Annual Report of Activity of Division of Plasma Physics

2016.1.22 AAPPS-DPP Chairman, Mitsuru Kikuchi

[1] Executive Committee Membership (Decision body)

Same as last year. M. Kikuchi(Japan, Chair), L. Chen(Beijing, Vice), A. Sen(India, Vice), M. Shiratani(Japan, Vice), Z. Sheng(Beijing, Vice), Lin-Ni Hau(Taipei, Vice), D. Ryu(Korea, Vice), M. Hole(Australia, Vice), T. Onjun(Thailand, Chief secretary), H. Nagai(Japan, HP secretary), K. Imadera(Japan, membership Secretary)

[2] International Honorary Advisory Committee (I-HAC) Membership (Advisory body)

Same as last year: Prof. P. Kaw (, India, Chair), Prof. A. Hasegawa(Japan), Acad. Prof. C. Yu(Beijing), Prof. R. Dewar (Australia), Prof. C.Z. Cheng (Taipei), Prof. C.S. Chang (US), , Prof. F.F. Chen (US), Prof. R. Hatakeyama (Japan), Prof. R. Boswell(Australia), Prof. T. Tajima (US), Acad. Prof. X.T. He (Beijing), Prof. K. Mima (Japan), Prof. K. Shibata (Japan), Acad. Prof. L.C. Lee (Taipei), Prof. Z. Pu (Beijing), Prof. W. Namkung (Korea), Prof. M. Sasao (Japan), Prof. H. Takabe (Germany), Prof. Chuanhong Pan (Beijing)

[3] Key Activities

1. Membership

- Total 1299 (Jan.2016) (Plasma Science Society of India joined DPP in 2014)
- Chinese DPP (X. Wang: chair) becomes group member of AAPPS-DPP (See ***Appendix 1***) after its approval in CPS council. Members of CPS-DPP are more than 1000. So AAPPS-DPP members are ~2120.

Achievement: AAPPS-DPP membership increased from >1000 in 2014 to >2000 in Jan 2016.

2. **Home Page:** DPP HP continues to be updated by Dr. Nagai. Excellent work!
3. **Mailing service:** Mailing service is continued using JAEA mailing service system.
4. **Conference Co-sponsor:** DPP co-sponsor/endorse conferences are continued.
   ICPP 2016 (International Congress of Plasma Physics) to be held in Kaohsiung, Taiwan during June 27-July 1, 2016 is largest conference DPP endorsed and DPP members are actively participating [Chair, C.Z. Cheng (I-HAC)] We have ***200 invited speakers*** (***Appendix 2***). Now we start call for contributed papers including large number of oral slots.

5. Cooperation with EPS-DPP:

EPS-DPP chair Sylvie Jacquemot and EPS2016 PC chair Paola Mantica asked me to join EPS2016 program committee ***representing AAPPS-DPP*** for the selection of plenary and invited speakers. This is the first actual participation to EPS PC from Asian region. We have big increase 1 plenary, 1 evening session, 7 invited speakers compared with 1 plenary and 2 invited speakers in EPS2015. See ***Appendix 3***.

6. **Web advertisement:**

We have started Web advertisement to have small but non-zero income to AAPPS-DPP. Currently, we have ***2 companies from Japan and 3 companies from China***. We need more from companies and institutes allover the Asia-Pacific region. An institute in Korea is under consideration.

7. **S. Chandrasekhar Prize of Plasma Physics (DPP Prize):**

We have partial sponsorship for 2015 S. Chandrasekhar Prize cash from Future Energy Research Association (President Osamu Motojima (last ITER DG), http://www8.plala.or.jp/mirai/). 2015 S. Chandrasekhar Prize laureate is Prof. P. Kaw of India for his seminal work on Laser-plasma interaction to whom we requested invited talk at APPC-13 (***Appendix 4***).

8. **DPP account:**

AAPPS-DPP has 2 bank accounts in Mizuho bank in Japan by the name of AAPPS-DPP. Yen account: 1319456, Dollar account: 9118832. These accounts are used for transfer of cash prize of S. Chandrasekhar Prize and also Web advertisements.

