SHORT HISTORIES

OF THE

NATIONAL VACUUM SOCIETIES

WITHIN IUVSTA

EDITED BY

J. L. ROBINS

A companion volume to the 2nd Edition of the "History of the International Union for Vacuum Science, Technique and Applications" (2001) by J. L. Robins and J. M. Lafferty

2001

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PREFACE

In 1986, James M. Lafferty wrote a History of the International Union for Vacuum Science, Technique and Applications (IUVSTA). He also included, as an Appendix, a compilation of brief historical statements prepared by all but one of the 23 National Vacuum Societies which then constituted the membership of the IUVSTA.

During my 22-year association with the Union, which has included a three year term as President, I found these histories of the societies to be very informative and they helped me to appreciate the subtle differences in the way the national societies are constituted and how they operate in the often very different circumstances that exist within their individual countries.

Thus, when I agreed to prepare a 2nd Edition of Lafferty's History of the IUVSTA, which would update the record to 2001, I accepted also the task of compiling an up-dated set of short histories of the current member societies. However, there are now 30 (soon to increase to 31) member societies within the Union, and the collection of their historical statements, although limited to about two pages each, is itself a large document and it is no longer appropriate for this to be included as an Appendix. Hence it is being published separately, but it should still be considered as a companion volume to the 2nd Edition of the "History of the International Union for Vacuum Science, Technique and Applications" (2001) by J. L. Robins and J. M. Lafferty.

As the Times New Roman font has been used in preparing the original manuscript for this document, it has not been possible to include the eastern European accents in some names within two or three of these histories. I apologise for this but, as the manuscript may be converted into different forms of electronic and hard copy formats, the inclusion of special fonts for individual letters might result in outcomes which cause greater confusion and embarrassment than that caused by the lack of the accent.

I have chosen not to include any Web addresses within these Histories, despite the fact that many national societies now maintain a Web page (currently 20 of the 30 societies). These sites, whether they already exist, or come on-line later or change their URLs, will always be accessible via links from the IUVSTA Website. Indeed I expect that this document will out-live the majority of the current URL addresses and in fact even the IUVSTA's URL address has changed during the compilation of these reports. The URL of the IUVSTA Website is currently

<http://www.iuvsta.org>

In September 1995, the membership of the Bulgarian National Committee on Vacuum Science, Technique and Applications was reluctantly terminated as economic conditions within Bulgaria had made it impossible for that society to maintain its own existence and hence its representation within IUVSTA. However, the Short History contributed by that society in 1986 has been retained here as an historical record, and in the hope that some day that society will be re-formed and re-admitted once again in to the Union.

In 1999 the Pakistan Vacuum Society was granted provisional membership of the Union and it is expected to become the 31st member society when full membership is granted by the General Meeting of the IUVSTA in November 2001. Accordingly, the Short History of that society also is included herein.

I wish to express my sincere appreciation to all authors who have prepared these Short Histories. Some have chosen to update and extend the existing 1986 entry, in which cases both authors' names are included. In other cases, authors have chosen to write new entries, whether or not the society existed prior to 1986. I have tried to keep my suggestions for editorial changes to a minimum, so as to leave the individual character of the presentation (including the choice of English vs American spelling) intact. However, I must thank those authors who accepted my guidance where this was designed to achieve some uniformity in the general fields of information supplied or was required to limit the size of the entry to about two pages. In many cases voluminous amounts of information were supplied on officers who had served the society along with full details of all conferences and educational activities that have been held and developed over many years. I trust that such valuable information, although prevented by space limitations from being included here, will be maintained by societies within their own archives and, additionally, be mounted on their websites where it can be accessed by all.

Finally, my special thanks go to those authors who responded so promptly to my original requests that their entries may have been written in late 2000 or early 2001. However, even very late entries have been appreciated as they have allowed us to achieve a one hundred percent final response from all 31 nations. We now have a complete record for all societies that will be formal members of the IUVSTA at the conclusion of 2001.

J. L. Robins
Perth, Australia.
October 2001

SHORT HISTORIES OF THE NATIONAL VACUUM SOCIETIES WITHIN IUVSTA

INTRODUCTION

The International Union for Vacuum Science, Technique and Applications (IUVSTA) has as its members the National Vacuum Societies of many nations. At present (October 2001) there are 30 nations represented within IUVSTA with the expectation of this number increasing to 31 in November of this year.

Vacuum societies in general tend to have a somewhat different structure and modus operandi to other single-profession-based societies, such as Institutes of Physics. This also applies to IUVSTA when compared to organisations such as IUPAP (International Union for Pure and Applied Physics). This probably arises from the fact that vacuum societies tend to have been formed by specific groups who needed a forum in which to exchange ideas on a common problem, but for which, over the years, the common problems and hence the people wishing to communicate with each other have changed, in a somewhat evolutionary process.

For example, most vacuum societies were founded by people who were engaged in developing improved vacuum pumps, improved low pressure gauges and appropriate techniques for processing vacuum chambers so as to reduce outgassing and virtual leaks. However, these developments required an ever increasing knowledge of gas-surface interactions, which attracted into the societies scientists whose interest lay in surface research. As the attainment of ultrahigh vacuum conditions became routine, an even wider group was attracted into the societies. These were people with interests in surface reactions involving atomically clean surfaces. This included physicists, chemists and crystallographers, and eventually material scientists, electronic engineers and others. This generated, and explains, the multidisciplinary nature of vacuum societies.

Hence we see that vacuum societies have been formed and transformed by the people who benefit from the interdisciplinary environment they offer, and the societies have been moulded into organisations that maximise these benefits.

However, it would be wrong to assume that all vacuum societies have the same structure. Indeed they vary markedly from country to country. This is not surprising when it is recognised that the fields of research emphasis vary from country to country. Also the grouping of scientists varies. To take a hypothetical example, in some country there may be a Thin Film Group which was formed early and has become so well established that there is now no wish for it to operate under the umbrella of a vacuum society. Thus each national society has had to adapt to accommodate differing circumstances.

Another striking feature of most vacuum societies is their ability to attract and maintain as members: academics, scientific and technical researchers, practising technologists, equipment manufacturers, and sales and service personnel. It is common to find representatives from all of these groups contributing to a society's activities, including its administration. Indeed it is possibly this mixture of interests that has facilitated the speed with which new ideas have been transformed into practical processes and devices for commerce and further research.

The Short Histories which are presented here have been solicited from the 31 national vacuum societies which will form the membership of IUVSTA at the end of 2001. For historical reasons a previous statement by a former member society, the Bulgarian National Committee on Science, Technique and Applications, is also included. The presentation of these Short Histories is intended to serve a number of objectives. Firstly, they offer historical records, not only of the societies but also of developments in vacuum and related fields within the various countries. Secondly, they illustrate the variety which exists in the organisational structure of the different societies and the range of activities which have been initiated. Thirdly, they can help people who are serving IUVSTA to understand the special circumstances pertaining to each of the member societies with which the Union is collaborating.

As explained in the Preface, these historical statements have been collected in conjunction with the writing of a 2nd Edition of the History of the IUVSTA, which updates the full description of the Union to the year 2001. Thus, whilst this collection of Short Histories of the national societies is being published separately, it should be read as a companion volume to the 2nd Edition of the "History of the International Union for Vacuum Science, Technique and Applications" (2001) by J. L. Robins and J. M. Lafferty.

J. L. Robins
Perth, Australia.
October 2001

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* Non-member since September 1995.

VACUUM SOCIETY OF AUSTRALIA (VSA)

Original (1986) by Tony Simpson
Updated (2001) by John L. Robins

The first attempt to form an Australian Vacuum Society was initiated by James Browne of Melbourne in 1965. Browne, an Engineer producing small finely crafted rotary pumps, conferred with other local enthusiasts including Don Swingler of the Chemical Physics Division of CSIRO and they gained an enthusiastic response on circularising the idea among Australian users of vacuum technology. After much consultation it was decided that an infant Australian vacuum society would be more secure if set up as part of an already well established body.

The result was that the Vacuum Physics Group (VPG) of the Australian Institute of Physics (AIP) was formally constituted in December 1966. The affairs of the Group were administered by a National Committee which rotated biennially between the States of Australia. In addition State Representatives were elected to organise local activities such as talks, seminars and one-day events.

In the early days a considerable level of activity was established and maintained. This included a biennial Australian Vacuum Conference which incorporated short courses and an equipment exhibition, bimonthly circulation of a national newsletter, and local activities at State centres. Membership of the VPG rose to an enthusiastic 200.

By invitation, in 1971, the VPG became a member of the IUVSTA and since then has nominated Councillors to the IUVSTA Executive Council, and representatives to the various IUVSTA Divisions.

During the early 1970's the National Committees failed to appreciate the significance of growing levels of interest in the applications areas of vacuum technology and, although including those areas in their national conferences, they did not strongly foster the involvement of those sectors in the activities of the VPG between conferences. Also, the fact that the VPG was established within the Australian Institute of Physics discouraged some of the multidisciplinary potential members from joining the Group. This may have contributed to interest groups such as surface science, thin films, and fusion technology proceeding to nucleate into small disparate bodies or amalgamate with other societies such as the Royal Australian Chemical Institute. Added to this, as the ready availability of commercial vacuum equipment increased, there was a slow diminution of people interested purely in developing vacuum technology.

By 1978, when the 6th Australian Vacuum Conference was held, the newsletter had ceased circulation and there was no longer any local state-based activity. Faced with this increasing loss of interest, a "caretaker" executive committee was elected in December 1981, and was commissioned to merely monitor the level of interest in vacuum-related activity within Australia. However the vacuum technology short course program, which had been established and continually presented by Tony Simpson and Kevin Lawlor since 1977, remained in demand and revenue from this allowed the Group, and its hard core supporters, to remain financial and active within the IUVSTA.

During 1988, a steering committee consisting of representatives from two Australian vacuum equipment manufacturers, three importers of vacuum equipment, government research laboratories and academic institutions carefully deliberated the issue of starting an Australian vacuum society. Key members of this group were Tony Simpson, Don Swingler, Kevin Lawlor and Ray Carter. As a result of this initiative, during the second half of 1989, the completely independent Vacuum Society of Australia (VSA) was formed. This society effectively took over from and replaced the VPG, with the harmonious agreement of the AIP. The VSA was henceforth recognised as the Australian member of the IUVSTA.

The objectives of the VSA are essentially:

- to allow people involved or interested in the production of vacuum, or in vacuum science and techniques, or in applications of vacuum, to come together in a united body.
- To engage in and/or encourage the spread and advancement of knowledge on vacuum science and technology, and of the areas of vacuum applications, by means of:
  (a) teaching in educational institutions and short courses,
  (b) seminars, lectures, workshops, symposia and conferences,
  (c) equipment exhibitions,
  (d) literature circulation to society members.
- to represent Australia within the IUVSTA.
- to collaborate with other societies if it is in the interests of the VSA and the development of vacuum science, techniques and applications to do so.

The Short Course program remains a major activity of the VSA, with courses being given across Australia throughout the year, as well as in conjunction with the re-established conference and exhibition series. Seven conferences in this new series have been held in the past ten years since the 1st National Conference of the VSA was held in February 1992. These are sometimes held in conjunction with one other society and sometimes within a National Congress of the AIP, which now gathers together and includes the conferences of up to ten societies and thus facilitates a fruitful mix of scientists from a wide range of groups with common or overlapping interests. This brings together people whose research involves the applications of vacuum science but who may not be members of the VSA.

Other activities include the publication of a quarterly newsletter and a buyers' guide for vacuum equipment distributors within Australia. In recent years the VSA has established and maintains a web page.

Soon after the formation of the VSA, the membership rose to 270 individual members and about 10 corporate (company) members. Whilst the corporate membership has been maintained, the number of individual members has stabilised at about 135.

The VSA has twice bid to host the IUVSTA's International Vacuum Congress but, so far, has been unsuccessful. However, it has successfully hosted an IUVSTA Scientific Workshop and an Executive Council meeting in 1997. It has been continuously represented on the Executive Council since 1971 by J Ward, M T Elford, J L Robins, A Simpson, D L Swingler, A Morton and D J O'Connor. In addition, John Robins has served the IUVSTA as Recording Secretary (1980-1983) and as President (1995-1998). The VSA also ensures that Australia is represented on all of the IUVSTA Divisions.

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AUSTRIAN VACUUM SOCIETY

Oesterreichische Gesellschaft für Vakuumtechnik (OEGV)

M Leisch

The "Oesterreichische Gesellschaft für Vakuumtechnik" (OEGV) - the Austrian Vacuum Society - was founded in 1969 during an informative meeting on the "Atominstitut" of the University of Vienna by a group of scientists and industrial managers, headed by F. Viehboeck.

The original formation of the OEGV was on October 23, 1969 with acceptance of the statutes. On March 19, 1982 new objectives like Surface Science, Thin Films and Plasma Science were entered into the statutes. On November 26, 1991 the possibility of a second re-election of members of the board to ensure continuity was entered into the statutes.

The main purpose and objectives of the OEGV are to bring together and to support all those interested in production, measurement and application of vacuum, to distribute information, and to organise courses, meetings and seminars. The support is especially focused to young society members who can apply for grants given for travel to improve international contacts and experience.

As a society, the OEGV is represented by the President. The board consists of the President, Vice-President, Aktuar (Secretary), Quaestor (Treasurer) and several co-opted members (at least two members from industry), each serving a two-year term.

The current number of members is 110. The members are individuals (90%), organisations, companies and distributors (10%).

The proportion of industrial involvement was very important during the formation of the OEGV. In the beginning about 50 percent of the members were coming from industry. The proportion has changed continuously. Presently most of the members are coming from the universities who dominate now the scientific structure of the society.

The scientific and technical areas covered by the OEGV have changed in parallel to the working fields of the individual members. In the beginning of the OEGV, vacuum technology in general was the main field of interaction. Nowadays surface science, nanometer structures, thin films and plasma science are the fields of main activity in the OEGV.

The OEGV has sponsored a considerable number of activities. Courses for technicians and engineers have been organised at university institutes and industrial plants. Examples are: "Production and measurement of vacuum" (Vienna, 1970), "Vacuum technique in electrical-technical industry" (Vienna, 1971), "Fundamentals of vacuum technique and production of thin films" (Vienna, 1973) and "Fundamentals and application of vacuum technique" (Kapfenberg, 1980).

In 1977 the OEGV, together with the Oesterreichisches Forschungszentrum Seibersdorf Ges.m.b.H. and the Technische Universitaet Wien, was responsible for the organisation of the 7th International Vacuum Congress (IVC) and the 3rd International Conference on Solid Surfaces (ICSS) in Vienna at the Congress Centre Hofburg on September 12 -16, 1977. This

congress, attended by more than 1300 participants, was a main activity in the first decade of the OEGV.

The 3rd European Vacuum Conference was organised in September 1991 in Vienna. In 1993 the OEGV was responsible for the 9th International Conference on Thin Films (ICTF-9) in Vienna. The 1999 European Conference on Surface Science (ECOSS-18) was held in Vienna under sponsorship of the OEGV. In addition the OEGV was active in the organisation of several IUVSTA-workshops (2nd in Obertraun 1990, 7th and 13th in Kitzsteinhorn 1993 and 1996 and 25th in Leibnitz 1999).

In 1979 the first joint meeting with the Hungarian Vacuum Society was organised in Gyoer, Hungary, which was the beginning of a successful series of conferences, the "Joint Vacuum Conference" running under sponsorship of IUVSTA. In spring 2002 the OEGV will organise the 9th Joint Vacuum Conference in Graz, Austria.

The OEGV has sponsored and co-sponsored several other international conferences including the "Symposium on Sputtering" (Vienna 1980) and the "Symposium on Surface Science" (Obertraun 1983 and 1985). Joint Meetings were held with the German Vacuum Society (DGV) and the Swiss Vacuum Society (SGV) within the annual spring meetings.

