

IEEE 2016 IEEE Taiwan Academic Seminars



IEEE Fellow經驗談-如何成為一位有影響力的國際學者

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Why Join IEEE

- IEEE is the world's largest technical professional organization dedicated to advancing innovation and technology excellence for the benefit of humanity.
- IEEE is designed to serve professionals involved in all aspects of the electrical, electronic, and computing fields and related areas of science and technology that underlie modern civilization.
- IEEE and its members inspire a global community to innovate for a better tomorrow through its more than 420,000 members in over 160 countries, and its highly cited publications, conferences, technology standards, and professional and educational activities.



- More than 423,000 members in more than 160 countries, more than 50 percent of whom are from outside the United States
- >=117,000 Student members, 334 Sections in ten geographic Regions worldwide
- 2,116 Chapters that unite local members with similar technical interests
- 3,005 Student Branches at colleges and universities in over 100 countries
- 1,481 Student Branch chapters of IEEE technical societies
- 486 affinity groups; IEEE affinity groups are non-technical sub-units of one or more Sections or a Council. The affinity group patent entities are the IEEE-USA Consultants' Network, Young Professionals (YP), Women in Engineering (WIE), Life Members (LM), and IEEE Entrepreneurship.
- Has 39 Societies and seven technical councils representing the wide range of IEEE technical interests
- More than 4 million documents in the IEEE Xplore[®] Digital Library, with more than 8 million downloads each month
- Has over 1,300 active standards and more than 500 standards under development
- Publishes approximately 200 transactions, journals, and magazines
- Sponsors more than 1,800 conferences in 95 countries



Why become IEEE Fellow Sistems Man 6 Under 12

躋身世界會員數最多的IEEE國際電機電子學會會士,除本身學術研究成果要很好的基本條件外,藉由國內外資深教授經驗與人脈傳承之策略(訣竅/眉角),會有較好的機會,早日獲得該國際知名學術殿堂的肯定,完成自我實現的目標。

並此藉此持續深化學術研究,成就造福全人類的 科技,且可進而競選擔任該國際學術機構的理事 ,傑出特選講員,期刊主副編,學會正副理事長 ,各區域理事長,以及IEEE總會要職,貢獻關 鍵重要的發展政策與影響力。



簡報大綱



- 一、躋身IEEE 會士歷程
- 二、躋身IEEE 會士攻略
- 三、IEEEE論文寫作經驗談
- 四、IEEE學會服務經驗談
- 五、國際學會服務經驗談
- 六、結論與願景



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一、躋身國際會士歷程(IEEE)



(一)國際電機電子學會(IEEE)會士之申請

- 1. 申請IEEE會士資格為會員需資深會員(Senior member),因此一般會員儘快申請為資深會員。
- 2. 成為會士需八位會士推薦函(最少五位/最多八位) 及三名知名學者專家支持信(Endorser),而這八 位推薦者最好不是在同一國家的學者,代表您研 究成果受國際肯定,且邀請這八位學者要確定能 替您極力推薦(推薦函被推薦等級於Fellow Committee討論,推薦等級絕對總分數為15分), 否則不一定要湊到八位推薦函。



、躋身國際會士歷程(IEEE)



- 3. 選擇會士提名者(Nominator)人選也很重要,最好選擇具領域(Society)人脈之國際重要知名人士。
- 4. IEEE 會士申請領域分四類:應用工程師 (Application Engineer/Practitioner)、教育家 (Educator)、技術管理者(Technical Leader)、及研究工程師與科學家 (Research Engineer/Scientist),每一IEEE 會員申請者僅能選擇其中一類申請。惟於學校擔任重要行政主管之學者,其提出引用(Proposed citation)可結合第四類(研究工程師與科學家)加第二類(教育家)領域專長申請(範例),但其提出引用僅能選擇一類。這選擇對學術研究成果很好並擔任學校行政主管學者,可增加獲得會士機會。



結合二類領域申請範例



- 1. Jingshown Wu (2005) (吳靜雄) for leadership in higher education and wireless industry development
- 2. Yan-Kuin Su (2007) (蘇炎坤) for contributions to optoelectronics and nanophotonics research and education
- 3. Chan-Nan Lu (2008) (盧展南) for contributions to power delivery and to power engineering education
- 4. Shen-Li Fu (2009) (傅勝利) for contributions to electronic packaging research and education
- 5. Powen Hsu (2010) (許博文) for leadership in electrical engineering education
- 6. Mikael Ostling (2004)
 for contributions to semiconductor device technology
 and education



ring Technology for Humanity 一、躋身國際會士歷程(IEEE)



