-analise met interpretasies in statistiese kwantumeganika gelewer. In 'n reeks referate waarvan die eerste in 2003 in die *Journal of Operator Theory* verskyn het, het prof Ströh en sy plaaslike en internasionale medewerkers vir die eerste keer getoon hoe ergodiese teorie, vermenging en rekurensie-eienskappe in dinamiese kwantumsisteme aangewend kan word. Hierdie werk het wêreldwyd aansienlike belangstelling gewek.

Prof Ströh het bydraes by plaaslike en internasionale konferensies gelewer en was medeorganiseerder van vyf internasionale konferensies. Hy is die outeur van navorsingsartikels in verskeie internasionaal geakkrediteerde vaktydskrifte. In 2001 ontvang hy 'n Gouepenning van die Suid-Afrikaanse Wiskundige Vereniging vir sy bydrae tot die uitbou van navorsingskapasiteit. Die Universiteit se Toekenning vir Uitnemende Akademiese Presteerders is in 2003, 2006 en weer in 2009 aan hom toegeken. Hy het 'n B2-gradering van die NNS.

Prof Ströh has been the Dean of the Faculty of Natural and Agricultural Sciences since May 2004. He completed his PhD in 1989 when he was 24 years old. He became the Chairperson of the School of Mathematical Sciences in 2000 and Chair of the National Science Deans Forum (NSDF) in 2009. In 2010 he was elected to the Standing Committee of the University Council.

In 1994 Prof Ströh was invited to do research at the renowned Banach Centre in Warsaw in Poland for six months. During this visit he managed to develop a complete Riesz decomposition theory relative to closed ideals in operator algebras by solving, in its most general form, a question on ideal structures of operator algebras jointly with Prof L Zsido of University of Rome II.

Over the past ten years, Prof Ströh has made significant contributions to the research field of functional analysis with interpretations in quantum statistical mechanics. In a series of papers, the first of which was published in 2003 in the *Journal of Operator Theory*, Prof Ströh and his local and international collaborators for the first time introduced the use of ergodic theory, mixing properties and recurrence properties, in quantum dynamical systems. This work has gained considerable attention worldwide.

Prof Ströh has delivered papers at local and international conferences and has been an associate organiser of five international conferences. He is the author of several research articles in internationally accredited journals. In 2001, he received a Gold Medal from the South African Mathematical Society for his contribution to research capacity building. He received the University's Exceptional Achievers Award in 2003, 2006 and 2009. He holds a B2-rating from the NRF.

Prof Ströh o bile Hlogo ya Lefapha la Thutamahlale a Tlhago le Temo go tloga ka Mosegamanye 2004. O feditše PhD ya gagwe ka 1989 a na le mengwaga e 24. O bile Modulasetulo wa Foramo ya Bosetšhaba ya Dihlogo tša Mafapha a Thutamahlale (NSDF) ka 2009. Ka 2010 o ile a kgethwa go ba Komiting ya Saruri ya Khansele ya Yunibesithi (Standing Committee of the University Council).

Ka 1994 Prof Ströh o ile a mengwa go yo dira dinyakišišo Senthareng ya go tuma ya Banach, Warsaw go la Poland dikgwedi tše tshela. Nakong ya ketelo ye o kgonne go hwetša teori ya Riesz ya polo yeo e amanago le ditsela tšeo di tšwaletšego ka dialetsebra tša tshepedišo ka go e rarolla, ka tlhamego ya yona ya kakaretšo, potšišo ka ga ditlhamego tša dialetsebra tša tshepedišo ka tshomišano le Prof L Zsidoof wa University of Rome II go la Italy.

Mengwageng e lesome yeo e fetilego Prof Ströh o bapetše dikarolo tše bohlokwa lefapheng la dinyakišišo la tshekatsheko ya mokgwa wa tšhomo ka dihlatollo ka dimekhenisemo tša bodipalopalo tša khwanthamo. Ka tatelanong ya dipampiri tša gagwe, ya mathomo e phatlaladitšwego ka 2003 ka go *Journal of Operator Theory*, Prof Ströh le batšekarolommogo ba gagwe ba mo gae le ba boditšhabatšhaba, la mathomo ba tsebagaditše tšhomišo ya teori ya ekodiki, go hlakanya didirišwa le didirišwa tša leboelela, ka ditseleng tša maatlatshepetšo a khwanthamo. Mošomo wo o amogetše šedi e kgolo lefaseng ka bophara.

Prof Ströh o badile dipampiri dikopanong tša mo gae le tša boditšhabatšhaba gomme o bile mothušamorulaganyi wa dikopano tše hlano tša boditšhabatšhaba. Ke mongwadi wa diathikele tša ditšenaleng tšeo di tsebegago maemong a boditšhabatšhaba. Ka 2001 o amogetše medale wa gauta go tšwa go *South African Mathematical Society* ka go tšeeng karolo ga gagwe go ageng mothamo wa dinyakišišo. O amogetše Sefoka sa Yunibesithi sa *Exceptional Academic Achievers* ka 2003, 2006 le ka 2009. O na le maemo a B2 go tšwa go Setheo sa Dinyakišišo sa Bosetšhaba (NRF).