

# IUPESM STATUTES AND BYLAWS UPDATE, FORMATION OF LEGAL STATUS AND FELLOWSHIP INTRODUCTION (2018-2022)

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**Abstract:** The paper describes briefly the activities in IUPESM leading to formation of its legal status and the update of its Statutes and Bylaws during the period 2018-2022, as well as the introduction of the IUPESM Fellowship scheme to celebrate the 40<sup>th</sup> anniversary of the Union in 2020.

**Keywords** – *International Union for Physical and Engineering Sciences in Medicine, IUPESM history.*

## I. INTRODUCTION

The International Union for Physical and Engineering Sciences in Medicine (IUPESM) was created in 1980 as a Union between the International Organization for Medical Physics (IOMP) and the International Federation for Medical and Biological Engineering (IFMBE) [1,2]. Initially a main goal of the Union was to achieve the membership of IUPESM in ICSU (International Council of Scientific Unions, now ISC - International Science Council). This was achieved in 1999 and was of great importance for the international recognition of both scientific fields – medical physics and biomedical engineering.

The next step of IUPESM was towards the recognition of both professional occupations – *medical physicist* and *biomedical engineer* by the International Labour Organisation (ILO). This was achieved in 2011 when ILO included both occupations in the International Standard Classification of Occupations (ISCO) - under categories: medical physicist (2111) and biomedical engineer (2149) [3].

Together with this, IUPESM organised successfully 15 World Congresses (WC) of Medical Physics and Biomedical Engineering [6] and represented both professions at various high-level international fora. All this underlined both - the very important role of IUPESM and the need for IUPESM to be a legal body. This required revision of the Statutes and Bylaws of the Union, as drafted in 1980.

The IUPESM Administrative Council (AC) 2018-2022, made steps in this direction. At its meeting (at WC2018 in Prague) it created an ad-hoc Rules Committee (RC) - S Tabakov (Chair), C Orton, KY Cheung, R Magjarevic, J Goh. Additionally, a Work Group (WG) on the IUPESM

Incorporation was created with members: S Tabakov (Chair), L Pecchia, S Keevil.

## II. WORLD CONGRESS CONTRACT REVISION

The Rules Committee's (RC) first activity was the review of the existing Contract for the World Congresses (WC). The changes in this Contract emphasized the fact that the Congress Organising Committee (COC) will have to synchronise its activities with the Congress Coordinating Committee (CCC). This was necessary as in the past the COCs had often taken decisions based on local requirements without discussing these with the IPESM-led CCC.

The timing of various stages during the 3 years of WC preparation was also specified, together with the specific Committees of the WC. At all these stages the equal representation of medical physicists and biomedical engineers was taken into consideration. The Calls for Papers and the Calls for Special Sessions were specifically linked with the IUPESM CCC.

The Publications agreements of WC abstracts/proceedings and the legacy of the WCs were also specified. It was suggested that each WC website shall be a property of the IUPESM in order for the Union to keep for long time the information related to the World Congress.

The financial part of the Contract was also specified, as well as categories for fees reductions or waivers.

RC took the opinion of all IUPESM AC members and further the WC Contract was discussed and agreed with the COC of WC2021. The revised Contract was finalised by the end of 2018 and accepted as template for future WC Contracts. Early in 2020 the revised Contract was signed with the WC2021 hosts from Singapore.

This step appeared to be very important on the background of the coming Covid-19 pandemic in 2020, what led to the postponement of the WC2021 to WC2022. The latter was the first IUPESM WC held as a hybrid (on-line and in-person) activity – a Congress organised very well by the WC hosts and all colleagues from Singapore, including the IUPESM President J Goh.

### III. IUPESM STATUTES AND BYLAWS UPDATE

IUPESM was created in 1980 as an Union based on good will between both Constituent Organisations (IOMP and IFMBE). As the first IUPESM President (J Mallard) states it had been taken care at the beginning for equal state of both professions “...*the physicists did NOT dominate the engineers, nor vice-versa...*”.[4] The update of the Statutes and Bylaws of the IUPESM was made by the RC in this spirit of existing democracy and harmonious relations between the two Constituent Organisations, aiming to support the decisions taking by consensus in an amicable atmosphere.

After the creation of IUPESM, the Statutes and Bylaws had only a minor update in 1992-93. During the past 30 years there were many changes in the life of both Constituent Organisations, which needed to be addressed, but more importantly the update had to include the establishment of the legal status of the IUPESM.