- 5. IEEE提名表格共12項,最多只能寫四頁,表格最重要6b填寫,須具體陳述一至二項研究成果顯著貢獻(Distinctive contributions)之領域影響力(Impact on society)及領域被認同(Recognized by society),不需將研究成果一一說明。表格7填寫6b研究成果貢獻之佐證,陳述三項主要及十項次要成果文獻說明。
- 6. 参加IEEE society活動,包括會員服務、擔任研討會委員、加入會員時間、及服務其他IEEE society均有加分作用。

IEEE Code of Ethics

cs Society

- IEEE Code of Ethics (items relevant to this task)
 - Avoid real or perceived conflicts of interest
 - <u>Definition</u>. Conflict of interest is defined as any situation in which a member's decisions or votes could substantially and directly affect the member's professional, personal, financial or business interests.
 - To be honest and realistic in stating claims or estimates based on available data
 - To seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others
 - To treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin
 - To avoid injuring others, their property, reputation, or employment by false or malicious action
 - To assist colleagues and co-workers in their professional development and to support them in following the code of ethics





一、躋身國際會士歷程(IEEE)



- 7. 每年提名獲得IEEE會士比例為低於會員總人數的 0.1% (近四年獲得會士人數不超過 300位),通常 第一次提名獲得會士的機會相當少。
- 8. 躋身IEEE會士最好年輕化,使獲得會士後發揮較多邊際效益。
- 9. 申請IEEE會士提名,每年必須在三月一日前提出。



、躋身國際會士歷程(IEEE)

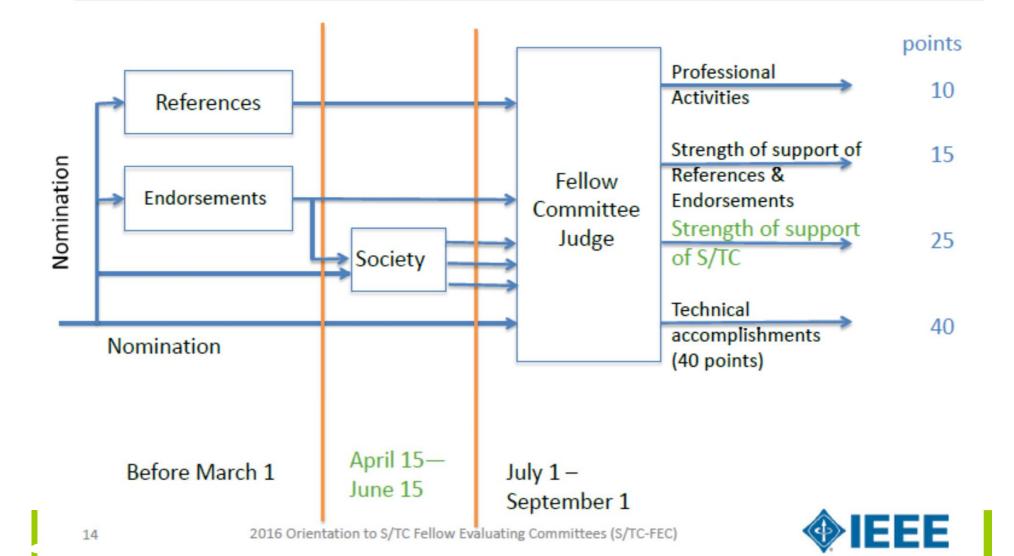


10. IEEE會士評審過程(The Fellow evaluation process)

- (1)Significant contributions
- (2) Evidence of technical accomplishments
- (3) Evidence by the IEEE Society/Technical Council selected by nominator
- (4) Confidential opinions of references and endorsers
- (5)Service to other professional societies
- (6) Total years in the profession