Since 1980, when the Max Auwaerter Preis (Award) was first announced, the OEGV has had the honour to present this prize to the recipient in a special ceremony at conferences which it has organised or co-organised.

A main future objective of the Austrian Vacuum Society will be the re-enforcement of the collaboration between university research and industrial applications. The new technologies (nanometer structures, biological surfaces, photonic, etc.) offer a new challenge for the traditional vacuum and surface scientists, as organised in our vacuum society. The organisation of workshops and conferences, as well as the intensification of the international scientific collaboration, will be an additional goal for the future.

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THE BELGIAN VACUUM SOCIETY

Société Belge de Vacuologie et de Vacuotechnique
Belgische Vereniging voor Vacuologie en Vacuümtechniek
Belgische Vakuumgemeinschaft (BELVAC)

Original (1986) by Jose Dupont
Updated (2001) by Remy Vanden Berghe

Two working groups founded the Society on May 16, 1963. One was the section on Vacuum Technique of the "Société Royale Belge des Ingénieurs et des Industriels, asbl", founded in 1954, and the other was a contact group "Nuclear Sciences and Low Pressures" of the "Institut Interuniversitaire des Sciences Nucléaires", Brussels, founded in 1955.

The purposes of BELVAC are to create and maintain interesting and useful relations between its members concerning vacuum and to promote the development of vacuum science and technology and contribute to its advancement in Belgium. This aim is pursued by organising lectures in Vacuum Sciences in the different regions of the country. Indeed the three linguistic groups united in Belgium and in BELVAC are an advantage for achieving another important goal of BELVAC: to provide interesting and useful relations with foreign vacuum societies and with international organisations having the same objectives. Indeed it would require too much space to relate here all of the national and international meetings held, since the first meeting - the "First International Congress on Vacuum Techniques", in June 1958 in Namur, Belgium - organised by the two groups from which BELVAC as a co-operation merged. These meetings are sometimes organised together with either the French or the Dutch Vacuum Societies, and there is a close co-operation for the regular organisation of an annual joint meeting both with NEVAC, Nederlandse Vacuum Vereniging, (Netherlands) and with the SFV, Société Française du Vide, (France).

BELVAC is a living Society, and as such its history has also periods of less activity (1975-1983). Then the belief in the future of BELVAC and the perseverance of Mr J. Dupont resulted in a rejuvenated BELVAC, reporting its activities in a magazine "BELVAC News", written in English and appearing every fourth month since 1984. BELVAC News contains also at least one article discussing a Scientific Topic, and contributions of Belgian and Foreign Vacuum suppliers which are highly appreciated.

BELVAC is a non-profit society with legal status. The organisation consists of a council with a president, a secretary, eight representatives in the IUVSTA Divisions and eight administrators.

BELVAC was the representative of the Belgian Standardisation Organisation in the six Working Groups of the International Standards Organisation (ISO) TC 112.

BELVAC is also the liaison between the Secretary General of IUVSTA and the Belgian Ministry of Justice on the IUVSTA Statutes.

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THE BRAZILIAN VACUUM SOCIETY
Sociedade Brasileira de Vácuo (SBV)

Original (1986) by Neelkanth G. Dhere
Updated (2001) by Vladimir Jesus Trava Airoldi

The Brazilian Vacuum Society (SBV) is a non profit organization with an independent administration. It was founded on May 17, 1978 at a meeting of scientists, professors, engineers and technicians held at the Instituto Militar de Engenharia (IME), Rio de Janeiro. In 1984 the headquarters was moved to UNICAMP University, in Campinas, São Paulo. Two years after the SBV was founded, it had a total membership of about 80. At the beginning of the year 2001, the SBV had about 120 full members, 30 student members, 12 supporting industrial members, and 6 institutional members.

Although the SBV did not originally grow as fast as it is growing today, it is now keeping pace with the scientific and development activities in our country. The SBV is an active community, bringing together Universities, Research Institutes and Industries covering several areas of the knowledge which involves vacuum technology. The SBV normally organizes its annual Vacuum Congress (Congresso Brasileiro de Aplicações de Vacuo na Industria e na Ciência - CBRAVIC) and Vacuum Courses in a period preceding the end of July. CBRAVIC extends over a three day period and typically includes 10 invited plenary presentations and 100 contributed papers on original research and development. In addition, it is traditional that in the days before and after the congress the SBV presents some courses on Basic and Advanced Vacuum Technology and on related topics such as Surfaces and Interfaces, Thin Films, Characterization Techniques, Metrology, Solar Cells, Plasma Applications and Atomic and Molecular Physics.

Workshops on Liquid Crystal, Plasma Science, Diamond and Related Materials and Nano-structured Materials have been supported by the SBV with both domestic and international participation. Also, the SBV supports the Brazilian Journal of Vacuum Application, which is a periodical on Vacuum Science and Technology. It is issued twice yearly and is supported by national and international referees and members of the editorial board. A great effort is in progress today, which is focused on expanding the Brazilian Vacuum Society activities to the South American regions.

The SBV recognizes the extreme effort being made by some researchers and engineers in order to keep our society looking to the future. Accordingly, in 1992 it introduced the grade of Honorary Membership, and Prof. Dr. Ross Alan Douglas from UNICAMP University was the first to be honored with this permanent position in 1995.

During the year 2000, as part of the annual congress, the SBV introduced an innovation in terms of cultural incentives to general scientific information, including some short and instructive courses to the “high school teachers communities” expounding the history of vacuum science and technology, its applications, and its influence on people’s every-day life.

The Brazilian Vacuum Society Administration (elected by all members for two years with permission to be re- elect once more) is composed of : the President, first and second Vice-President, first and second Secretary, first and second Treasurer, Cultural Director, Scientific

Director, and two Board Councillors. The SBV also nominates two Councillors and Divisional representatives for all scientific areas of the IUVSTA.

Finally, the major purpose of the Brazilian Vacuum Society is:
- to disseminate the application and theory of vacuum science and technology to the developed communities throughout our country, including all Universities, Research Institutes and Industries,
- to facilitate cooperation among different scientific and technological communities, by organizing congresses, workshops and courses involving many areas of the knowledge which is related to vacuum technology,
- to keep together, in permanent contact, the academic activities in Universities and the practical activities in Industry,
- to represent the Brazilian Scientific and Technological Communities on Vacuum and Related Areas within IUVSTA.

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THE BULGARIAN NATIONAL COMMITTEE ON VACUUM SCIENCE, TECHNIQUE AND APPLICATIONS (BNVC)

Bulgarska Akademiya na Naukite -
Natsionalen Komitet za Vakuumka Fizika e Technika

Original 1986 entry by Grigori I. Grigorov

[The BNVC's membership of IUVSTA terminated in 1995]

The Bulgarian National Committee on Vacuum Science, Technique and Applications (BNVC) was established in 1968. The main aims of BNVC are to:
- follow, study and support the development of vacuum science, technique and applications;
- help and support specialists in the field:
- help and improve the education in the field;
- help the organizing of appropriate conferences;
- develop and improve contacts and cooperation with corresponding international and national organizations.

The first President of BNVC was Prof. E. S. Djakov, a regular member of the Bulgarian Academy of Science. He remained in this position until his death in 1978. Since 1983 the President of BNVC has been Prof. Dr. A. Y. Spasov.

Conferences organized in the past include the:
- 26th IUVSTA Executive Council Meeting and Vacuum Seminar, Sofia 1976.
- A series of National Schools on Vacuum, Electron and Ion Technologies (VEIT): 1st in Primorsko 1977, 2nd in Varna 1980, 3rd in Varna 1983, and 4th in Sozopol 1985.

The National School on VEIT became more and more important with an increasing number of foreign lecturers and participants until it was established as the main national forum in the field of vacuum. Most of the lectures presented appear in the journal Vacuum.

At the present time [1986] BNVC is governed by a council of 20 delegates from different institutions in science and industry. The officers of the BNVC council are [1986]: President - Prof. Dr. A. Y. Spasov, Vice President - Assoc. Prof. Dr. G. I. Grigorov, Vice President - Assoc. Prof. V. I. Kanev, and Scientific Secretary - Mr. K. K. Tzatzov.

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CHINESE VACUUM SOCIETY (CVS)

Zhong-Yi Hua

The Chinese Vacuum Society (CVS) is a non-governmental, national organization of those professionals who are interested in vacuum science and technology (VST) from most of the research institutes, universities and manufacturers of vacuum products in China. The CVS is affiliated with the China Association for Science and Technology (CAST).

The society was formed in October 1979. Its objectives are to encourage and organize many kinds of academic activities in the field of VST to:

- ensure the growth and development of VST,
- enhance the popularization and application of research achievements in VST,
- heighten the growth of talents in VST, and
- ensure that VST contributes to economic development and thus makes a significant contribution to the modernization of China.

The CVS Executive Committee now includes 105 persons, who were elected by the members of the society during the 5th CVS National Conference held in October, 1998. The elected CVS officials serve a 5-year term of office.

The society has various subcommittees including:

- An Editorial Board of the Journal "Vacuum Science and Technology (China)".
- A Technology Advisory and Consulting Committee.
- An Educational Committee on VST.
- A Referee Committee for CVS Scholarship.

The scientific and technical activities of the CVS are covered by the following Divisions:

- Vacuum Production and Measurement. (Formerly 4 Divisions, namely, Vacuum Physics, Vacuum Production, Vacuum in Nuclear Physics, and Vacuum Measurement and Calibration).
- Surface Science and Nanoscience.
- Mass Spectroscopy and Leak Detection.
- Electronic Materials and Devices. (Formerly Vacuum Application in Electron Devices)
- Thin Films.
- Vacuum Metallurgy.

There are 10 Local Chapters of the CVS. These are located in Beijing, Tianjin, Shanghai, Shenzhen, Anhui, Jiangsu, Zhejiang, Guangdong, Sichuan and Shansi.

The society currently has about 3,000 individual members and about 110 institutions, including research institutes, universities and factories, are affiliated with it. Of these 110 institutions about 40 are industrial firms.

The CVS is a non-official organization and provides a wide variety of services to its members including:

- Organizing all kinds of academic activities to promote exchange and cooperation in the field of VST both domestically and internationally.
- Editing the journal "Vacuum Science and Technology (China)" and producing various types of printed and audio/video publications.
- Channelling VST into different related industries.
- Providing an advisory service and/or decision-making recommendations and technical consultations to industrial companies and various government departments on R&D strategy.
- Popularizing VST by offering training programs to engineers, high-school students and laid-off workers.
- Organizing exhibitions of the latest R&D, advanced technology and new products in the field of VST.
- Organizing in-service training for scientists, engineers and technicians, and thus providing continuous education.

The CVS Science and Technology Achievements Award (Hayashi Award) has been presented by the CVS since 1993.

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CROATIAN VACUUM SOCIETY

Hrvatsko Vakuumsko Drustvo (HVD)

N. Radic

The Croatian Vacuum Society was founded on July 20, 1979, in Zagreb, by a dozen engineers and scientists involved in vacuum technique. However, the progress to such an event can be traced back to late 1950s. At that time several industrial companies in Croatia used vacuum equipment on a large scale for the production of light bulbs, rectifying tubes, various chemical and pharmaceutical products and for food processing. On the other hand, the construction of several large scientific facilities (neutron generator, cyclotron) at the Rudjer Boskovic Institute in Zagreb required state-of-the-art knowledge of vacuum science and technology. Representatives of both the industrial and scientific communities participated at the First International Vacuum Congress in Namur in June 1958. The Croatian vacuum experts participated at the First Yugoslav Congress on Vacuum Science held in 1960, organized by the Slovenian Society which had been established by that time. Although not formally organized, the Croatian vacuum experts were a well-defined and stable group of physicists and electrical engineers, coordinated by Mme Milena Varicak. At that time their interest was concentrated upon improvement of the production and measurement of vacuum. The Yugoslav Centre for Vacuum Technique (JCVT) was founded on the day following the First Yugoslav Vacuum Congress, and the vacuum groups and individuals from Croatia joined in. In 1962, the JCVT was transformed into the Yugoslav National Committee for Vacuum Technique (JUVAK), as a prerequisite for membership in the newly formed IUVSTA. The JUVAK started as an organization comprising vacuum societies from Slovenia, Croatia and Serbia, the respective vacuum societies sharing (in unequal proportions, however) its history till its end in 1992. For their part, the Croatian representatives participated in most JUVAK activities and regularly attended Yugoslav Vacuum Congresses, 11 of which were organized during the 1960-1990 period.

The Croatian vacuumists took a long time to organize themselves. In 1964, a group of engineers from the Electrotechnical Institute “Rade Koncar” (an industrial research institute) and representatives of the vacuum equipment importers formed the Section for Vacuum Technique of Croatia - a predecessor of the Croatian Vacuum Society. Somehow or other, the scientists were absent from this event. Two years later, the Section organized the 3rd JUVAK Vacuum Congress in Zagreb. In connection with this meeting, the Section also hosted the 8th Executive Council Meeting of IUVSTA on September 28, 1966. At the Congress, the thin films section presented lately aroused interest in that topic in Croatia. The organized activity of the Section gradually decreased after the Congress.

After a setback of the liberal movement in Croatia in 1971, the Section was almost inactive for several years. The guardians of the remnants of the Section were people from the Faculty of Mechanical Engineering which in the early seventies worked on metal processing in vacuum, and members of the freeze drying community. However, a continuous activity in the thin films research (M. Persin) and vigorous growth of theoretical surface science (M. Sunjic) were presented at many international and domestic meetings during the 1970s. In the meantime, the organization of the professional unions had to be adjusted to the more “federal” model that evolved in Yugoslavia. Due to dissipation of its membership, the Croatian Vacuum Section was unable to follow Slovenian and Serbian Vacuum Societies that reorganized themselves along the new lines. Because new rules required reorganization of the JUVAK as a union of at

least three vacuum societies, the need for revitalizing the Croatian vacuum organization became pressing indeed. As a result, the Croatian Vacuum Society (CVS) was founded at a meeting of vacuum science and technology experts associated with industry and academic research, on July 20, 1979.

The prime objectives of the CVS were the promotion and stimulation of professional communication among its members and between similar societies, as well as the initiation of educational programs at various levels. The first Chairman of the CVS was Mr. R. Stojanovic. During the 8th Vacuum Congress held in Bled (Slovenia) in 1979, the new JUVAK was formed as a Union of Vacuum Societies of Slovenia, Croatia and Serbia. As a sign of new life, the Croatian Vacuum Society organized the 9th Vacuum Congress in 1983.

Soon after this, the CVS was in crisis again. Consolidation was attempted by grass-root activity - education and information of the potential membership. Several courses covering various levels of vacuum science were organized in the late eighties. These courses attracted considerable attendance of the newcomers to the field, as well as those who wanted to improve their knowledge. Through them, the scientists from the research institutes (Rudjer Boskovic Institute and Institute of Physics) and the universities became more and more involved in the regular activities of the Society. As far as research was concerned, thin films topics continued and experimental surface science grew vigorously, while some classical subjects gradually lost importance. The combined effort resulted in a certain shift of focus from the engineering side towards more scientific. The new president (H. Zorc) and the secretary (M. Milun), elected at the 1990 CVS Annual Convention, were both from research laboratories.

Under rather unfavorable circumstances (during the violent dissolution of Yugoslavia) a period of new activity has begun. The Croatian Vacuum Society, together with the Slovenian Vacuum Society, decided at the beginning of 1992 for dissolution of the JUVAK and applied for individual membership in IUVSTA. After being a provisional member for about a year, the CVS was admitted as a full member of IUVSTA at the 12th General Meeting in The Hague, held on October 12, 1992. Since then, the CVS has organized bilateral annual meetings with the Slovenian Vacuum Society. It is also one of the organizers of the Joint Vacuum Conference and the 8th Joint Vacuum Conference of Croatia, Austria, Hungary and Slovenia was organized in Pula, Croatia in June 2000. In 1997 the new officers (N. Radic as president and P. Pervan as secretary, both from research laboratories) were elected.