The draft of the changes was prepared by the Rules Committee in 2020-21. Further these were discussed, finalised and supported for proposal to the General Assembly (GA) by all IUPESM Administrative Council (AC): Prof James Goh (President, Singapore), Prof Slavik Tabakov (Vice-President, UK), Prof Kin Yin Cheung (Past-President, Hong Kong), Prof Leandro Pecchia (Secretary General, UK), Prof Magdalena Stoeva (Treasurer, Bulgaria), Prof Madan Rehani (President IOMP, USA), Prof Shankar Krishnan (President IFMBE, USA), Prof John Damilakis (Vice-President IOMP, Greece), Prof Ratko Magjarevic (Vice-President IFMBE, Croatia), Prof Eva Bezak (Secretary General IOMP, Australia), Prof Kang Ping Lin (Secretary General IFMBE Taiwan, China), Prof Geoff Ibbott (IOMP, USA), Prof Stephen Keevil (IOMP, UK), Prof Timo Jamsa (IFMBE, Finland) and Prof Marc Nyssen (IFMBE, Belgium).

The main updates/changes included:

-Replacing the term Chairman with Chairperson (emphasizing the increased role of women in the AC and the profession as a whole);

- Linking the IUPESM Official Address with the address of the IUPESM Company;

-Removing the “National members” category, as they are not direct members of IUPESM and do not pay membership fees to the IUPESM. The Union between the Constituent Organisations (IOMP and IFMBE) has never included National Societies as direct members. The National Member Societies of IOMP and IFMBE are members to IUPESM through IOMP and IFMBE;

- Specifying that Affiliate members to IUPESM have no voting rights;

- Introducing the possibility to take IUPESM decisions with electronic ballot;

- Specifying the succession in IUPESM Officers in case someone is not able to perform the assigned duties;

- Increasing the Officers to 6 (President, Vice-President, Secretary-General, Treasurer, Past-President, Past Vice-President) to allow equal representation of both Constituent Organisations (also this was related with the IUPESM Company, which was agreed to be established by all Officers as Directors – 3 medical physicists +3 biomedical engineers);

- The Standing Committees were listed as: Congress Coordinating Committee; Nominating Committee; Awards and Honours Committee (Honours was added to reflect the new IUPESM Fellowships scheme – see below); Rules Committee (a new Committee). There are other Active IUPESM Committees and Work Groups – these are regularly listed at the IUPESM Web site;

- The dues structure was specified to be reviewed by AC triennially (related to the Constituent Organisations);

- A special new paragraph was added to link the Statutes and Bylaws with the new IUPESM Company.

These updates and amendments of the Statutes and Bylaws were approved by all AC and sent to GA for discussion and approval. These were approved by the IUPESM General Assembly during December 2021 and were activated from 1 January 2022 – see IUPESM web site>Statutes/Bylaws [1].

### IV. IUPESM LEGAL STATUS (IUPESM COMPANY)

A number of IUPESM activities required the arrangement of its legal status. Hence the formation of an IUPESM Company was proposed to provide legal representation of IUPESM. This activity followed the steps of the successful arrangement of the IOMP Legal status in 2017 - at that time an IOMP Work Group was formed on the subject: S Tabakov (Chair), S Keevil and S Hawking [5].

The new IUPESM Work Group on the IUPESM Incorporation included S Tabakov (Chair), L Pecchia, S Keevil, supported by F McKeown and S Hawking from the IPEM, York, UK. Active part in these steps took also the President J Goh and Past-President KY Cheung. The WG consulted its activities with a specialist lawyer and later the AC discussed at length the Company draft documents. These were agreed to be sent to the IUPESM General Assembly for discussion and approval.

Due to the specific nature of the IUPESM, a different structure of the Company was developed (as compared to the IOMP Company) - IUPESM Company formed by the 6

IUPESM Officers (as Directors). The Directors change as per the normal change of IUPESM Officers at each World Congress. This way each IUPESM Officer has two functions – as officer of the Organisation and as Company Director. The IUPESM Company is fully accountable to the Administrative Council and the General Assembly. The Objectives of the IUPESM Company are identical with the Objectives of the IUPESM. This keeps the existing ultimate authority of the General Assembly and the Council whilst providing the legal representation of IUPESM.

The format of the Company follows the IOMP Company incorporated in the UK - 'Company Limited by Guarantee', a not-for-profit company with no shareholders and no distribution of dividends or other financial benefits to the Company Directors/Members. The primary purpose of the new company is to act on behalf of IUPESM wherever legal representation is necessary. The IUPESM Company is part of the final paragraph of the updated IUPESM Statutes and Bylaws.