根據上述六項,每項評審過程以絕對分數表示。IEEE會員被推薦為會士辦法與國內學術界升等辦法之三級三審相仿:Technical Council,Society Committee,及Fellow Committee 三級審查。首先Nominator將被提名者資料送至Technical Council (如同系教評會)打分數後,送到Society Committee (如同院教評會)進行提名者打分數與排序,前二級主要考慮學術成果顯著貢獻之領域影響力與領域被認同度。最後將排序送至Fellow Committee(如同校教評會)討論最後會士推薦名單,討論項目包括Reference與Endorser成績、Society服務、及加入IEEE會員時間。

Overview of the overall fellow process



IEEE Fellow Committee process

- IEEE Fellow Committee evaluates nominees for elevation to the level of IEEE Fellow
 - 50 judges divided into 10 groups of 5 judges
 - 1/10 of nominees assigned (randomly) to a judge group, subject to conflict
 of interest checks
 - Each nominee evaluated on 4 categories (below)
- The Society/Technical Council evaluation of the nominee provides the judges with critical information from the nominee's technical peers

Technical Accomplishments 40 Pts Indirect influence

Society Evaluation
 25 Pts
 Direct influence

References 15 Pts

External and IEEE Activities 10 Pts

The candidate population 10pts





躋身國際會士歷程(IEEE)



IEEE Fellow Committee Judges rate the candidates from 100 to 0 in an "absolute" candidate

Extraordinarily qualified (90.0 - 100)

Highly qualified (80.0 - 89.9)

Qualified (60.0 - 79.9)

Marginally qualified (50.0 - 59.9)

Not qualified (00.0-49.9)



Final Elevated Fellows



- IEEE elevated less than 300 Fellows each year
- With 500,000+ IEEE members →
 0.06% elevated each year
- IEEE Elevated Fellows each year are usually announced on the first day of the third week in November.



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(一)提升專業領域的貢獻度與知名度-己立已達

- 提出新而有用的技術創意,精通IEEE期刊論 文3C寫作,增高接受率。
- 多撰寫IEEE期刊論文,提高被引用率。
- 常參加IEEE 旗艦型國際學術研討會,多與相關領域學者專家討論或合作。
- ●擔任著名教授或實驗室的訪問學者,共同發展創意。





(二)利用參加重要國際研討會機會積極被推薦 擔任邀請講員(Invited Speaker) - 領域被認同

參加國際學術研討會目的,係使參加研討會相關領域學者專家了解您的研究成果,因此建議國內教授利用參加重要研討會之機會認識資深前輩,使他們了解及肯定您研究成果,並積極被推薦為研討會邀請講員。邀請講員(Invited Speaker)為研討會議程(Program)重要一環,擔任邀請講員表示您研究領域被認





(三)積極主辦IEEE重要學術研討會 - 領域影響力之一

積極於國內主辦IEEE重要學術研討會,並利用機會邀請國際知名學者及IEEE/Society、主席到內國演講、交流、深談。國內主辦學術研討會研討會之效益為提昇國內研究水準及研究領域影響力,同時利用機會請國際知名學者及Society主席替您推薦國際會士。





(四)積極被推薦擔任國際重要知名學術期刊之副主編 (Associated Editor) - 領域影響力之二

利用參加國際學術研討會及國內主辦研討會機會,認識與交流國際重要知名學術期刊總編輯(Editor),並利用機會請(或請國際友人)重要學術期刊總編輯推薦您擔任期刊之副主編。擔任國際知名重要學術期刊之副主編,相當具有研究領域影響力。





(五)積極被推薦擔任國際重要學術學會及研討會工作主席之委員-領域影響力之三

利用參加研討會之機會認識國際知名學者, 並積極被推薦擔任國際重要學術學會及研討 會工作主席委員。使自己有利於進入國際學 術組織核心,並可決定主辦研討會國家與地 點。因此擔任國際重要學術學會及研討會理 監事委員,具有研究領域影響力。





(六)積極參於IEEE會員活動服務 - Society服務 具體表現

積極參於IEEE台北分會、會員活動服務,擔任 支會主席,指導學生推動成立學生分會 (Student Chapter),並擔任學生分會Advisor。 這推動學生會員活動之Society服務具體表現, 對會士申請相當有加分作用。





(七)諮詢歷年科技部工程司或國內相關學會榮獲IEEE會士前輩

藉由國內歷年國內各學會與科技部工程司學 門榮獲IEEE 或國際學會會士經驗與人脈之諮 詢,減少摸索申請時間,可能較有機會早日 進入IEEE 或其他國際知名學術會士殿堂。



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Writing Experience for IEEE Technical Papers

To become an IEEE Fellow, you must exhibit your outstanding technical contributions.