At present, the Croatian Vacuum Society has 77 individual members and 7 corporate members. About half of the membership comes from the companies which use vacuum in manufacturing their products. The other half works in research laboratories or at universities (mostly on thin films, electronic materials and surface science or just using vacuum in their research). Many of them participate regularly in the international vacuum conferences and the meetings on surface science and thin films held in Europe.

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CZECH VACUUM SOCIETY

Ceská Vakuová Spolecnost (CVS)

Zbynek Hulek and Pavel Hedbavny

In the former Czechoslovakia, since 1965 the scientific community of people working in the field of vacuum technology and applications, was represented within the IUVSTA by the "Czechoslovak National Committee on Vacuum Science, Technique and Applications".

Two decades later a Working Group "Vacuum Technology" was created within the framework of the Czechoslovak Society for Science and Technology. This Working Group organised summer schools and seminars on vacuum science and technology.

After changes in Czechoslovakia in 1989 and separation of the Czech and Slovak Republics, the "Czech Vacuum Society" (CVS) was founded on the 29 April 1993. The majority of members of the Working Group Vacuum Technology became members of the Czech Vacuum Society.

The Czech Vacuum Society became the only organisation representing the community of people working in the field of Vacuum Science and Technology in our country. From the very beginning, excellent working contacts were created between the Czech and Slovak Vacuum Societies. In fact, this was a continuation of the former cooperation and the foundation of both national Vacuum Societies was prepared in an atmosphere of very close cooperation between Czech and Slovak colleagues. Till now all summer schools on vacuum science and technology are organized as a joint activity of both Societies.

The CVS established also links to IUVSTA. The General Meeting 12 of the IUVSTA in 1995 in Yokohama accepted the application from the CVS to join the IUVSTA with 2 shares.

The main activities of the Czech Vacuum Society are:

- A Summer School on Vacuum Technology organized once a year. Each summer school is devoted to a selected part of vacuum science - usually with an industrial application. In spite of the emphasis on practical aspects, people from Universities and Academy of Sciences also take part.
- PRAGOVAC - an exhibition with a seminar, taking place every year in mid-November. Vacuum manufacturers present their products and technically oriented lectures are given.
- Seminars and lectures on vacuum science, technology and related phenomena.

The membership in the CVS may be individual or collective. The collective members are Universities and Institutes of the Czech Academy of Sciences (membership of these institutions is fully free of charge) and companies (companies pay an enhanced membership fee). At present the CVS has 93 individual members and 15 collective ones. The Committee elected for the 3-year period is responsible for organizing the CVS between General Meetings. The scientific structure follows the divisional structure of IUVSTA.

For the current 1999 – 2002 triennium the serving officers are: President: Pavel Hedbavny, Vice Presidents: Vladimir Matolin and Zbynek Hulek, and Treasurer Tomas Gronych.

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THE FINNISH VACUUM SOCIETY

Suomen Tyhjiöseura

Jari Koskinen

The Finnish Vacuum Society was founded on April 13, 1973. A formal application for membership in IUVSTA was submitted to the Executive Council Meeting in Madrid on September 27, 1973. Membership was granted by the IUVSTA General Meeting on March 26, 1974 in Kyoto, Japan.

The Finnish Vacuum Society was founded to advance the development and knowledge of vacuum technologies in Finland. The active people were from the Helsinki University of Technology, University of Helsinki , Department of Physics, University of Jyväskylä, Technical Research Centre of Finland (VTT) and companies producing vacuum devices and selling vacuum components and systems. The inaugural President was K. Valli (1973-1974). The number of members in the society has been varying between 100 and 300.

The aims of the society are to:

- create connections between people and organisations which are active in the field,
- distribute information about vacuum technology, mainly by using national publications and seminars,
  advance research and education in vacuum technology,
- develop the special vocabulary of vacuum technology in Finnish,
- collaborate with corresponding national and international organisations in this field.

The society has been active in organising annual seminars on vacuum technology and arranging visits to laboratories with advanced vacuum technologies. The Finnish Vacuum Society held a National Summer School on Vacuum Sciences in 1980 in Jyväskylä and again in 1984 in Helsinki. It also held the international "Nordic Conference on Surface Science" on August 18-20, 1982 in Tampere. In connection with this meeting it hosted the 44th Executive Council Meeting of the IUVSTA on August 16-17. The society has published numerous articles and organised the writing of a text book of vacuum technology (in Finnish), which was published in 1986. The Finnish Vacuum Society is a member of the Finnish Physics Society.

Councillors to the IUVSTA have been Pekka Viitanen (1974-1980), Markus Pessa (1980-1986) and Eero Ristolainen (1989-present). In addition, Risto Nieminen, Jyrki Molanus and Jari Koskinen have served as Alternate Councillors. These people have also served on various IUVSTA committees.

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THE FRENCH VACUUM SOCIETY

Société Française du Vide (SFV)

Pierre Pileur

In 1938-39 a group of French scientists and people from industry, including the late Dr. Fernand Holweck (deceased 1941), proposed to form a national organisation which would gather together scientific, industrial and educational representatives for the purpose of promoting vacuum science and techniques through education. Due to the intervention of World War II this initiative was delayed until 1944, and the constitutive general assembly took place on 10th March 1945. This society was established as a professional scientific society, called Société Française des Ingenieurs et Techniciens du Vide (SFITV) or the French Society for Vacuum Engineers and Technicians. It maintained this name until 1974 when, for the purpose of international standardisation, the name was changed to Société Française du Vide (SFV) or the French Vacuum Society.

To achieve its full objectives, the councillors and executive board members of the SFV include representatives from the three communities: scientific research, industry (equipment manufacturers and users) and education (universities). The SFV was recognised by the French government as a Public Utility Society in March 1957.

The major activities of the SFV include:

- Publishing

The first activity of the SFV was to set up a technical review journal, Le Vide. Its publication started in December 1945, only nine months after the SFV was founded. In particular, all the Proceedings of the conferences organised by the SFV are published in this journal. The Society also publishes scientific and technical books. In the year 2000, a Web site was created to improve communication.

- Conferences and Workshops

During the 1946-1954 period, the SFV organised only technical workshops but each of these attracted about 100 to 120 attendees. Then, in 1954, the SFV organised its first international congress on “Oxide Coated Cathodes” in Paris. This was followed in 1956 by an international congress on “Ultra High Frequency Tubes” at which more than 178 papers were presented. Since that date, about 200 conferences and congresses have been organised by the SFV at national, European and international levels. In 1980, the SFV hosted the IUVSTA’s 8th International Vacuum Congress in Cannes.

- Education

The first Technical Course with practical training took place in 1968. This was jointly organised with the Technology Institute of Orsay University. Now about thirty courses are available each year on topics such as vacuum production, vacuum control, leak detection, thin films, plasmas processes, and the major types of physical analysis. The practical training is carried out in the SFV Vacuum Laboratory for Teaching located in Orsay. Some courses are offered in conjunction with conferences on subjects related to the topic of the conference. Specific courses can also be organised at industrial sites on request. Some of the courses can be taught in the English language.

During the 1990's there was a strong move within the SFV to set up technical divisions and 6 Divisions have been created: Adhesion, Dielectrics, Plasma Processes, Microelectronic Materials and Processes, Vacuum Metallurgy and Thin Films, Vacuum Science and Techniques. They all participate actively in the publishing, conference and education programmes of the Society.

Since 1953, the SFV has developed international relationships with a number of different scientific communities. It has willingly helped and encouraged representatives of other countries, both in Europe and in other parts of the world, to set up national vacuum societies in their own country. The SFV participated in the creation in 1959 of the International Organisation for Vacuum Science and Technology (IOVST) but decided not to join this organisation until it was transformed into a confederation of national vacuum organisations. When in 1962 the IUVSTA was formed to replace the IOVST, the SFV was one of the ten Founder Members and contributed, through M. Berthaud, to drafting the original statutes and by-laws for the Union, and J. Debiesse was elected as the first Vice-President. Members who have served as Officers of the Union include: J. Debiesse (President), D. Degras (STD Chairman), P. S. Choumoff (Treasurer), and M. Berthaud and M-G Barthés-Labrousse (STD Secretaries). Today, the SFV has representatives in the various committees and all Divisions of the IUVSTA, as well as on the Executive Council, and Dr. M-G Barthés-Labrousse will become the IUVSTA President in 2001.

The 50th anniversary of the SFV was celebrated in Paris in 1995 with the participation of national and international personalities from the political, scientific, educational and industrial worlds, including Professor T. E. Madey, who was the IUVSTA President at that time.

Being the oldest national vacuum society in the world, the SFV already has a long history. Its continuing contribution, both within France and internationally, to activities in fields related to the development and application of vacuum will remain strong. This is assured by the continuing input of its members and councillors and to the dedication of the members of its secretariat, currently comprising five permanent staff.

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GERMAN VACUUM SOCIETY
VACUUM-BASED SCIENCE AND TECHNOLOGIES
Deutsche Vakuum-Gesellschaft e.V. (DVG)
Vakuumgestützte Wissenschaften und Technologien

Hans Oechsner and Michael Scheib

The most famous historical vacuum experiment in Germany is that of Otto von Guericke with the Magdeburg halfspheres which dates as early as 1654.

Up to the beginning of World War II vacuum science and technology in Germany had its domicile in the national physical societies. Then in the early fifties, mostly due to technical applications in industry, three vacuum societies were founded. One of them, the Deutsche Arbeitskreis Vakuum DAV was sustained by four important science and technology societies: the German Physical Society, the German Society for Chemical Apparatuses, the Union of German Engineers, and the Society of Communications Engineering.

In March 1963, the three vacuum societies combined to the Deutsche Arbeitsgemeinschaft Vakuum DAGV, under the guidance of these four supporting societies. From 1973 the office of this new society was located in the Institute of Interface Research and Vacuum Science at Jülich, a national vacuum institute which itself had been founded as an initiative of the German vacuum society. In 1990 the name was changed to German Vacuum Society (Deutsche Vakuum-Gesellschaft DVG) which became an officially registered organization (e.V.) in 1998. In 1991 the German Vacuum Society was unified with the corresponding society of the former German Democratic Republic, the so-called National Vacuum Commission.

The main purpose of the German Vacuum Society is to monitor and support research and development in the areas of thin films, surface science, vacuum science and technology and, recently, nanostructure science and technology. The society is the national link to the vacuum societies of other countries, such as the AVS, and represents science and technical institutions and companies in the above mentioned fields at a national and international level. One important activity is to collaborate with the IUVSTA and with its Divisions.

The administrative structure includes a President (currently Prof. H. Oechsner) who is assisted by two Deputies and a Secretary who cares for the administrative matters. The board of the society, which is elected by the society members, consists of individuals from universities, industry and research institutes with about half of these being company representatives. A meeting of the society's members is held at least once a year.

Regarding the scientific structure, the German Vacuum Society has Scientific Divisions in the areas of surface science, thin films, vacuum science and technology, electronic materials and processing, and nanostructure science and technology. In addition there are Divisions for education and standardisation.

Currently, the society has 160 personal members and 14 industrial (company) members. However, as some of the Divisions are operated in conjunction with the German Physical Society, more then 3200 individuals must be added to the personal members.

The German Vacuum Society organises or co-organises national and international conferences, examples of which are the Conference on Applied Surface Analysis, every two years, since 1980; the National School for Vacuum Technology, every year, since 1990 (organized by the Education Division); the International Symposium on Trends and Applications of Thin Films, every two years, since 1988 (organised together with the French and more recently with the Swedish Vacuum Societies). Additionally, in 2000, the Division of Nanostructure Science and Technology has organised two conferences: NC-AFM 2000, the International Conference on Non-contact Atomic Force Microscopy; and SPS-2000, the International Conference on Scanning Probe Spectroscopy. The Education Division produces publications such as a collection of problems on vacuum science and technology, and a vacuum dictionary. Since its foundation the German Vacuum Society has been closely related to the German Physical Society. Both societies jointly support the Divisions of surface science, thin films, and vacuum science and technology. These three German Vacuum Society Divisions are traditionally co-organisers of the German Physical Society spring conferences on solid state physics.

Every year since 1986 the German Vacuum Society grants the Gaede Prize, which is now established as one of the most prestigious Physics awards in Germany, to younger scientists for outstanding research in the scientific and technological disciplines covered by the society .

In 2002 the German Vacuum Society intends to organize its first international symposium on vacuum-based science and technologies in Berlin. This will mainly be an application-oriented conference focusing on strong participation from industry. It will cover all areas of current interest to the Society including surface science and technology, thin films, bio-surfaces, nanostructure science and technology, vacuum technology, electronics, vacuum metallurgy, and memory and display technology.

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THE BRITISH VACUUM COUNCIL (BVC)

John S. Colligon

The British Vacuum Council (BVC), which came into existence in 1959 under its original name Joint British Committee for Vacuum Science and Technology (JBCVST), is the body which was established by a number of professional, scientific and technological institutions (Institute of Metals, Institution of Electrical Engineers, Institute of Physics, the Faraday Division of the Royal Society of Chemistry) to co-ordinate meetings and similar activities of members interested in vacuum in the several Institutions. It is moreover, the British national vacuum body affiliated to the International Union for Vacuum Science, Technique and Applications and the official channel through which vacuum workers in the United Kingdom can collaborate with their colleagues overseas.

The need for a national body to serve the interests of the scientists and engineers engaged in expanding the field of vacuum science and technology in the UK became apparent in 1959. Because of the inter-disciplinary nature of the subject no single Professional Institution could be expected to give a complete service to all vacuum workers. Accordingly discussions took place between representatives of nine Institutions culminating in a meeting in June 1959 at which it was agreed not to recommend the formation of a new autonomous vacuum society but, instead, to set up a joint committee composed of representatives of the participating Institutions. It was further agreed that the Institute of Physics would provide a permanent secretariat for the Committee, which would be paid for from a small annual subscription levied on each participating Institution. The JBCVST held its first meeting in October 1959 at which Dr. R. W. Sillars (representative of the Institute of Physics) was elected as the first Chairman with Dr. H. R. Lang (Secretary of the Institute of Physics) being appointed Secretary.

Further examination of the role of the JBCVST after several years' operation led to the conclusion that it should continue but with the formulation of a proper Constitution to regularise its existence. As part of this reform the title was changed on 10 April 1969 to The British Vacuum Council. Apart from minor changes this Constitution still remains and, on 18th November 1985, it was accepted by the UK Charity Commissioners, giving the BVC charitable status (Reg No: 292999).

The original members of the BVC were: The Institute of Physics and the Physical Society, The Institution of Electrical Engineers, The Royal Society of Chemistry, The Institute of Metals, The Institute of Petroleum and The Institute of Chemical Engineers. Owing to changes in the member Institutes and their own members' interests, only the Institute of Physics and the Faraday Division of the Royal Society of Chemistry now remain as members of the BVC. The Institute of Metals withdrew in 1993. Membership of the BVC is open to other UK societies and associations having an interest in the field of vacuum science and technology.

The aims and objects of the BVC are to promote and advance the understanding and teaching of vacuum science, technology and its applications by:

- co-ordinating and promoting conferences, seminars and courses and publications in these fields,
- encouraging excellence amongst postgraduate and other young research workers in these fields, and

- representing the UK on the International Union for Vacuum Science, Technique and Applications.

The Charity Commissioners have to receive in writing and to approve any changes in these aims and objects or constitution.