The IUPESM President (who is also a Chair of the Board of Directors of the Company) will present, on behalf of the Company, regular annual reports to the GA and the AC to keep all informed. The Company Articles of Association were drafted with the help of a solicitor to ensure they meet the requirements for registration as a Company Limited by Guarantee within the UK, where the IUPESM head office is situated for over 10 years. This does not restrict IUPESM from relocating in the future, should it be necessary.

Following a ballot in the General Assembly, the new IUPESM Company was approved in December 2021 (with 97% support of all National member societies of IOMP and IFMBE). The new IUPESM Company Limited by Guarantee passed the registration procedure in the UK and was officially formed on 5 May 2022. The Company was announced at the IUPESM Web site - the Founding members of the IUPESM Company are the 6 current IUPESM officers, who are also members of the Board of Directors of the IUPESM Company: James Goh, Slavik Tabakov, Leandro Pecchia, Magdalena Stoeva, Kin Yin Cheung and Ratko Magjarevic.

After the World Congress in Singapore (June 2022) the Company Directors are: Madan Rehani, Shankar Krishnan, Magdalena Stoeva, Elliot Vernet, James Goh and Slavik Tabakov.

A new plaque of the IUPESM Company was placed at the IPEM office in York, UK, where the Official Address of the IUPESM is at present (Fig.1).

## V. IUPESM FELLOWSHIP

In parallel with the above activities the IUPESM Awards Committee: S Tabakov (Chair), KY Cheung, R Magjarevic,

S Renha, J Goh took steps for the recognition of those colleagues who have contributed to the IUPESM during the past 40 years and 15 World Congresses. The draft of a IUPESM Fellowship scheme (FIUPESM) was prepared by S Tabakov and discussed by all Committee and AC. The FIUPESM scheme is designed to acknowledge the hard work of many high-profile colleagues, who voluntarily contribute to the global development of medical physics and biomedical engineers [6]. The scheme also encourages more colleagues to contribute this way to the IUPESM.

The Fellowship scheme includes 90 points in three main tiers/groups (A, B, C). Group A (max 56 points) is associated with various positions taken at IUPESM AC and the leadership of IFMBE, IOMP and their parts. The remaining 34 points are for Group B (max 23 points) associated with the leadership and roles related to the organisation and delivery of World Congresses and additionally Group C includes discretionary points (max 11 points). The number of points required for Fellowship status is minimum 40, of which a minimum 15 points required from group A.

The AC approved the FIUPESM scheme. Badges and poster were made (with the support of KP Lin and M Stoeva). J Goh and S Tabakov prepared special Diplomas plus Folders for FIUPESM recipients and plaques for the other colleagues.

The first group of IUPESM Fellows included all past AC members. The list of inaugural Fellows – the outstanding international leaders of medical physics and biomedical engineering – includes 58 high-level specialists from 26 countries (this List with FIUPESM included also 15 of the initial builders of the Scientific Union, awarded posthumously). J Goh and S Tabakov collected the addresses of all these colleagues. The colleagues (or their families) were invited to the Special Online celebration of IUPESM 40th Anniversary on 20 November 2020. The virtual celebration (due to the pandemic situation) was attended by over 200 colleagues and relatives. It included also presentations highlighting the achievements of the IUPESM during the past 4 decades [2, 6] and short Bio for each of the inaugural Fellows (see **Annex to this MPI issue**).

The first group FIUPESM (2020) includes: Prof. John Mallard, Prof Robert L. Clarke, Prof. John "Jack" Hopps, Prof. Masao Saito, Prof. Oivind Lorentsen, Prof. Alexander Kaul, Prof Lawrence H. Lanzl, Prof. Nandor Richter, Prof. Robert Nerem, Prof John R Cunningham, Prof. Orest Roy, Prof. Niilo Saranummi, Prof Udipi Madhvanath, Prof. Jos Spaan, Prof Keith Boddy, Prof. Kajiya Fumihiko, Prof. Gary Fullerton, Prof. Jean-Pierre Morucci, Prof. Colin Orton, Prof. Kwan Hoong Ng, Prof. Inger-Lena Lamm, Prof. Azam Niroomand-Rad, Prof Oskar Chomicki, Prof. Dov Jaron, Prof. Heikki Teriö, Prof. Joe Barbenel, Prof. Joachim Nagel, Prof. Peter H. S. Smith, Prof Barry J Allen, Prof. Makoto Kikuchi, Prof. Ratko Magjarevic, Prof. Alun Beddoe, Prof. George Mawko, Prof. Antonio Fernando Catelli Infantozzi,