- 3C Writing Principle
- Five Steps to Write a Good Scientific and Technical Paper
- Summaries





Key Principle: 3 C (Correct, Concise and Clears) writing style

• Correctness (正確): use appropriate wording, correct grammar, write logical and readable sentences, consistent paragraphs with topic sentences,





• Clearness (Clarity) (清楚): In addition to editing for conciseness, the writer must also edit for clarity to ensure that a manuscript is thoroughly revised. This unit emphasizes on how to refine a writer's intended meaning by omitting stylistic errors that prevent him or her from writing succinct sentences.





• Conciseness (精育): Conciseness in technical writing is essential for busy professionals who do not have the time to read wordy documents. Writing a long document is often easier that writing a short one because writing concisely takes longer than simply writing.





Preface:

- Scientific papers must be written correctly, clearly and concisely; they have to be stated without uses of wordy, indirect, unpersuasive, and unnatural sentences. Hence, readers can easily understand professional contents of those articles and, furthermore, comprehend their contribution and value.
- One of successful factors to write good scientific papers is to read papers or articles written by famous native English writers •
- Practice, practice and more practices





HOW TO WRITE A GOOD SCIENTIFIC AND TECHNICAL PAPER

- ◆標題 (Title): 敘述或暗示主要結果
- ◆摘要 (Abstract): 敘述研究活動、方法、成果
- ◆ 導論 (Introduction): 敘述研究動機與目的;
- ◆方法 (Method)章節:方法描述必須既清楚又精確;
- ◆結果 (Result)章節:陳述最主要的結果;
- ◆討論 (Discussion)章節:針對結果提出合理解釋;
- ◆結論 (Conclusions)章節:應敘述主要的結論。





Five steps of Writing Scientific Papers 1. Thinking:

Paper objectives and main concepts, including solid evidences or chapters; elucidate paper's aims, and then describe the proposed methods and results; clearly indicate the **novelty**, **contribution and value** of the papers.





2. Drafting:

During the drafting, use simple sentences, and do it as early as possible; adopt appropriate section titles and subtitles, especially in the discussion section. Comprehend reading habits of professionals, for instances;



- Paper title should express or indicate main result(s) or and method(s).
- ◆ Abstract section clearly describes the proposed method, main research results and conclusion.
- Introduction section provides research motivation and objectives.
- ◆ Statements in the method or analysis section must be both clear and precise.
- Result section explains the most important result .
- Discussion section gives reasonable explanations regarding the experimental results.
- Conclusion section states clearly and concisely key results and implications.





For easy writing, writers can try to write method or analysis section first, and then result section, discussion section, conclusion section, and finally introduction section and abstract section.

- 將大綱以完整的句子或段落表達出來,並 輸入電腦。
- 避免生硬的句子,並增進文章的可讀性。
- 專業術語應前後一致。
- 查閱期刊的格式說明。
- 多翻閱好的參考書籍及詞典。



三、IEEEE論文寫作經驗談



3. Revision:

Carefully do reading proof; check whether any typos and grammatical errors occur, any mathematic errors or any format errors; reevaluate if the intended goals and thinking meets your original ones; if needed, rewrite it so as to clarify the paper .if required,

請朋友或同事閱讀,並提供批評及建議。



三、IEEEE論文寫作經驗談



4.Revision, revision and more revisions, until the paper is satisfactory. Submit the paper to a journal of interest, and meet the requirements of journals.

投稿到自己研究領域裡的期刊,並符合該期刊的旨趣。



三、IEEE語文寫作經驗談



5. Consider the paper rejection as a valuable writing experience.

細心修改再投原IEEE 期刊或其他的期刊。遭退 稿最普遍理由在於文章的主題不適合或超出期 刊的範圍;或文章內容的重要性及結果的正確 性令人懷疑;討論及分析不夠深入;文章篇幅 太長;文章組織不良,焦點不清楚;表達方式 不恰當,沒有清楚地解釋研究問題以及研究結 果的重要性;英文錯誤太多,不知所云等等。



三、IEEEE論文寫作經驗談



Summaries (1/2)

Scientific papers must be written correctly, clearly and concisely.