The BVC is a founder member of IUVSTA and has been actively involved with the IUVSTA since its formation. The BVC hosted the 4th IUVSTA IVC in Manchester in 1968 and the 14th IVC in Birmingham in 1998 and has also hosted 12 ECM's . Professor J. Yarwood helped draft the resolution establishing the IOVST which later became IUVSTA. He served as Councillor and was for many years Recording Secretary of the IUVSTA Executive Council. Mr. A. S. D. Barrett was Secretary General of the IOVST and IUVSTA Councillor. Professor L. Holland served as President of the Union during the period 1977-1980. Professor J. S. Colligon was Recording Secretary from 1986-1989 and Secretary General from 1989-1998. Professor D. P. Woodruff was Scientific Director from 1992-1995 and President from 1998-2001. Other Councillors have been Professors C. J. Todd, D. A. King, D. P.Woodruff, J. H. Leck, R. W. Joyner, Dr G. J. Davies and Dr R. J. Reid. The BVC currently is represented on nearly all Divisions of the IUVSTA.

In 1970 the Council introduced into its calendar a special lecture to be given annually by an outstanding worker in vacuum science or an allied subject. The first lecture was given by Professor L. Holland. In the early 1970's this annual lecture was presented at a special meeting held in London and hosted by one of the constituent bodies. More recently the format has been changed so that the lecture is now held in conjunction with a major national or international conference held in the UK.

In 1971 the Council, at the invitation of the Directors of Pergamon Press, took over editorial responsibility for the journal "Vacuum". The duties handed down included the appointment of the Editor and his editorial advisors. The council has been fortunate in its selection of editors. The first was Professor J. Yarwood from 1971 to 1980 who was followed on retirement by Professor J. S. Colligon (1981-9) and, subsequently, Dr R. K. Fitch. All were extremely energetic in carrying out the general policy established by the council and in developing the International standing of the Journal. In 1995 Elsevier, who had taken over the publication of "Vacuum" from Pergamon, terminated this agreement and its associated royalties. During the period where royalties were received the income had allowed the BVC to give financial support to postgraduate students in the UK to enable them to attend scientific meetings both at home and abroad.

To encourage the awareness of young scientists and engineers of the subject, the Council instituted in 1977 a prize to be presented each year to a young scientist or engineer working in a UK laboratory, adjudged to have presented the best scientific paper in that year. In 1981 the Council was pleased when Dr. C. R. Burch agreed to allow his name to be attached to the prize in recognition of his pioneering work in vacuum science particularly in developing Apeizon oils some 50 years earlier.

In 1988 the BVC established an annual John Yarwood Memorial Medal and Prize to be presented for distinguished contributions to British scientific research in the fields of vacuum science, surface science, thin films or any related topic in which vacuum science and engineering play an important role. Since 1998 the person nominated for this award has also given the Annual Address.

The BVC has sponsored short courses on vacuum and related topics over the years, including a very successful training course on Vacuum Technology, run by Drs Chambers, Fitch and Halliday, which was first held in Glasgow in March 1986 and has since been repeated at various venues many times.

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THE HUNGARIAN NATIONAL COMMITTEE OF IUVSTA

Nemzetközi Vakuumtechnikai Unió - Magyar Nemzeti Bizottsága

Original (1986) by Iván Péter Valkó †
Updated (2001) by György Radnóczi

From the first years of this century there has been a strong interest in vacuum science and technology in Hungary, due mainly to the use of vacuum by Tungsram Ltd. Some of its early achievements include the Tungsten lamp in 1903 and the Krypton lamp in 1935. An independent vacuum society has not been established in Hungary but vacuists have found a home within the Mathematical and Physical Society. After World War II when scientific life was reorganized the structure remained similar. Vacuum and Thin Film Sections have been established in the Roland Eötvös Physical Society, in the Scientific Society for Telecommunication and in the Society for Optics, Acoustics and Cinema Techniques. Lectures and discussions were organized by these Sections. The cooperation of these sections is prompted by the Coordinating Committee for Vacuum and Thin Film Techniques of the Association of Scientific and Technical Societies in Budapest which is the umbrella organization of the societies. Hungarian vacuum scientists contribute regularly to international vacuum periodicals and conferences.

Several vacuum experts became individual members of IOVST and a delegation participated in the Namur Conference in 1958. After its reorganization into the IUVSTA as an international body of national committees in 1959, Hungary became a member and in 1962 the Hungarian National Committee of IUVSTA was established by the Technical Sciences Section of the Hungarian Academy of Sciences. Prof. G. Szigeti, first secretary and later chairman of the Hungarian National Committee, was for many years the most ardent promoter of organized vacuum activities in Hungary. He also took a lively part in the corroboration of the international profile of IUVSTA.

Prof. J. Antal, the Chairman of the Hungarian National Committee of IUVSTA became president-elect of IUVSTA in 1980 and acted as president of IUVSTA in the triennium 1983-1986.

The National Committee, having had at first about a dozen members, now has a strength of 35. It is composed of vacuum science and technology experts associated with industry, academic research and educational institutions. Chairmen of the Committee have been E.

Winter (1962-1964), G. Szigeti (1964-1976), J. Antal (1976-1988), P. B. Barna (1988-1991) and J. Gyulai (1991-). The Councillors of IUVSTA, designated by the Hungarian National Committee were G. Szigeti (1965-1971), I. P. Valkó (1971-1977), J. Antal (1977-1980), P. B. Barna (1980-1986), L. Guczi (1986-1992) and G. Radnóczi (1992-). In March 1979 the Committee organized the 36th Executive Council Meeting of the IUVSTA in Budapest and in October 1985 the 51st Meeting in Debrecen. ECM-78 was also organized in Debrecen (1997), in connection with the 7th Joint Vacuum Conference, organized by the Hungarian, Austrian Slovenian and Croatian Vacuum Societies. Members of the National Committee meet regularly and the scientific meetings are jointly organized with the Vacuum Physics and Thin Film Physics Groups of the Roland Eötvös Physical Society. Besides scientific presentations, at these meetings members receive information about current national and international vacuum events based on reports of the participants. Other topics such as industrial and educational progress are occasionally referred to.

One of the most important activities of the National Committee has been the initiation, organization and sponsorship of seminars, summer schools, workshops, symposia and national and international conferences in Hungary. These events have been arranged with international lecturers with usually 60 to 120 participants. The organization of regional joint events has been initiated by the Austrian Vacuum Society and the Vacuum and Thin Film Groups of the Roland Eötvös Physical Society under the sponsorship of the Hungarian National Committee of IUVSTA since 1978. The first "Austrian-Hungarian Vacuum Days" was held in 1979 in Györ, Hungary, and the second in 1981 in Brunn am Gebirge, Austria. These events grew to a periodically organized regional Joint Vacuum Conference (JVC). In the organization of JVC-3 in 1985 (Debrecen, Hungary) Yugoslavia was invited to participate in the organization. The Hungarian National Committee of IUVSTA hosted also the JVC-7 in 1997 (Debrecen).

Other events with international participation have been:
- Colloquium on Gas Discharges, Balatonvilágos, 1958
- Conference on Solid State Physics, Balatonfüred, 1959
- Symposium on Luminescence, Balatonvilágos, 1961
- Symposium on Electron and Vacuum Physics, Balatonföldvár, 1962
- Seminar on UHV, Esztergom, 1967
- International Thin Film Conference, Budapest, 1975
- Conference on Plasma Physics and Application, Balatonvilágos, 1979
- ESCA Seminar, Debrecen, 1979
- 5th IUVSTA Workshop, Balatonaliga, 1992
- 14th IUVSTA Workshop, Balatonföldvár, 1996
- 22nd IUVSTA Workshop, Hortobágy, 1999

The Hungarian National Committee has taken an active part in the Divisions of IUVSTA since their development**.**

In the last decade the Hungarian National Committee has continued to represent Hungary in IUVSTA. It does this in close co-operation with the Vacuum Physics and Thin Film Physics Groups of the Roland Eötvös Physical Society. Since most of the members are participating in both organizations this is a straightforward matter at present.

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INDIAN VACUUM SOCIETY (IVS)

A S Raja Rao

The Indian Vacuum Society (IVS) was established in 1970. It has more than 650 individual life members and a number of sustaining members from industry and R&D institutions spread over the country. The society has two chapters, one at Calcutta and the other at Hyderabad. The society was formed with the main aim to promote, encourage and develop the growth of vacuum science, techniques and applications in the country. The society is managed by an Executive Committee which is elected every three years.

In order to achieve this aim it has been conducting a number of short term courses at graduate and technician's level on vacuum science and technology. So far it has conducted 34 short term courses at different parts of the country and imparted training to more than 1200 personnel in the field. It has also been regularly conducting national and international symposia and seminars on vacuum science and technology and related topics. In addition, a number of lectures and workshops on topical subjects are arranged routinely. The society helped in the UNESCO sponsored post-graduate level courses in vacuum science, technology and applications conducted by the University of Mumbai. The society also arranges technical visits to different industries and research institutions for the benefit of its members.

A permanent exhibition has been set up at the Nehru Science Centre, Mumbai. This displays the role of the Indian Vacuum Society in the promotion of vacuum science and technology in the country by means of panels, write up, active demonstration models and blown-up cross-sectional views. The exhibition will be expanded in the future by collaborations with Indian vacuum industries.

IVS has been a member of the International Union for Vacuum Science, Technique and Applications (IUVSTA) since 1970 and is represented on its Executive Council, committees and scientific Divisions. In 1983, IVS conducted an International Symposium on Vacuum Technology and Nuclear Applications in BARC, Mumbai under the sponsorship of IUVSTA. In 1987, the Triennial International Conference on Thin Films was held at New Delhi, where more than 200 foreign delegates participated. IVS also hosted the IUVSTA Executive Council and other meetings along with the conference. The society organized yet another International Conference on Vacuum Science and Technology INCOVAST-95 at the Centre for Advanced Technology, Indore. The theme of the conference was Use and Application of Ultrahigh Vacuum for Synchrotron Radiation Sources, which was well timed to match the design and construction of a 450 MeV Electron Storage Ring, the Indus-1, at the Centre for Advanced Technology.

IVS arranges the prestigious Prof. Balakrishnan Memorial Lecture in memory of the founder Vice-President of the Society. Every year, a leading scientist in the field, either from India or abroad, is invited to deliver the lecture.

IVS has instituted an award in memory of the late Mr C. Ambasankaran, its past President and pioneer in vacuum technology, to be given to the best technical paper presented in the national symposium conducted by IVS. To encourage students at the postgraduate level in physics, the society has instituted the "IVS Prof. D. Y. Phadke Memorial Prize" in the University of Mumbai in memory of our founder President, the late Prof. D. Y. Phadke. The

IVS Calcutta chapter has formed a "Dr A. S. Divatia Memorial Trust" comprising of senior scientists and technologists in the field of vacuum, in particular, and close associates of late Dr A. S. Divatia, who was Director of the Variable Energy Cyclotron Centre in Calcutta and an eminent scientist in the field of vacuum science. The main objectives of the trust are to organize a Dr A. S. Divatia Memorial Lecture and seminar once each year in and around Calcutta, and to set up a vacuum testing and calibration laboratory.

During each National symposium, IVS honors two of its members, one from industry and one from an R&D institute, for their life-time contribution in vacuum science and technology.

IVS extended its support in standardizing many vacuum instruments, and played a vital role in helping to set up a Regional Testing Centre along with the Bhabha Atomic Research Centre, Mumbai. As part of the development of vacuum education, the society arranges for its members who are experts on the subject to participate in delivering lectures and taking part in devising courses in the universities.

The society has published a quarterly journal called the "Bulletin of the Indian Vacuum Society" since its inception. The articles in the IVS Bulletin are internationally abstracted. It is gratifying to note that the Bulletin of the IVS has been included in the hand-book of Indian Research Journals compiled by the Indian Bibliographic Centre, Varanasi. IVS also publishes the proceedings of International and National symposia, seminars, manuals, lecture notes, etc. It has published a "Vacuum Directory" containing very useful information for vacuum technologists and others.

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THE ISRAEL VACUUM SOCIETY (IVS)

Sidney Cohen

The Israel Vacuum Society - Science, Technology, and Applications (IVS) was constituted and registered as the Israeli Society for Vacuum Technology (ISVT) in October 1968 by a group comprised predominantly of technicians, and immediately applied for IUVSTA membership. (The society name-change occurred in 1992, and was meant to reflect the breadth of our fields of interest.) It was provisionally accepted as the 16th member of IUVSTA in January 1969 and has been an active participant in IUVSTA activities since then through its delegates, Councillors and Division Committee members. The Chairman of the first Board of Directors was Dr. Alexander Roth, who has since written well known books entitled "Vacuum Technology", and "Vacuum Sealing Techniques" and who later became our first Honorary Member, subsequently joined by 4 other past chairmen and members - Prof. Enrique Gruenbaum, Prof. Nicholas Klein, Prof. Yoram Shapira, and Prof. Reshef Tenne. The initial enrollment in ISVT was more than 200 scientists, engineers and technicians. The present number of IVS members is now more than 400. These members are active in many branches of vacuum science and technology and related fields and work in various research and industry establishments in Israel.

Initially, the activities of the society were divided into: National Conferences (which after 3 initial autonomous conferences were held in conjunction with the Israeli Physical Society meetings); National Symposia devoted to specific topics; and courses in vacuum technology.

Although the number of society members has grown significantly over the years, and the number of participants in the conferences and symposia has also steadily grown, the nature of the symposia/conferences has varied with changes in the makeup of the board of directors who initiate and steer essentially all of the society activities. Thus, the technically-oriented symposia were largely abandoned during the early to mid nineties, but brought back into play after a polling of the general membership showed a true interest in such meetings. In addition, the joint symposia with the Physical Society have been abandoned. In the mid 1990s, the National conference was held jointly with the biannual conference of the Israel Materials Union, an umbrella organization of societies involved in varied aspects of materials (whose foundation was spurred and nurtured by IVS board members), but this also has been abandoned. Finally, correspondence with members has included, over the years, mailings with activity updates, bulletins with technical articles, and more recently, electronic media is being used to disseminate information.

The organizational structure of the IVS was modified significantly through the 1990s due to the formation of formal divisions within the society. In 1992, the request of the Association for Crystal Growth to join the IVS as a division was accepted. Subsequently, the Hydride Society, whose size had dwindled to the point that a separate entity was not viable, became a formal division of the society. In 1999 the Israel Society for Plasma Science and Technology also became a formal division within the vacuum society. This alliance has served several purposes: the activities of the IVS, which include vacuum, thin films, hard coatings, dielectrics, sensors, surface science, photovoltaics, nanoscience, biointerfaces, overlap strongly with the activities of the divisions so that there were many common members of the different societies and interest in holding joint sessions in conferences; governmental requirements concerning non-profit organizations have become very cumbersome so that this alliance reduces and consolidates the amount of bureaucratic work which must be tended to; the only paid help of the IVS is the secretary of many years, Ms. Yehudit Rousso, whose invaluable and dedicated services are thus available to all divisions.

The societal activities have also developed over the years. As commercial entities have now appeared which provide instruction in vacuum technology, this service has become less emphasized and only one such course was sponsored by the IVS in recent years, which was actually run by a local training center. On the other hand, outreach to students has become more intense - prizes in memory of Dr. Roth and Prof. Esterman, and a prize donated by the Electron Device section of the IEEE are awarded at each national conference. The international Welch Scholarship of the IUVSTA has been awarded to an Israeli student twice out of the last 5 years. In the academic year 2000, Edwards Israel (one of the founding sponsors of the IVS) will sponsor an undergraduate student fellowship. An employment center has also been run on a trial basis during the national conference. A very popular commercial equipment exhibition accompanies each national conference. This not only serves the vendors well, but the income received allows reduction of the registration fees to a nominal value, thus encouraging all - and particularly students - to attend.