Prof. Herbert Voigt, Prof. Fridtjof Nuesslin, Prof. Shankar M. Krishnan, Prof. Caridad Borrás, Prof. Kin Yin Cheung, Prof. Yimin Hu, Prof. James Goh, Prof. Slavik D. Tabakov, Prof. Madan Rehani, Prof. Tomas Kron, Prof. De Pei Liu, Prof. Monique Frize, Prof. Marc Nyssen, Prof. Eva Bezak, Prof. Ákos Jobbágy, Prof. Kang Ping Lin, Prof. Virginia Tsapaki, Prof. Howell Round, Prof. Magdalena Stoeva, Prof. John Damilakis, Prof. Timo Jämsä, Prof. Geoffrey S. Ibbott, Prof. Stephen Keevil, Prof. Leandro Pecchia.

In 2022 a second Group of FIUPESM was awarded, included colleagues who have contributed to the organisation of IUPESM World Congresses and further international promotion of medical physics and biomedical engineering. This group was announced at the hybrid (on-line and in-person) ceremony at the WC2022 in Singapore. Their Bios were prepared by J Goh and S Tabakov and presented at the ceremony (see Annex 2 to this MPI issue).

The FIUPESM 2022 group includes the following 38 outstanding contributors (medical physicists and biomedical engineers) to IUPESM: Prof. Dietrich Harder, Prof. Walter Bleifeld, Prof. Tapani Jauhiainen, Prof. Perry Sprawls, Prof. David Kopp, Prof. Hiroshi Abe, Prof. Carlos de Almeida, Prof. Ronney Panerai, Prof. Pierre Aletti, Prof. Bernard Rigaud, Prof. William Hendee, Prof. Alfred R. Potvin, Prof. Nigel Lovell, Prof. Tae Suh Suk, Prof. Sun Il Kim, Prof. Lodewijk Bos, Prof. Luis Kun, Prof. Wolfgang Schlegel, Prof. Olaf Dossel, Prof. Per Ask, Prof. Yubo Fan, Prof. Raymond Wu, Prof. Yadin David, Prof. Gilda Barabino, Prof. David Jaffray, Prof. Tony Easty, Prof. Jaroslav Cmiral, Prof. Libor Judas, Prof. Lenka Lhotska, Prof. Anchali Krisanachinda, Prof. Stelios Christofides, Prof. Simone Renha, Prof. Lip Teck Chew, Prof. Chwee Teck Lim, Prof. James Cheow Lei Lee, Prof. Hwa Liang Leo.



Fig.1 Placing the IUPESM Company plaque at its official address in IPeM, York, UK (S Tabakov with IPeM President R Farley, Chief Executive P Morgan and IUPESM/IOMP administrators S Hawking and F McKeown)

## VI. CONCLUSION

The very successful IUPESM term of office 2018-2022 achieved the formation of the legal status of

the Union. This was also related to the most significant update of the Statutes and Bylaws of the Organisation, thus tracing its future development in support of the global recognition and growth of medical physicists and biomedical engineers. The inaugurated IUPESM Fellowship provided a most necessary recognition to colleagues who voluntarily contribute to the objectives of the Scientific Union of both professions.

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## REFERENCES

1. www.iupesm.org
2. Goh, J., Tabakov, S. (2020), 40 years IUPESM. Health Technol. 10, 1331–1336
3. P Smith, F Nuesslin (2013), Benefits to Medical Physics from the Recent Inclusion of Medical Physicists in the International Classification of Standard Occupations (ICSO-08), Medical Physics International Journal, vol. 1, No.1, 2013, p.11
4. Mallard J, The Birth of the International Organizations - with Memories, Scope, Vol. 3 No.2, 25-31, June 1994
5. Tabakov, S. (2018), Drivers of the IOMP Effectiveness and Visibility During the Period June 2015-June 2018 : Continuation of Previous Activities and Introduction of New Initiatives, Journal Medical Physics International, v.6, p 231-241
6. Tabakov S, Goh J, Cheung KY (2022), IUPESM milestone developments and achievements during 1980–2022—a tribute to the contributors. Health Technol. 21 Apr 2022, <https://doi.org/10.1007/s12553-022-00667-6>

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