- Such papers have to be stated without uses of wordy, indirect, unpersuasive, and unnatural sentences.
- Readers can easily understand professional contents of those articles and, furthermore, comprehend their novelty, contributions and values.



三、IEEEE論文寫作經驗談 Summaries (2/2)



- One of successful factors to write good scientific papers is to read papers or articles written by famous native English writers •
- Practice, practice and more practices!



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四、IEEE學會服務經驗談專業成就被認同與發輝領域影響力



- □ 積極被推薦擔任國際重要學術學會及研討會 工作主席之委員
- □ 積極主辨IEEE重要學術研討會 領域影響力 之一
- □利用參加重要國際研討會機會積極被推薦擔任邀請講員(Invited Speaker) 領域被認同
- □將每一服務做到止於至善,或每一篇論文的 創意,貢獻與完整度寫到最好,爭取學會服 務或最佳論文獎



四、IEEE學會服務經驗談 IEEE Conference Activities



- Program-Co-chair, IEEE SMC 2016.
- Publicity chair, IEEE SMC 2015.
- Special Session Co-chair and Session Chair, IEEE SMC 2014.
- Program Committee and Session Chair, IEEE SMC 2013.
- Program Committee and Session Chair, IEEE SMC 2012.
- Invited Session Chair, IEEE International Conference on Advanced Intelligent Mechatronics (AIM), 2012.
- Program Committee and Session Chair, IEEE SMC 2011.
- Exhibition Chair and Session Chair, IEEE/RSJ IROS 2010, Taipei, Taiwan.
- Special Session Chair, FUZZ-IEEE 2010.
- Track chair and Session Chair, IEEE SMC 2010.
- Program Co-chair, SICE Annual Conference 2010 in Taiwan, technically sponsored by IEEE.
- Award Committee Co-Chair and Session Chair, IEEE SMC 2009.
- Program Committee and Session Chair, IEEE SMC 2009.
- Associate Editor, <u>2008 IEEE/RSJ</u> IROS 2008.
- International Program Committee and Session Chair, 2007 IEEE Internat .Conf. on Industrial Electronics
- Program Committee and Session Chairs, various IEEE International conferences, for example SMC 2006, Mechatronics 2005, Control applications 2004, Robotics and Automationa 2003..



四、IEEE學會服務經驗談 IEEE Honors and Awards



- Best Paper Award, 2015 IEEE International conference on System Science and Engineering.
- **Best paper in Application**, 2014 International conference on Fuzzy theory and its applications
- IEEE SMC Most Active TC Award, IEEE SMC Society, 2012.
- Finalist of Best Student Papers in IEEE SMC 2012.
- Best Conference Paper Award, 2011 International Conference on Systems Science and Engineering, Macau, China, June 7-10.
- Certificate of Appreciation, IEEE SMC Student branch chapter at National Chung Hsing University, 2009.
- Noble Service Award, IEEE Control Systems Society, 2004.
- Third Society Prize Paper Award, IEEE Industry Applications Society, 1998.).



四、IEEE學會服務經驗談 自願志工,全力以赴



- □ Society服務具體表現-積極參於IEEE會員活動服務,擔任支會主席,擔任學生分會Advisor
- □領域成就指標-積極被推薦擔任IEEE學術期刊之副主編 (Associated Editor)
- □擔任IEEE各學會的技術委員會主席
- □ 擔任IEEE學會或Council的BoG member



四、IEEE學會服務經驗談



Committee Memberships and Offices Held

- 1. BOG member, IEEE Systems, Man and Cybernetics Society (since 2017)
- 2. BOG member (SMC Representative), IEEE Nano-Technology council (since 2015)
- 3. Associate Editor, IEEE Transactions on SMC: systems (since 2014)
- 4. Chair, IEEE SMC Technical Committee on Intelligent Learning in Control Systems since 2009
- 5. Chair, Taichung Chapter, IEEE Systems, Man and Cybernetics Society since 2009.
- 6. Advisor, IEEE SMC Student Branch Chapter at National Chung Hsing University, Taichung, Taiwan since 2009.
- 7. Chair, Taipei Chapter, IEEE Robotics and Automation Society, Elected (2005-2006).
- 8. Chair, Taipei Chapter, IEEE Control Systems Society, Elected (2001-2003).