With regard to international conferences and events, it should first be noted that foreign scientists and engineers are regular attendees at the society sponsored symposia. As for bona-fide international symposia, the first of these sponsored by the society was the 5th International Thin Films Congress, a biannual activity of IUVSTA's Thin Film Division, which was held in Herzlia on the Sea in September 1981 with attendance of more than 400 international participants. In 1994, a binational conference with the UK “Frontiers in Surface Science” was held near Jerusalem sponsored by the Ministry of Science and the Arts, with

heavy involvement of the IVS. In 1998, one of the IVS divisions, the Association for Crystal Growth, organized and sponsored the 12th International Conference on Crystal Growth in conjunction with the 10th International Conference on Vapour Growth and Epitaxy. In 2000, the national conference was partially sponsored by the American Vacuum Society which allowed invitation of 3 AVS members.

The main goals of the IVS since its inception have been: (1) to promote and stimulate professional communication among its members and between itself and similar societies, and (2) to foster educational activities at various scientific levels. In the future, the society aims to continue in these paths, and to strengthen itself by including additional divisions, and promote the new tradition of holding parallel sessions at the National Symposia. In addition, there are plans to establish a lending library and attempts to strengthen our financial base in order to provide more substantial student grants. Finally, we hope to continue extending our outreach to all members, providing information and help in various means, relying more heavily on electronic media.

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THE ITALIAN VACUUM SOCIETY

Associazione Italiana del Vuoto (AIV)

Anita Calcatelli

The activity of the association was started, in 1963, by several people involved in science, technique and application of vacuum who felt the need to meet together in a community in which they could exchange information, discuss about their own activity and organise meetings at various levels. In fact the first meetings did not have the congress amplitude, but they were mostly discussion seminars. Ing P. della Porta (from SAES Getters), who was the first chairman of the AIV, organised a group of people to start the organisation and perform all the necessary activities. As a consequence, a group of eleven people, mostly from industries, wrote the statutes of the association and pioneered the association, including organising the first encounters, first in Milan then in Florence. From the early stage AIV has been a member of the much wider association, FAST (Federazione delle Associazioni Scientifiche e Tecniche), a federation of various scientific and technical associations.

From the beginning AIV was, and still is, a non-profit, volunteer-based association dedicated to advancing the science and technology of vacuum and applications. One of the main objectives is the promotion of a variety of educational events and providing a variety of educational opportunities in both fundamental physics and technology through courses for technicians and graduated people giving them an opportunity of improving their base knowledge or starting a new activity. The AIV is a member of the International Union for Vacuum Science, Technique and Applications (IUVSTA).

At the top of the organisational structure there is a chair person who is chosen from eleven members of the directory board (eleven councillors), who, in turn, are nominated by the members of the association by voting on a list of persons well known as experts on various sectors related to vacuum physics, technology and applications. There is also a co-chair person and a secretary who may or may not be an expert of vacuum. A treasurer, also elected by the members, takes care of the administration.

For matters relating to scientific activity the association is organised in several technical divisions for vacuum physics and technology, surfaces, interfaces, nanometer structures, electronic materials and processing, thin films, plasmas, and vacuum metallurgy. The members of the AIV are active in fundamental and applied research, manufacturing, sales, and education.

The Association organises a national congress every two years. The papers presented at the congresses are collected and published as Proceedings of the meetings. Since 1968 the AIV has been publishing a review "Vuoto- Scienza e Tecnologia". In addition to the review, subsidiary material such as tutorial papers or short texts for didactic purposes are written and published by the association on vacuum techniques, measurements of total and partial pressures, leak detection, etc. More recently the following textbooks have been presented: "Metodi per la caratterizzazione chimico-fisica delle superfici" (Authors: M. G. Cattania et al.), Patron Editore, Quarto Inferiore (Bologna), 1990, and "Introduzione alla tecnologia del vuoto" (Author: B. Ferrario, Second edition by A. Calcatelli), Patron Editore, Quarto Inferiore (Bologna), 1999

At the national level, courses are organised on a periodic basis: on vacuum physics and technology at Lecce University (with an intended biennial periodicity) and on non destructive testing using mass spectrometry at Consiglio Nazionale delle Ricerche in Torino (every three years). In addition several courses are held by special request from industries or research laboratories involved in vacuum techniques and applications (in various parts of the country). Courses are also presented, on application, on plasma physics, thin films, vacuum metallurgy, etc.

Workshops, generally one day-specialised workshops, are held on request. These are mostly on topics such as Pure gases handling and analyses, Quality in vacuum technology, Vacuum panels, or Surfaces.

At the international level, various European congresses and international workshops have been organised over the years. Recently these have included ISASST II, III, and IV (International School on the Application of Surface Science Techniques), ECOSS II (European Conference on Surface Science), and an IUVSTA Workshop and IUVSTA Summer School.

An award, the "Maria Grazia Cattania Award", is given to young scientists every two years, during the national congress.

The number of the members (approximately 300) has not increased significantly in recent years because in Italy several specialised associations are active even in fields related to vacuum. For example, the Italian Society of Physics caters for surface science, sometimes in cooperation with our association, and the Italian Society of Chemistry covers several subjects of interest to the AIV. The proportion of industrial involvement, especially during the formation and development of the society, was wider than that of researchers from universities or other public research centres, although over the years public researchers have been more active, generally, in organising and developing scientific and training activities.

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THE VACUUM SOCIETY OF JAPAN (VSJ)

Nihon Shinku Kyokai

Masatoshi Ono

In May 1958, the "Shinku Kyokai" (Vacuum Society) was organised by unification of the Research Committee on Vacuum Technology and the Vacuum Equipment Society. The former started in 1950 for publishing a journal named "Shinku Gijutu" (Vacuum Technology) and for having meetings on scientific and technological presentations. The latter was formed in 1954 to promote development and standardization of vacuum equipment.

The Society was renamed "Nihon Shinku Kyokai" (The Vacuum Society of Japan) in February 1971 during preparations for hosting the IUVSTA Congress held in Kyoto in March 1974.

Five Divisions and the Kansai (the district including Osaka, Kyoto and Kobe) Branch of VSJ are under the control of the board of directors, headed by the President and Vice Presidents, and assisted by an Advisory Committee. At present (December 2000) the organization is actively serving 1,237 individual members and 199 corporate members.

The Research Division had the first Annual Conference of the Society in the fall of 1960, and the first summer school on vacuum technology in 1961. At the Conference in November 1999, 81 papers were presented. The Kumagai Vacuum Science Award and the Kumagai Vacuum Technology Award, named after the distinguished past president, Professor H. Kumagai, are given for achievements of the members, and also the Vacuum Progress Award is presented to young researchers during the Conference. This division also played a main role in preparation of the Yokohama Congress of IUVSTA in 1995. In September 1999, the VSJ hosted the first Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA) held in Tokyo, in cooperation with the Vacuum Society of Australia, the Korean Vacuum Society, the Indian Vacuum Society, and the Chinese Vacuum Society.

VSJ conducts a symposium on vacuum science and technologies twice a year and a forum for surface science jointly with the Surface Science Society of Japan. VSJ joins also the vacuum session of the Annual Spring Symposium of the Japan Society of Applied Physics.

Although the scope of the Research Division is almost the same as IUVSTA, the Sputtering and Plasma Processes Division was formed in 1999 to enhance activities in the field and to organize the biennial International Symposium on Sputtering and Plasma Processes.

The Editorial Division started monthly publication of a journal named "Shinku" (Vacuum) in 1958. Titles, abstracts and figure captions of the papers in the journal are written in English. Currently each issue of the journal contains about 65 pages and over 3,000 copies are printed for distribution.

The Standards Division is responsible for establishing and revising a part of the Japanese Industrial Standards (JIS) related to vacuum technologies, including terminology, measurement and equipment.

The Industry Division was formed in 1973, and gave birth to the Japan Vacuum Industry Association (JVIA) in 1985 and serves corporate members by holding lecture-meetings on vacuum technology and arranging visits to related laboratories and factories. VSJ also cooperates with JVIA to hold an annual Japan Vacuum Show or an International Vacuum Exhibition.

The Kansai Branch conducts the annual Conference of VSJ every other year, and convenes forums and an annual summer school of its own on vacuum technology.

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THE KOREAN VACUUM SOCIETY (KVS)

Tong Soo Park

The Korean Vacuum Society (KVS) was created in February 1991 with 80 founding members. Professor Tong Soo Park, of Kyungpook National University, was elected as the first President of the Society. The objectives of the Society are to promote vacuum science, technology and their applications, and to support the development of vacuum and its related industries, including the semiconductor industry, in Korea.

The society now has a membership of about 1,800. Approximately 70% of these members are in universities, 20% in research institutions and 10% in industry. These members represent a wide range of disciplines and fields including Physics, Chemistry, Electronics, Electrical Engineering, Metallurgy, Material Sciences, Mechanical, Nuclear, Life Science, Semiconductors, Electroluminescence, Vacuum and others.

The society is administered by a General Assembly and a Board of Directors. There are five Executive Secretaries covering the domains of General Affairs, Publications, Treasury, Business, and Public Relations. The society has four Technical Divisions: Surface Science, Vacuum Technology, Thin Films I, Thin Films II, and Plasma Science. Other activities of the society are administered through four committees, namely a Fellows Committee, an Editorial Committee, a KVS-Industry Relations Committee, and an Awards, Honors and Scholarship Committee.

The KVS has established and maintains many international relationships. In November 1991 the KVS signed a Cooperative Relationship Memorandum with the American Vacuum Society (AVS). In October 1992 the society became a member of the IUVSTA. Between 1992 and 1993 the KVS established cooperative relationships with the Japan Vacuum Society, the Japan Vacuum Industry Association, the Chinese Vacuum Society, and the Taiwan Vacuum Society. Since 1993 a number of conferences have been organised with international partners including the Korean-Japan Vacuum Microelectronics Symposium in Seoul, the Korean-Japan Symposium on Control of Semiconductor Interfaces, the Korean-Japan CVD Symposium in Taegu, the Korean-China Thin Films Symposium (held yearly), the International Compound Semiconductor Symposium, the Korea-Japan Symposium on Surface Analysis, and the International Nanoscale Surface Science Symposium.

Official publications of the KVS include the Journal of the Korean Vacuum Society (Korean + English), the Korean Vacuum Society Journal (English), a Buyers Guide, and Bulletins.

Other activities and services include: a 2-day Annual General Meeting every year; two 2-day Annual Symposia in February and July; the surveying, collecting and exchange of information; supporting international symposia, joint research and overseas meetings; encouraging Vacuum Industry-Academy cooperation; recommending vacuum related policies to government; and organising the standardization of vacuum components and products.

Every year a Short School (of two days) on Vacuum is presented and this leads to the presentation of a diploma. There are typically 80 students in attendance. In addition an Award is given to a Young Vacuum Scientist, at graduate school level, who attends and presents a talk at an IUVSTA, AVS or other Vacuum Meeting abroad.

Twice a year a Vacuum Equipment Exhibition is organised in conjunction with the KVS meeting in February and July. About 30 to 40 companies contribute to this.

In the year 2000, a Korean Vacuum Industry Association (KVIA) was created to promote the Korean Vacuum Industry and to support the KVS.

During the period since 1991 when the KVS was formed, the Korean vacuum industry has grown by a factor of 5 in scale, products and technology. Venture companies are growing rapidly. Also the Korean government is supporting a Long-range Vacuum Project under the supervision of the KVS.

Professor Tong Soo Park, Physics, who served as foundation president of the KVS from 1991 to 1997 is now an Honorary Life President. He was followed as president by Professor Young Ki Kim, Physics, who served from 1997 to 1999, and Professor Chong Chun Woo, Physics, is the current president until September 2001.

The KVS looks forward to the possibility of hosting an IUVSTA Triennial Congress and/or an IUVSTA Executive Council meeting in Korea.

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THE MEXICAN VACUUM SOCIETY (MVS)

Sociedad Mexicana de Ciencia de Superficies y Vacío

Miguel Meléndez-Lira

The origin of the Sociedad Mexicana de Ciencia de Superficies y Vacío (MVS) can be traced back to 1980, when the first workshop on Surfaces was organized by scientists from the Instituto Mexicano del Petroleo (IMP) and from the Instituto de Física–UNAM (IFUNAM). This workshop was the first initiative to promote the study of the, until then non-existent, surface science in Mexico. It was organized primarily for scientist returning to Mexico after the culmination of their graduate studies. There was no involvement of industry in the development of this activity.

In 1981, the intended second workshop was cancelled and the IFUNAM group organized a workshop of Surfaces in Oaxtepec, Morelos. In this meeting, the necessity for the creation of a society for surface studies in Mexico was discussed and, as a consequence, a provisional committee was appointed. This committee established the statutes and undertook the legal work required to formalize the new society.

In November of 1982, the MVS was a reality and it organized the first Latin American Symposium of Surfaces in Puebla city. In 1983, on October 5, the legal status was conferred.

The main objectives of the MVS are to promote the development of surface science, vacuum science and technology and their applications, catalysis, metallurgy and related topics through the organization of scientific congresses, workshops and short courses in collaboration with public or private institutions, and the publishing of scientific journals, books and technical pamphlets.

The MVS board of directors is comprised of the president, secretary, past-president, treasurer, publishing coordinator, meetings coordinator and representatives from the north, south, west and east México regions . The administrative personnel is comprized of just one secretary.

The president's term is 2 years with the possibility to be reelected. The president is elected in a general assembly and he has a vote of confidence to choose the other members of the directive board.

The number of registered members during 2000 was around 200, although currently there is a large effort to increase this number by offering extra activities in addition to the national meeting.

The areas of interest of MVS are thin films, science and engineering of surfaces, vacuum technology, semiconductors, nanostructures, science and technology of plasmas, biomaterials, dielectric materials, electronics and instrumentation, magnetism, materials characterization, superconductors, polymers, coatings, and industry-university interaction.

During the past 20 years, most MVS activities were focused on the organization of national meetings, including the hosting of two international conferences: the 8th Latin American Congress on Surface Science and its Applications, and the 11th International Conference on

Thin Films of the IUVSTA. In 2001 MVS began the teaching of short courses by local members as part of its strategy to become a more dynamic society. As part of its publishing activities MVS edits “Superficies y Vacío”, which is a local journal dedicated to the areas of interest of the members of MVS. This journal can be viewed on the web, via a link from the MVS web site.

MVS grants annually the “Francisco Mejia Lira” award for outstanding scientific work related to the areas of MVS interest and/or outstanding contributions to the development of the Mexican surface science community. There are also two annual prizes for students' work associated with surface, vacuum and related themes: 1) the best master in science thesis award, and 2) the best doctorate thesis award.

Future goals are to: increase MVS membership; try to involve members from industry; get strong participation in the formation of new scientists willing to contribute to the development of our country, and; expand collaboration with other vacuum societies.

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THE NETHERLANDS VACUUM SOCIETY

Nederlandse Vacuumvereniging (NEVAC)

J. W. Niemantsverdriet

The Netherlands Vacuum Society (NEVAC), founded by Kistemaker, Makkink and Venema on April 13, 1962, promotes the exchange of knowledge in vacuum technology and areas which rely on the application of vacuum, by organizing scientific meetings, excursions and educational courses. NEVAC counts about 300 scientists, technicians and commercial representatives, as well as 35 corporate members. The Society relies entirely on volunteers from industry and universities.

The following highlights from the NEVAC history illustrate the activities of our society:

- NEVAC has been the principal organizer and sponsor of the successful conference series "the Solid-Vacuum Interface" which was held in 1970, 1972, 1974 and 1976. This conference widened its scope in 1978 and was merged into the "European Conference of Surface Science" (ECOSS) series. NEVAC also organized the 17th European Conference on Surface Science (ECOSS) in Twente, 1997.
- On the occasion of the 25th anniversary of the Society, NEVAC has co-sponsored and hosted the second International Conference on the Structure of Solid Surfaces (ICSOS) in 1987.
- NEVAC organized the 12th International Vacuum Congress (IVC-12/ICSS-8) in The Hague in 1992
- NEVAC organizes on average 6 national meetings per year, ranging from fundamental surface science, to applications of vacuum technology.

- Our journal NEVACBLAD (in Dutch) appears four times per year and serves as a newsletter for the members. In addition it contains three to five articles on subjects related to Vacuum Science.
- The society has its own University Chair in Vacuum Technology at Delft University of Technology.
- In October 1997, some 45 members participated in a very successful 5 day excursion to the National Symposium of the American Vacuum Society (AVS) in San Jose, California. In 1999, a two day excursion to various companies in Belgium was organized in cooperation with the Belgian Vacuum Society BELVAC.

The society is organized around its four major activities:
- Organizing regular national meetings in surface science and related fields where vacuum provides the environment of experimentation, as e.g. in materials science and catalysis.
- Bringing together those members interested in the technique of vacuum and the construction of vacuum equipment, ranging from the simple vacuum chamber in the laboratory to large scale facilities such as synchrotrons, and linear accelerators.
- Education: in 1998 the 1000th participant successfully passed his examination in vacuum technology.
- Publication: The quarterly NEVAC Journal serves as a newsletter to members and popularizes scientific issues in the Dutch language, in the form of 10-15 articles per year. Many of these are written by talented students who previously presented work on the special Student Conference.

The NEVAC Board consists of scientists and technicians who serve in three-year terms, which can be renewed once. NEVAC Presidents include internationally well-known scientists such as Tony van Oostrom (†), Gosse Bootsma (†), Werner van der Weg, Friso van der Veen, Frans Habraken, Aart Kleyn, Hans Niemantsverdriet and Jo Hermans (2000-2003).

NEVAC is a Founder Member of IUVSTA and has been continuously involved in its activities from the start. One of NEVAC's founding members, Dr. A. Venema, was President of IUVSTA from 1974 to 1977. NEVAC has been mainly responsible for the theoretical part of the IUVSTA Visual Aids Project (Part 1. Fundamentals of Vacuum). Dr. A. van Oostrom served as the first Chairman of the Surface Science Division and other NEVAC members are represented in the various IUVSTA Divisions.

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PAKISTAN VACUUM SOCIETY (PVS)

Javaid Ahsan Bhatti

A meeting of vacuum technologists representing various research and industrial organizations was held on July 10, 1997 under the Chairmanship of the late Mr. Nurul Mustafa in the Hotel Best Western, Islamabad. The purpose of the meeting was to prepare a program for the first national course on vacuum technology to be held in Pakistan. The meeting, on a suggestion by Mr. Javaid Ahsan Bhatti that a society be formed to focus on the potential use of vacuum in industry, unanimously decided to establish a national forum to work for the promotion and development of vacuum science and technology in Pakistan under the name, Pakistan Vacuum Society (PVS). An ad hoc body comprised of the following people was formed with the task to complete the initial organizational work: Dr. F. H. Hashmi (President), Mr. Nurul Mustafa (Vice President), Mr. Javaid Ahsan Bhatti (Secretary General), and Mr. M. Amin Sabir (Secretary Finance).

This committee formulated by-laws for the society with the objectives of promoting the knowledge of vacuum science, technology and their applications through seminars, workshops, conferences and training programs for the benefit of people engaged in the scientific, educational and industrial institutions of the country. PVS is a non-Government, non-profit welfare body registered with the Registrar Joint Stock Companies, Islamabad Capital Territory, Government of Pakistan, under No. RS/ICT/286 of 1998 dated June 3, 1998. On the occasion of the establishment of PVS, the President of Pakistan Mr. Muhammad Rafiq Tarrer and Prime Minister Mr. Nawaz Sharief sent congratulatory messages to PVS management. After the success of the first national course on vacuum technology and the enthusiastic response of the participants, the membership of the society rose from 12 founding members to 60 life and 26 annual members within a span of six months. In the middle of 1998, a meeting of the general body of PVS members elected the office bearers and members of the executive council and technical committees. During this meeting, PVS launched the society newsletter PAKVACUUM, establishing an information-link between members and the society activities.

The main areas of PVS activity include vacuum science, vacuum technology, vacuum electronics, vacuum metallurgy, vacuum chemistry, and thin films.

Since its inception, PVS has been continually organizing promotional activities such as a 5-day workshop VACUUM 98 in 1998 at Islamabad, a 5-day National Workshop on Vacuum Technology in 1999 at Islamabad and a 4-day National Vacuum Workshop in 2000 at Karachi. Beside this, a National Vacuum Day was observed on May 5, 2000 in Islamabad. More recently, PVS has organized a 4-day National Workshop on Industrial Vacuum in December 2001 at Islamabad and a 3-day National Conference on Vacuum Applications in December 2002 at Islamabad.

PVS continues to publish the quarterly newsletter PAKVACUUM from its office at Islamabad. This is available to all members free of cost. In addition, PVS extends advisory services to the industrial sector at nominal charges.

The membership of PVS now exceeds 200 life members and 48 annual members including industrialists, engineers, technologists, researchers and university professors. PVS has offered

free annual membership to PhD and post-graduate students working in fields related to vacuum science and technology

The PVS has planned provincial chapters at Karachi, Lahore, Quetta and Peshawar beside a main office at Islamabad. Presently, the main office and the Karachi Chapter are operational. In addition to this, the Government of Pakistan has approved the proposal of PVS for the establishment of an institute on vacuum science and technology in Islamabad. Planning of this institute is in progress.

PVS is recognized as the sole authority in the field of vacuum science and technology in Pakistan.

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THE POLISH VACUUM SOCIETY (PVS)

Polskie Towarzystwo Prozniowe

Tomasz Stobiecki

On the initiative of Prof. Janusz Groszkowski [professor of the Technical University of Warsaw and president of the Polish Academy of Sciences (1961 - 72)], the Polish National Committee for Vacuum Technique was founded in 1964, which assembled scientists and engineers, working with vacuum, at universities, scientific and research institutes and industry. This Committee has been a member of IUVSTA since 1965.

In 1981 this Committee was incorporated into the Society of Polish Electricians as a section having the name: Polish National Committee for Vacuum Technique and Technology. The first president of the Polish National Committee for Vacuum Technique and Technology was Prof. B. Paszkowski and the first Honorary President was Prof. J. Groszkowski.

In 1992 the Polish National Committee for Vacuum Technique and Technology separated from the Society of Polish Electricians and started its independent activity as the Polish Vacuum Society (PVS). The presidents have been Prof. A. Halas, Prof. M. Szymonski and Prof. M. Herman.

The purpose and principal objectives of the Society are the extension and dissemination of knowledge of vacuum science and technology, and also the inspiring and arranging of wide collaboration between specialists from industry, business and scientific institutions.

The officers of the Society include the President, President-Elect, Past President, Secretary, and Scientific Secretary. Currently the Society has 95 members and 8 collective members (companies and scientific institutions in about equal numbers). About 15% of the members are employed outside of research, science and teaching institutions.

The PVS has developed scientific cooperation with the French Vacuum Society in the form of the Polish–French Symposia. A recent example is the 3rd Polish-French Symposium on Vacuum Science, Technology and Applications which was held in Warsaw on 18-19 May

2000. In the near future the 20th European Conference on Surface Science (ECOSS-20) will be held in Cracow between 4–7 September 2001 under the auspices of the IUVSTA.

For its scientific and technological activities the PVS is divided into four Sections: Thin Films, Surface Science, Plasma Surface Engineering, and Vacuum Technique. These Sections organise various conferences, seminars and workshops, such as the following. A Seminar of Surface Science and Thin Film Structure, and a Summer School of Modern Plasma Surface Technology are held every year. A Workshop on MBE Growth Physics, an International Seminar on Semiconductor Gas Sensors (SGS), an International Seminar on Semiconductor Surface Passivation (SSP), and a Conference on Vacuum Technique are held every two years. In addition, a full Congress of the PVS is held every third year.

In terms of publications, the PVS edits the Bulletin "Vacuum Technique and Vacuum Technologies", in Polish, twice a year as an attachment to the journal “Elektronika”. This Bulletin is also published in electronic format on the internet in the PVS's website.

Each year the Groszkowski Award is presented by the PVS for the best diploma and Ph.D. thesis on vacuum technique, technology and applications. It is planned that in the near future there will also be a prestigious PVS Science Prize, and also a PVS Medal for small producers for the best product and technology.

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THE PORTUGUESE SOCIETY OF VACUUM

Sociedade Portuguesa de Vácuo (SOPORVAC)

M. Isabel C. Ferreira

SOPORVAC – Sociedade Portuguesa de Vácuo, was founded on 27 September 1986, in Braga, at the 1st National Meeting of Vacuum -VÁCUO 86. This meeting was organized by Centro de Física Molecular (Lisbon), Departamento de Física da Universidade do Minho (Braga) and CRIOLAB (Porto) under the sponsorship of INIC – Instituto Nacional de Investigação Científica. Professor José L. de Segóvia, then President of IUVSTA, was invited. His experience and support on the foundation of the society are fully acknowledged.

SOPORVAC has a predominantly technical–scientific character and its objectives are:

- to promote knowledge in the field of vacuum and other related techniques;
- to promote the professional and scientific skills of its members;
- to promote the intellectual, cultural and social companionship and the exchange of experiences among its members;
- to promote and establish the exchange of activities and services with similar associations, national or international, especially through participation in international meetings, through the exchange of information, and through cooperation in common projects.

SOPORVAC was officially registered in Braga on 22 October 1987. In March 1987 it was accepted as a provisional member of IUVSTA and was elected to full membership at the General Meeting in September 1989. At present there are 67 members. Most members are academics or full-time researchers, but a significant group originate either from industry or

from commercial activities. These members are registered under one of the following four categories: effective, correspondent, honorary and patron.

The collective bodies of SOPORVAC are the General Assembly (GE), the Executive Board (EB) and the Auditors Committee (AC). The GE is the highest authority in the society and therefore is responsible for the most important decisions such as changes in statutes, officers elections, establishment of subscription fees, and approval of the Annual Report, Annual Accounts Report and Programme of Activities. All effective members belong to the GE. The officers of the GE are the President, two officers and two substitutes, elected by secret ballot from among its members. The EB is formed by its President, one Vice-President, five officers and three substitute officers. It is the duty of the EB to execute the resolutions of the GE, to deliberate on the admission of new members, to prepare the Annual Report, to draft the internal by-laws of the society, and to represent the Society. The AC is formed by three effective members: the President of the AC, the Vice-President and Secretary and two substitute officers. The AC verifies the balance of income and expenses, periodically examines the accounts of SOPORVAC, and prepares the Annual Accounts Report to be submitted to the GE for approval.

The major areas of interest and activity within the society are: thin films, surface science, and vacuum science.

Since its foundation SOPORVAC has organized national meetings in collaboration with ASEVA-Asociacion Espanola del Vacio y sus Aplicaciones in order to promote contacts between the Portuguese and Spanish specialists. These are the IBERIAN VACUUM MEETINGS, or RIVA Meetings, the fourth of which took place in July 2000 in Avila, Spain. The first one was held in Braga in September of 1988.

The Society publishes a quarterly News Bulletin. In this way members are informed on the activities of the EB, and also on the main national activities related to the science, technology and application of vacuum.

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THE ROMANIAN VACUUM SOCIETY

Societatea Romana de Vid (SRV)

George Marin

The Romanian Vacuum Society (SRV) was founded on 13 August 1990 at the initiative of specialists working in the Institute of Atomic Physics, Bucharest. The aim was to bring together those specialists who were working in various research institutes and enterprises in Bucharest and elsewhere in Romania, who had an interested in Vacuum Physics and Technology and the application of this knowledge. At the time the Society was founded there were about 100 members.

The decision to join IUVSTA was made at a General Meeting of the Society in 1991, and the Society was formally admitted into IUVSTA at its General Meeting in The Hague in 1992.

The main activities developed between 1991 and 2000 were:

- Founding a specialized library of the Romanian Vacuum Society, containing books, scientific magazines and other technical information.
- Promoting the adoption of ISO Standards and regulations, and the development of national standards, in the field of Vacuum Technology.
- Offering consultations for both scientific and industrial applications on matters requiring vacuum knowledge.
- Organizing meetings between specialist members of RVS, and people interested in the use and maintenance of vacuum equipment.
- Organizing short courses on Vacuum Science and Technology at different levels, ranging from university courses to instruction courses for technicians and operators.
- Maintaining connections with IUVSTA and other national vacuum societies.

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RUSSIAN SCIENTIFIC AND TECHNICAL VACUUM SOCIETY (RSTVS)

Pavel Kashkarov

In the former USSR there were many scientific societies, which brought together specialists working in vacuum science, technologies and industry. Such societies were organised in many Soviet Republics (now independent states) and of course in the Russian Republic. After the disintegration of the USSR took place there survived two organisations in Russia: the Russian National Committee for Vacuum Science and Techniques (RNCVST) with Professor Vitas A. Grazhulis as president, and the Russian Vacuum Society (RVS) with Professor D. V. Bykov as president.

The RNCVST contained the following sections: surface science, electronics materials and ultrahigh vacuum technology, vacuum techniques, and thin films. Members of this committee, and especially V. Grazhulis, supported an active relationship with IUVSTA. They took part in IUVSTA meetings and RNCVST was responsible for the annual subscription to IUVSTA. This national committee was formally admitted as a member of IUVSTA in 1992.

Under the aegis of RNCVST international conferences titled "Physics of Low Dimensional Structures" were organised, and a monthly scientific journal with the same title was published (the Editor-in-Chief was Prof. V. A. Grazhulis).

The RVS was registered in the Russian Ministry of Justice in 1992 and was active mainly inside the country. Since 1994 the society organised annual conferences titled "Vacuum Science and Technology". Until now, seven such conferences have been held and the RVS has also published the scientific journal "Vacuum Science and Technology".

In 1998, after Prof. V. A. Grazhulis passed away, both organisations were combined under the guidance of Prof. D. V. Bykov. The present name of the organisation is the "Russian Scientific and Technical Vacuum Society" (RSTVS). The members of RSTVS come from both the scientific and industrial sectors.

The objectives of the society are:

- to offer guidance in the field;
- to promote rigorous research in the field of vacuum science, engineering and technology;
- to support the creation of new technologies and equipment;
- to promote and publicise new scientific and technical knowledge;
- to assess and make recommendations concerning developments in vacuum science and technology;
- to make business contacts with foreign organisations;
- to develop an information bank;
- to assess technical programs put forward within the country.

The Society is a federation of regional Branches with these being situated in the cities: Vladimir, Voronezh, Ivanvo, Izhevsk, Kasan, Kaliningrad, Kursk, Moscow, Nizhniy, Novgorod, Novosibirsk, Omsk, Pensa, Rostov-na-Donu, Ryazan, St. Peterburg, Saratov, Taganrog, Ufa and others.

The RSTVS includes more than 2000 individual members and collective members and now has its own website.

The RSTVS contains the following seven Sections.
- Vacuum science and techniques
- Surface science
- Thin films
- Vacuum metallurgy and materials
- Thermonuclear fusion and accelerators
- Vacuum technologies
- Vacuum mechanics and tribology.

The RSTVS is now responsible for international activities, including membership of IUVSTA.

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THE SLOVAK VACUUM SOCIETY

Slovenská vákuová spolocnost (SVS)

Viera Dubravcova and Marian Vesely

In former Czechoslovakia, the community of people working in the field of vacuum science, technology and applications was represented in IUVSTA, from 1965, by the Czechoslovak National Committee for Vacuum Science, Technique and Applications. Two decades later, the Working Group Vacuum Technology was founded in the frame of the Czechoslovak Society for Science and Technology. This Working Group organized summer schools and seminars in vacuum science and technology.