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- 四、IEEE學會服務經驗談
- 五、國際學會服務經驗談
- 六、結論與願景



五、國際學會服務經驗談 創新服務,世界接軌



- President, Robotics Society of Taiwan, Taiwan, elected (2016-2017)
- Vice President, International Fuzzy Systems Association, elected (2015-2017)
- President, Chinese Automatic Control Society, Taiwan, elected (2011-2015)
- President, Taichung Area, Chinese Institute of Engineers, Taiwan, elected (2007-2011)
- Executive Director in BOGs, Taiwan Association of System Science and Engineering, Taiwan, elected (2009-2012).
- Steering Committee, Asian Control Association (2015-2016).
- Executive Director in BOGs, Robotics Society of Taiwan, Taiwan, Elected (2008-2015).
- Executive Director in BOGs, Taiwan Fuzzy System Association, Taiwan, elected (2011-2013).



五、國際學會服務經驗談 重學術,善交流



International Conference Activities

- General Chair, 2016 International Conference on Advanced Robotics and Intelligent Systems.
- General Chair, 2015 CACS International Automatic Control Conference 2015.
- General Chair, 2015 International Conference on Fuzzy Theory and Its Applications 2015.
- General Chair, 2014 CACS International Automatic Control Conference 2014.
- General Chair, 2013 CACS International Automatic Control Conference 2013.
- General Chair, 2012 CACS International Automatic Control Conference 2012.
- General Chair, 2012 International Conference on Fuzzy Theory and Its Applications 2012.
- Program Co-chair, 2012 (43rd) International Symposium on Robotics 2012.
- General Chair, 2011 International Conference on Service and Interactive Robot 2011.
- Program Co-chair, 2011 International Conference on System Science and Engineering.
- Program Co-chair, 2010 SICE Annual Conference 2010.
- Program Chair, 2007 CACS International Automatic Control Conference.
- Program Chair, the 2005(8th) International Conference on Automation Technology.



五、國際學會服務經驗談 Honors and Awards



- Outstanding Electrical Engineering Professor Award, the Chinese Institute of Electrical Engineers, 2014.
- Fellow, Chinese Automatic Control Society, 2009.
- Fellow, the Institution of Engineering Technology (IET), (IET#1100127363),2009
- Outstanding Engineering Professor Award, the Chinese Institute of Engineers, 2009.
- Outstanding Automatic Engineering Award, the Chinese Automatic Control Society, 2008.
- First Prize Award, 2005 Altera Nios Embedded Processor Design Contest, 2005
- Outstanding Teaching Award, National Chung-Hsing University, 2002.
- Outstanding Youth Electrical Engineer Award, the Chinese Institute of Electrical Engineers, 1999.







- 一、躋身IEEE 會士歷程
- 二、躋身IEEE 會士攻略
- 三、IEEEE論文寫作經驗談
- 四、IEEE學會服務經驗談
- 五、國際學會服務經驗談
- 六、結論與願景



六、結論與願景

- 1. IEEE有39專門學會與7委員會,領域有大小,貢獻無貴賤,傑出創意的技術貢獻與服務是躋身IEEE會士殿堂的必要條件。
- 2. 躋身IEEE國際學術會士殿堂,除研究成果具備領域影響力及領域被認同條件外,藉由國內外知名或資深教授經驗與人脈傳承策略(眉角),減少申請摸索,使國內學者早日進入國際知名學術殿堂。
- 3. 近年由於中國崛起,獲得IEEE會士愈來愈競爭,每年獲得IEEE會士比例低於會員總人數的0.1%(約300位)。台灣近五年國內獲得IEEE會士,由2013年12位,2014年為7位。2015年為6位,2016年為4位,2017年反升為7位。



六、結論與願景

- 4. 躋身IEEE會士後,學術成就或貢獻已受肯定,應持續發揮更多邊際效益與影響力,如爭取更高的學術榮譽,持續深化學術研究,成就造福全人類的科技,且可進而競選擔任IEEE各學會要職以及IEEE總會要職,發揮關鍵的決策影響力。
- 5. Life Fellow =Fellow grade+ (age>=65)+(Age+ Years of Membership>=100)(Proof of a strong sustained commitment to the profession.)
- 6. 惟學術研究係長期志業,需固定運動習慣,以保持健康身體,常保喜樂的心靈,並關心與照顧家庭。









謝謝聆聽,歡迎問題!