After the splitting of Czechoslovakia in two separate countries, the Czech Republic and Slovakia, the Slovak Vacuum Society (SVS) was established on 5 April 1993. Most of the Slovakian members of the Working Group Vacuum Technology became members of SVS. From the very beginning, excellent professional contacts have existed between the newly established Czech and Slovak Vacuum Societies. Actually, both of the national vacuum societies were created in close co-operation between Slovakian and Czech colleagues. Collaboration from the previous period continues smoothly.

During its meeting in Bled (Slovenia) in April 1995, the Executive Council of IUVSTA recommended to incorporate the Slovak Vacuum Society into IUVSTA. At the General Meeting held on the occasion of the International Vacuum Congress in Yokohama (Japan) in September 1995, the Slovak Vacuum Society was formally accepted as a member of IUVSTA. Since that time the SVS has been represented on the Executive Council of IUVSTA by a Councillor and Alternate Councillor. The SVS also nominates a representative on each of the IUVSTA Scientific Divisions. In 1998, the SVS hosted an Executive Council Meeting of the IUVSTA in Bratislava, as noted below.

The membership in SVS is individual or collective. Collective members are Universities and Institutes of the Slovak Academy of Sciences, and industrial companies. At present, SVS has 43 individual and 2 collective members. Between General Meetings, the activities of SVS are

steered by the Committee elected for three years. The scientific structure of SVS follows the divisional structure of IUVSTA.

The most notable meetings hosted by the SVS since its foundation in 1993 have been:

- The 3rd Bratislava Days on Molecular Beam Epitaxy, 16-17 May 1996.
- The “Summer School of Vacuum Physics”, 16-19 June 1997, held in Modra, and organized jointly with the Czech Vacuum Society (CVS).
- The "80th Executive Committee Meeting of IUVSTA", and a Seminar on “Thin Film Nucleation, Growth and Analysis”, 20-24 March 1998, both held in Bratislava.
- A “School of Vacuum Technology”, 1-4 June 1998, held in Ziarska Valley, and organized jointly with CVS.
- A “School of Vacuum Technology”, 24-27 May 1999, held in Bystrianska Valley, and organized jointly with CVS.
- A “Summer School of Vacuum Technology 2000”, 15-18 May 2000, held in the Sumava Mountains, and organized jointly with CVS.

Several one-day seminars were held on various topics and occasions, with some of them being organized in co-operation with other institutions:

- “Vacuum Technology in Slovakia” (28 Sept 1994)
- “Vacuum and Plasma Technologies and their Current and Future Applications in Manufacture” (21 Sept 1995)
- “Thin Films: Preparation and Technical Applications” (5 Dec 1996)
- “100 Years Since the Discovery of the Electron” (29 Apr 1997)
- “50 Years Since the Discovery of the Transistor” (17 Dec 1997)
- “Physics and Technology of the Growth of Diamond Layers” (25 Nov 1998)
- “Diamond and Diamond-like Films: Physics and Applications” (16 Feb 2000)

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SLOVENIAN VACUUM SOCIETY

Drustvo za Vakuumsko Tehniko Slovenije (DVTS)

Andrej Pregelj

The origins of the Slovenian Vacuum Society (DVTS) date back to the period immediately following the First International Congress on Vacuum Technique in Namur in 1958. At that time, following World War II, Slovenia was one of the 6 republics that were united as Yugoslavia. Thus its history begins with the activities of the Yugoslavian Vacuum Society of which the DVTS, in an earlier form, played a major role. The Yugoslavian Vacuum Society was a Founder Member of the IUVSTA and this period of history, including the prominent participation of Slovenian vacuum experts, is described separately at the end of this historical report.

After the dissolution of Yugoslavia in 1991, the Slovenian Vacuum Society (DVTS) was accepted into IUVSTA as an independent member at a General Meeting in The Hague in 1992.

It currently has a membership of about 150 and is governed by an Executive Council of 15 members, which meets about 5-8 times per year. It also has Committees on publication, education and periodic activities.

The purpose of the Society, as stated in its statutes, is:

- to contribute to the development of vacuum science and technique,
- to offer professional advice on the introduction of new technologies in this field,
- to educate professional staff in industry and research institutions,
- to promote contacts and cooperation among Society members and also among other similar societies at home and abroad,
- to promote the activities of its members with organized work to attain defined goals, and to coordinate the activities of separate professional organizations.

To achieve its purpose the Society undertakes a wide variety of activities which include:

- organizing national and international scientific and professional meetings (such as the Joint Vacuum Conference: Slovenia, Croatia, Austria, Hungary)
- presenting professional lectures
- presenting technical courses
- publishing technical literature
- publishing the journal “Vakuumist” (four times per year)
- offering advisory services
- collaborating with the IUVSTA, with other national vacuum societies (especially those of Croatia, Austria, Hungary and other near-neighbours) and with the Electrotechnical Society of Slovenia

A range of technical education courses are presented. These courses are intended for researchers as well as for vacuum equipment people from industry. They are held at the Institutes in Ljubljana (Institute of Metals and Technology, Jozef Stefan Institute, Institute of Surface Engineering and Optoelectronics) and include basic lectures and demonstrational practice in the institute laboratories. Existing regular courses include: Vacuum Technique Fundamentals, Vacuum Equipment Maintenance, Vacuum Technique for Teachers of Physics, and Leak Detection. Courses in preparation include: Thin Films, and Vacuum Cleanliness.

The DVTS plays an active role in the IUVSTA. It hosted the 73rd and 86th Executive Council Meetings in Brdo (1995) and Portoroz (2000) respectively. It maintains representatives on all of the IUVSTA Scientific Divisions and its current Councillor and Alternate are Mag. Andrej Pregelj and A/Prof. Dr. Monika Jenko, the latter of whom has recently chaired the Union's Developing Countries Committee. It currently maintains its own website and also an electronic data-base to aid the collaboration of scientists in technically developed and redeveloping countries. It is preparing a new edition of a Slovenian book on Vacuum Technique and it is extending the scope of its educational courses so that they can be offered "in house" for industrial companies on specialised topics.

History and events, prior to 1991.

After World War II, Slovenia was one of the 6 republics united as Yugoslavia. As it was, economically, the most progressive and developed country, it offered good conditions for research and was the knowledge-centre of the whole federal state. Therefore it is not strange that the Yugoslav vacuum experts - centered around the Slovenian "Institute for Electronics and Vacuum Technique" (in Ljubljana) - participated in the First International Congress on Vacuum Technique in Namur (Belgium). Returning home, these participants formed (in 1959) a section for vacuum science and technique as a part of Electrotechnical Society of Slovenia. This section is considered as a beginning of the present DVTS.

From the earliest time the Slovenian Vacuum Society was very active not only in its own country but also in the other republics. It's first task was to join all Yugoslav vacuumists in one union. Excited by the international vacuum movement, Slovenian vacuumists organized the 1st Yugoslav Conference on vacuum technique (on October 23, 1960 in Ljubljana). On this occasion they founded the "Yugoslav Centre for Vacuum Technique" (JCTV) with the seat in Ljubljana. In the following years the vacuum organizations in two other Yugoslav Republics, Serbia and Croatia, were formed and they became active as new members in the JCTV. At the request of the IUVSTA committee, two JCTV delegates (Slovenes: Dr. E. Kansky and Mr. B. Zupancic) attended the constitutional meeting in Brussels in 1962 and Yugoslavia became one of the ten Founder Members of IUVSTA. At that time the JCTV changed its status to the "Yugoslav Committee for Vacuum Technique" (JUVAK).

The DVTS - with well known names Lasic, Kansky, Lah, and Gasperic - was the initiator of organized activities in the field of vacuum throughout Yugoslavia, being recognized as the scientific and technical leader. Since the beginning, the seat of the Slovenian Society and that of the JUVAK have been in the Institute of Electronics and Vacuum Technique (IEVT) in Ljubljana, which is the capital of Slovenia.

In 1979 the three vacuum societies of the Federal Republics of Slovenia, Serbia and Croatia changed the subtitle of JUVAK to the "Yugoslav Union of Vacuum Societies". In the period preceding 1990 there were about 300 members included in all three societies. JUVAK organized 11 Yugoslav vacuum congresses and several specialized conferences and published 24 issues of its Bulletin. JUVAK, closely connected with DVTS, also made important contributions to the progress of vacuum science and technology in the whole country through educational courses, advisory work and edition of several vacuum text books in the national languages of Yugoslavia. It also hosted three IUVSTA Executive Council meetings, in Zagreb in 1966 and in Portoroz in 1971 and 1988.

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THE SPANISH VACUUM SOCIETY

Asociación Española del Vacío y sus Aplicaciones (ASEVA)

J. L. de Segovia.

The main aim of the Spanish Vacuum Society is: to stimulate the interest of the Spanish Scientific and Technical communities for the field of Vacuum and its Applications; to co-operate with other societies to spread the interest of the field; to co-operate with the Spanish and Local Governments in promoting the development of vacuum science and technology.

The Spanish Vacuum Society was created in 1963 as a specialised working group of the Spanish Committee of the International Union of Pure and Applied Physics (IUPAP) and eventually it became an independent society "Asociación Española del Vacío y sus Aplicaciones" (ASEVA) in 1968. This first stage is credited to the work and encouragement of Dr. L. Villena who promoted meetings among specialists in the field with the aim of creating a Society, or at least a Committee, on Vacuum Science and Technology. Activities were focused on the Vacuum Physics group at the Institute of Applied Physics of the National Research Council, CSIC, under the leadership of Dr. C. S. Martín and Dr. J. L. de Segovia. Thanks to the early activities of Drs. Villena and Martín, the Spanish Committee joined the IOVST in Belgium, which later became the IUVSTA. This gave ASEVA the opportunity to become a Founder Member of IUVSTA.

The governing board consists of a President, Vice-President, Secretary, Treasurer, and up to 16 members. Each person serves for four years, with half of the board renewed every two years. The board names representatives in the IUVSTA: Councillor, Alternate Councillor and members of the Electoral College of each IUVSTA Division.

Dr. C. S. Martín was President of ASEVA from 1964 until he retired in 1982 and he was assisted by Prof. J. L. de Segovia as Secretary General. His successor was Dr. F. Verdaguer (Atomic Energy Commission) who unfortunately died in April 1984. Prof. F. Rueda (Universidad Autonoma de Madrid) then held the Presidency until March 1985. Prof. J. L. de Segovia was promoted from Secretary General to President in 1985 and he served in that capacity until he retired in 2000, being assisted by Dra E. Román as Secretary General. The current President is Professor J. M. Albella (Instituto de Ciencia de Materiales de Madrid, CSIC) and Dra. E. Román is Secretary General.

The following scientific and technical areas are covered by ASEVA: Vacuum Science and Technology, Surface Science, Applied Surface Science, Nanotechnology, Electronic Materials, Thin Films, Fusion Technology, Metallurgy and Hard Coatings.

ASEVA is supported by the National Research Council (headquarters for the Society), the Atomic Energy Commission, the Autonoma University of Madrid and the Industrial Engineering Department of the Polytechnical University. Vacuum industries associated with ASEVA are Telstar S.A, and Leybold S.A.

The ASEVA has 80 members. Dr. L. Villena, Prof. K. Diels†, Mr R. Capella and Dr. C. S. Martín† are Honorary Members of the Society and recently Professor J. L. de Segovia has been nominated Honorary President of the Society.

The Spanish Vacuum Society has remained an active participant in the IUVSTA during its long association with that Union. It has always been represented on the Executive Council and has been actively involved on several working Committees of the IUVSTA including Education, Bibliography and Literature, Methods of Measurements, Standardisation, Finance, Congress Planning Committee and several Division Committees. It has representatives on all of the scientific Divisions and Professor J. L. de Segovia served as President of IUVSTA from 1989 to 1992.

The society has hosted three meetings of the Executive Committee of the IUVSTA, at Madrid in 1972, Ávila in 1990 and Segovia in 1996. It organised the 9th International Vacuum Congress and 5th International Conference on Solid Surfaces in Madrid in 1983. This was the first Congress in which the host country worked closely with the IUVSTA Divisions in planning the scientific program of the Congress along lines drawn up by Professor de Segovia whilst he was Chairman of the IUVSTA Congress Planning Committee.

The Spanish Vacuum Society has a long history of presenting its own triennial series of National Vacuum Meetings which, after 1985, were held jointly with the Portuguese Vacuum Society as the Iberian Vacuum Meetings. These have been interspersed by other national, regional and international conferences.

With regard to publishing, the Society has published the Proceedings of its own National Vacuum Meetings and some of the other international conferences. It has also published a Spanish version of the IUVSTA Visual Aids Project and a text on Vacuum Science and Technology.

In terms of direct educational activities, the ASEVA organises the following Courses on an annual basis: Basic Vacuum I, Basic Leak Detection I, Vacuum for Glass Blowers, Mass Spectrometry, and Systems Maintenance.

In addition to these courses, in 1999 the Society established a permanent Summer School to be held during each summer at the town of Ávila. The aim has been to organise special high quality courses in Vacuum Science and Applications, workshops on highlight topics, and special vacuum-related events, with a number of these being held concurrently or sequentially during the School period. Subjects have included: Water Reactivity: Gas-Solid and Liquid-Solid Interfaces; Surface Treatments for Ultra High Vacuum Devices; Materials for Gas Sensors; Carbon and Carbon Compounds; Electron Spectroscopies and Strongly Correlated Electron Systems; Physical Basis and Technology of Absolute Pressure Measurements (2000 mbar to Low Vacuum).

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THE SWEDISH VACUUM SOCIETY

Svenska Vakuum Sällskapet (SVS)

Lars Westerberg

Sweden has a long tradition in the development of vacuum science, including the turbo molecular pumps developed by Prof. Manne Siegbahn for X-ray spectrometers in Uppsala starting in the 1920's and for accelerators in Stockholm the 1940's. When IUVSTA was founded there was no formal Swedish vacuum society. There were, however, several research groups that had a need for new developments in the vacuum field. There was a demand for cleaner vacuum systems and lower pressure for surface science using ESCA spectrometers.

It is therefore not surprising that Sweden was one of the ten founding members of IUVSTA. Prof. Gösta Brogren from Chalmers University, Gothenburg, was present at the founding meeting and he was the Swedish councillor for the triennium 1962-65. It was, however, not until 1973 that the Swedish Vacuum Society was formally founded. An Interim Committee had been formed on January 21, 1972. The chairman of that committee was Prof. Stig Hagström and the secretary was Hans Ottosson, both of the University of Linköping. Contacts were made with Scandinavian colleagues, in an attempt to form a Scandinavian Vacuum Society. However these attempts were not successful. One of the activities of the Interim Committee was to start publishing a news bulletin, "Vakuum Nytt", the first issue of which was published on February 10, 1972. This publication is still actively used as an information medium in the Swedish Vacuum Society, with No. 69 being published in December 2000. The Interim Committee called a Charter Meeting on June 14, 1973, and on this date the Swedish Vacuum Society was formed. The first Board of Directors (BoD) was: Gunnar Schön (President), Roland Jacobsson (Vice president and secretary), Lars Yström (Treasurer) and Alex Albrecht.

Contact with IUVSTA had been established previously on January 25, 1973 at an Executive Council Meeting in London and a formal application for membership was submitted to the 22nd Executive Council Meeting in Madrid on September 27, 1973. Membership was granted by the IUVSTA General Meeting on March 26, 1974 in Kyoto, Japan.

Among the members of the Swedish Vacuum Society who have served IUVSTA extensively are Hans Ottosson, STD Secretary from 1974 to 1983, Sven-Erik Karlsson, STD Secretary 1983-89, Jan-Eric Sundgren who chaired the Thin Film Division 1992-95, and Lars Westerberg who was chair of the Publications Committee 1995-2001 and editor of the IUVSTA Web home page 1996-2000 and editor of the News Bulletin 1997-2001. Other Swedish delegates who have served in various capacities are Sören Berg, Anders Flodström and Lars Hultman. The Swedish Vacuum Society has contributed to IUVSTA conference activities in Sweden by organizing an International Symposium on Vacuum and Thin Films Technology in Uppsala, August 31 - September 3, 1976, and the Sixth International Conference on Thin Films (ICTF-6) in Stockholm, August 13 - 17, 1984. On both these occasions, the Swedish Vacuum Society also hosted the Executive Council Meetings of IUVSTA.

In the early 1990's our vacuum society was bidding to host the European Vacuum Conference (EVC) and in June 1994 EVC-4, chaired by L. Westerberg, was held in Uppsala for 3 days and continued on a passenger ferry back and fourth from Stockholm to Helsinki with all 350 participants. The meeting was held together with the Swedish Vacuum Meeting (SVM-1)

which focused on thin films, surface science and vacuum science. This combination was a clear success and the meeting has since been held every third year, in Linköping 1997, chaired by L. Hultman, and in Göteborg 2000, chaired by L.Walldén. The acronym SVM is still the same, but the name has changed to the Swedish Vacuum and Materials science meeting. We celebrated the 25 year anniversary of SVS at the meeting in 1997 in Linköping. Several of the pioneers came to this meeting. In 1997 SVS hosted an IUVSTA workshop on "Outgassing of materials", co-chaired by B. Hjörvarsson and L. Westerberg. High level vacuum courses were organized in cooperation with IUVSTA and/or AVS in 1994, 1997 and 2000. We have participated in a meeting of European vacuum society presidents organized by the French Vacuum Society and we have organized a similar meeting in 1997. These meetings have been very useful when planning for new activities.

The current membership of the Swedish Vacuum Society is approximately 300, plus 20 supporting company members. One member of the BoD is appointed by the supporting companies. In the beginning of the 1990's the terms for presidents were changed to two one-year terms as president-elect and president. A position as past president was also created. The editor of the news bulletin and the vacuum course director are coopted to the BoD if they are not already members in another capacity.

Today, the main issues of the Swedish Vacuum Society are as follows.

- During 2001 the News Letter "Vakuum Nytt" is being upgraded from A5 format to A4, including the introduction of colour.
- A campaign will be mounted at universities and major companies to recruit more members. Already course participants are offered free membership during the first year.
- We will plan future conferences and bid for new ones. NANO-7 will be organized in Malmö in June-July 2002. ECOSS-21 will be organized together with this event in cooperation with Danish scientists. We will organize TATF'2002 in South Sweden in cooperation with Germany and France. SVM-4 will be held in Karlstad in 2003 and ICTF will be arranged in Sweden in 2005. We have also submitted a proposal to IUVSTA to host IVC-17/ICSS-13 in Stockholm in 2007.
- Our vacuum society is already very active in giving courses and this activity will be expanded. We give our basic vacuum technology course several times per year. It is interesting to note that there is an increasing demand for courses presented exclusively for one company at a time and on the company premises. We are in the process of developing a course on residual gas analyzers. For more special courses we will continue to rely on our cooperation with IUVSTA and AVS.
- It is our aim to strengthen the cooperation with our colleagues in the Finnish Vacuum Society and with groups active in the IUVSTA fields in Denmark and Norway. To support this objective, some years ago our annual meeting was held in Copenhagen.

At the annual meeting in Göteborg in 2000 the SVS statutes were changed as follows: When presenting the society it is recommended that the name of the society is further clarified in the following way: The Swedish Vacuum Society - A Society for Vacuum Technology and Materials Science.

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THE SWISS VACUUM SOCIETY

Schweizerische Vakuumgesellschaft (SVG)
Societé Suisse du Vide
Swiss Vacuum

Urs Wälchli

The Swiss vacuum society was founded in the year 1952. The society was named “Schweizerische Gesellschaft für Vakuum-Physik und -Technik" (SGV) in German and a corresponding name in French. Members of this society could be either Collective Members or Corresponding Members. The Collective Members were Industrial Companies, Trading Companies, or public or scientific Institutions, which were active in the field of vacuum science or vacuum technology whilst the Corresponding Members were personal contacts within the Collective Members. The members had to be located either in Switzerland or in the Principality of Liechtenstein. It was this society which joined the IUVSTA as a Founder member in 1962.

Unfortunately, membership of the "old" society slowly began to decline. To keep activities in the field of vacuum science and technology alive, it was decided by the board of the old society to restart the activities under a new name. As a consequence of this, and due to some legal and tax issues, in 1993 a new society was founded at the 40th yearly assembly of the “Schweizerische Gesellschaft für Vakuum-Physik und -Technik”. This new society is the legal successor of the old society and bears the names “Schweizerische Vakuumgesellschaft" (SVG), "Societé Suisse du Vide" and "Swiss Vacuum". The Swiss Vacuum Society has a structure that is somewhat different to that of the old SGV. Members may now also be individual persons who are working, or have interest, in the field of vacuum.

The purpose of the Swiss Vacuum Society is to be a forum for the people, the research groups and the companies who are interested in the field of the vacuum production or applications. The goal is to gather and share information and knowledge about research done in Swiss or other research laboratories; and to hear about industrial research and development in Seminars, Courses, Lectures and Assemblies provided by the society.

In order that the basic knowledge and its applications may be shared efficiently, Working Groups have been set up in the following fields:

- Vacuum in Research
- Vacuum Metallurgy
- Hard Coatings
- Decorative Coatings
- Vacuum in Plasma Processes
- Vacuum for Semiconductors and Data Storage
- Vacuum in Chemical and Pharmaceutical Processes.

The Swiss Vacuum Society has the following structure. It has a Board consisting of at least three members, presided over by, and including, a president, a vice-president and a financial officer who manages the business. The members of the board are elected yearly at the general assembly, where all members have voting rights, but once elected the Board may coopt additional members. All changes of the statutes or major changes in the business orientation and the financial framework have to be approved by the general assembly. Usually the general

assembly takes place once a year. However, upon request of a specific number of members, a general assembly can be held at any time.

Currently the society has 71 members, of which 20 are industrial companies, 5 are individual persons and the others are public organizations.

Since its participation as a Founder Member of the IUVSTA, members of the Swiss Vacuum Society have been represented amongst the Officers of the Union by R Mercier, J Hengevoss and H Wahl, all as Treasurers. As well as being represented on the Executive Council of the Union and on its various committees, the Society also has nominated representatives in all of the Scientific Divisions. The society has hosted Executive Council meetings on two occasions, namely ECM-45 in Vaduz (Liechtenstein) and ECM-83 in Saillon (Switzerland).

In recent years, the society has not been active in its coverage of the scientific areas of the previously listed Working Groups. Perhaps this is because scientific and industrial developments in these fields appear to flourish in Switzerland and Liechtenstein without extra support from the society. However, it is expected that, under its new organisation, the society will again become a focal point for bringing together those working in the Working Group fields.

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THE UKRAINIAN VACUUM SOCIETY (UVS)

Anton G Naumovets

The Ukrainian Vacuum Society (UVS) was founded in 1993. The main event which led to its creation was the declaration of Ukraine as an independent state in 1991. Upon establishment, the UVS was officially registered by the Ministry of Justice of Ukraine and recognized by the Ministry of Education and Science of Ukraine. In 1995, the UVS was admitted as a full member of the IUVSTA.

Prior to 1991, whilst Ukraine was a part of the Soviet Union, many research institutes, university departments, branch R&D organizations and industrial enterprises were already active in the field of vacuum science and technology (VTS). The institutions were primarily those of the Academy of Sciences of Ukraine, namely the Institutes of Physics, Semiconductor Physics, Metal Physics, Nuclear Research, Electrical Welding, Materials Science, Low-Temperature Physics and Technologies, Electron Physics, and the Kharkov Physico-Technical Institute. The principal university departments were those of the Universities of Kiev, Kharkov, Lviv, Uzhgorod, and Ivano-Frankovsk. The industrial enterprises included "Micropribor", "Saturn", and the Plant of Electron Microscopes and Vacuum Equipment in Sumy, etc.

However, in this period prior to 1993, whilst the vacuum scientists and engineers of Ukraine were not unified within a consolidated society, they did participate in various councils and sections belonging to the Academy of Sciences and to the All-Union Society of Inventors and Developers.

The objectives of the UVS are: to stimulate the development of vacuum science and technologies; to train vacuum specialists; and, to encourage contacts between specialists.

The UVS currently has a membership of about 250 and is governed by its Steering Board, President, Vice-President and Secretary.

The involvement of industry in the activities of the UVS is at present impeded by the crisis of the Ukrainian economy, especially in the microelectronics and other high-tech fields.

Areas of VST covered in Ukraine are: surface physics and chemistry; surface characterization techniques; thin film technologies; electron-beam, ion-beam and plasma technologies; space simulations; nanophysics and nanoelectronics.

Every second year the UVS organizes a national symposium on VST. Material presented at these symposia are published as a collection of UVS books. A journal, "Problems of Vacuum Science and Technology", is also published in Kharkov.

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THE AMERICAN VACUUM SOCIETY (AVS)

Original (1986) by J. M. Lafferty
Updated (2000) by W. D. Westwood

Frederick A. McNally was responsible for the formation of the American Vacuum Society (AVS). Through his efforts, an organizational meeting was held in New York City on June 18, 1953, to discuss the formation of a permanent organization that could bring together both the theoretical and practical knowledge of the many different fields using a vacuum as a production or research tool. This meeting resulted in the formal organization of the "Committee on Vacuum Techniques" (CVT) less than a week later, and its formal incorporation in Massachusetts on October 19, 1953. Since its first symposium the following June in Asbury Park, New Jersey, the group has convened an annual symposium in every succeeding year.

In 1957, the CVT changed its name to the American Vacuum Society, Inc. The first biennial equipment exhibit was held in conjunction with its 1961 symposium. Since 1965, an equipment exhibit has been a part of every symposium. These exhibits have proved to be of great interest to the registrants, and of considerable financial help to the AVS. The 40th anniversary symposium, which was held in Orlando in 1993, had over 1300 attendees and 900 papers. In 2000, over 1400 papers will be given in Boston.

The AVS has continued to grow and prosper with a current membership of approximately 6,000. AVS is a tax exempt not-for-profit organization. The founders of AVS were mainly drawn from industry and industrial participation has continued to be strong as participation from government labs and universities grew. With membership drawn from all three sectors, AVS provides a forum for interaction between them.

Over the years, the AVS has developed a close association with the American Institute of Physics becoming a full member society of AIP in 1976. The AIP has been publishing the "Journal of Vacuum Science and Technology" for the AVS since its inception in 1965. The Institute also has managed the equipment exhibits at the national symposia since 1965.

AVS produces both the "Journal of Vacuum Science and Technology" and "Surface Science Spectra" as archival publications. Approximately 7000 pages are published annually in JVST; almost 500 material data records have been published in SSS. JVST is available on-line as well as on CDs, issued quarterly.

The AVS is governed by an elected Board of Directors consisting of a President, President-Elect, Secretary Clerk, Treasurer, and six Directors. The President serves a 1 year term. Originally, three directors were elected each year to serve a two-year term but now 2 are elected each year for 3 year terms to provide more continuity. Two trustees are also elected each year for 3 year terms; the six trustees are responsible for selecting the winners of the various awards presented by AVS for scientific and technical achievement at all levels from postgraduate studies onwards.

The AVS headquarters has been located in New York City since 1968. It now occupies space on Wall Street with an excellent view, and there is a west coast office in Silicon Valley. Until 1981, the office staff comprised Nancy Hammond. There are now 6 staff in New York and 1 in the west. Another 3 staff members are associated with the JVST office in North Carolina.

In the 1960's, the AVS Board of Directors formed divisions to provide a home and give support to those new disciplines that have benefited most from improved vacuum technology. These included a Vacuum Metallurgy Division in 1961, a Thin Film Division in 1964, a Surface Science Division in 1968, a Vacuum Technology Division in 1970, an Electronic Materials and Processes Division in 1979 and a Fusion Technology Division in 1980. There are now 9 divisions (Advanced Surface Engineering-renamed from Vacuum Metallurgy in 2000, Applied Surface Science-1985, Electronic Materials and Processes, Magnetic Interfaces and Nanostructures-2000, Nanometer Science and Technology-1992, Plasma Science and Technology-formed in 1986 from Fusion Technology, Surface Science, Thin Film, Vacuum Technology). The divisions provide technical guidance to the Society. They play a strong hand in the content of the National Symposia and they sponsor or co-sponsor topical symposia related to their own special fields of expertise.

To foster new areas of technology, the Board established Technical Groups, which are intended to be a stepping stone to division status or a temporary organization for a developing area of technology. The first group was Manufacturing Science and Technology in 1994. The other current technical groups are Biomaterials Interfaces-1995, Electrochemistry and Fluid/Solid Interfaces-1995 and Micro Electro Mechanical Systems-1999.

It will be noted that even though the AVS has now become a multidisciplinary society, there is a synergistic interaction between the divisions and technical groups that extends beyond the fact that they all use vacuum as an important tool in practicing their trade. This has given the Society strength and tenacity, and was highlighted by the organization of the symposium in 1999 along thematic lines.

Local Chapters are a vital part of the AVS structure and have contributed substantially to its growth. They are geographical in nature and serve to bring important technical information to

local communities on a continuing basis throughout the year. This is done through regional symposia, courses, newsletters, dinner meetings, etc. There are currently 19 Chapters covering the USA and Canada; the number has decreased slightly to reflect the changing geographic distribution of members.

The AVS places an emphasis on educational activities which include: over 40 courses in topics related to AVS areas of expertise, which are offered at various locations and times throughout the year; publication of topical monographs; workshops for high school science teachers; support for the US team in the Physics Olympiad.

The AVS is a Founder Member of the IUVSTA and has been involved in its activities since its inception. Mr. Medard W. Welch played a prominent role in establishing and shaping the IUVSTA, serving as Vice President of the IOVST and as the first President of IUVSTA. He established and supported the Welch Foundation which awards an annual international scholarship. In recognition of his support and service to the Union he was made an Honorary President and Founder Member of the IUVSTA. Dr. Luther E. Preuss was active in the IUVSTA from 1965 in various positions and was responsible for establishing the IUVSTA Secretariat in London and for the smooth and orderly establishment of Divisions in the IUVSTA. Dr. James M. Lafferty was active in the IUVSTA from 1970 and served as President for 1980-3. He was responsible for the decentralization of the IUVSTA Secretariat and for establishing a sound financial policy for the Union. He was also responsible for establishing an organizational structure involving the IUVSTA Divisions for the planning of International Vacuum Congresses. Dr. M. H. Francombe was the first Chairman of the Electronic Materials and Processing Division, Dr. M. Kaminsky was the first Chairman of the Fusion Division and Prof. R. Bunshah was the first Chairman of the Vacuum Metallurgy Division. Prof. T. E Madey was Secretary General in 1986-9 before serving as President in 1992-5.

The AVS hosted the IOVST International Vacuum Congress in Washington in 1961 and the IUVSTA International Vacuum Congress and International Conference on Solid Surfaces in Boston in 1971 and Baltimore in 1986 and will again host these in 2001 in San Francisco.

A more detailed history of the AVS was compiled by Paul A. Redhead in 1994 (AVS Monograph M-15) from previous histories by H. W. Schleuning, J. L. Vossen and N. Hammond, J. M. Lafferty and J. H. Singleton on the occasions of the 20th, 30th and 40th anniversaries of the society; a further update will be compiled for the 50th anniversary in 2003.

Up to date information on AVS can be found through the AVS website. This includes the bi-monthly newsletter, course offerings, monographs, and a calendar of events.

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