9. **Preparation for Next APPC:**

According to By Law of Division of AAPPS, DPP want to actively organize plasma physics program and attract more participants in the next APPC. We are waiting for answer for above request in last 31th council meeting. Ex. Co. decision for APPC-13 plenary for plasma physics is S. Ichimaru submitted through M. Hole (PC member) and IAC member Prof. M. Sasao but not selected [Note APPC-12 Organizing Committee gave 4 plenaries, 41 invited and 46 oral speakers to DPP]. We have submitted ~100 candidates of invited speakers to APPC/AIP PC in July 2015. We are still waiting for action on invited speakers.

10. **DPP Journal:**

We are working on creating new Asia-Pacific DPP journal, called "Reviews of Modern Plasma Physics". Negotiation to one publisher was not successful and another publisher gave satisfactory counter proposal to AAPPS-DPP. Planned first publication is now shifted to January 2017. (see ***Appendix 5***)

11. **Education activity on plasma physics:**

DPP chief secretary T. Onjun started ASEAN plasma school in Jan. 2015. We have 2nd ASEAN plasma and fusion school. AAPPS-DPP co-sponsors this school. DPP also endorses EAST Asia school and WS.

Appendix-1: CPS-DPP application of group membership

哈爾濱工業大學

Harbin Institute of Technology
Harbin, Heilongjiang 150001
Tel: +86-451-8626-6709

January 12, 2016

Dear Prof. Kikuchi, Chairman of AAPPS-DPP, and Committee Members,

It is a great honor for me, on behalf of the Division of Plasma Physics of the Chinese Physical Society (DPP/CPS), to apply for the group membership of Division of Plasma Physics of Association of Asian-Pacific Physical Societies (DPP/AAPPS).

DPP/CPS was founded and named Association of Plasma Studies, China in 1980s, and then became a division of Chinese Physical Society (CPS) in 2006. The division has 27 core institutions as its executive group members and more than 60 associate groups in China to represent more than a thousand researchers and graduate students in plasma physics.

On the 2015 annual meeting of Executive Committee of DPP/CPS last August, the move of applying for a group membership of DPP/AAPPS was passed unanimously. The proposal has then been approved by The 2nd Meeting of The 10th CPS Standing Executive Committee, in December 2015.

This letter serves as the formal application for the group membership of DPP/APPSS. I am looking forward to your reply and the division's approval.

If any further info is needed, please feel free to contact me at xgwang@hit.edu.cn.

Yours sincerely,

Xiaogang Wang
Chair, Division of Plasma Physics
Chinese Physical Society
Also:
Professor of Physics
& Director of Institute of Plasma Physics
Harbin Institute of Technology
Harbin, China 150001
xgwang@hit.edu.cn

Increase in individual membership from 2015 to 2016.

2016.1.1

	Founders	Members	Total
Australia	11	22	33
Beijing	22	94	116
India	10	839	849
Japan	24	110	134
Korea	9	47	56
Malaysia	1	3	4
Philippines	1	5	6
Taipei	5	16	21
Thailand	2	14	16
Singapore	4	0	4
Hong-Kong	1	0	1
Nepal	1	19	20
Oman	0	1	1
Pakistan	0	1	1
Indonesia	0	2	2
USA	1	21	22
Canada	0	1	1
France	0	1	1
UK	0	2	2
Germany	0	4	4
Italy	0	1	1
Czech	0	1	1
Portugal	0	1	1
Chili	0	1	1
Rwanda	0	1	1
Total	92	1207	1299

2015.1.1

	Founders	Members	Total
Australia	11	21	32
Beijing	22	92	114
India	10	835	845
Japan	24	104	128
Korea	9	29	38
Malaysia	1	3	4
Philippines	1	5	6
Taipei	5	16	21
Thailand	2	12	14
Singapore	4	0	4
Hong-Kong	1	0	1
Nepal	1	18	19
Oman	0	1	1
Pakistan	0	0	0
Indonesia	0	0	0
USA	1	19	20
Canada	0	1	1
France	0	1	1
UK	0	1	1
Germany	0	4	4
Italy	0	1	1
Czech	0	1	1
Portugal	0	1	1
Chili	0	1	1
Rwanda	0	1	1
Total	92	1167	1259

Appendix 2: ICPP 2016 Plenary and Invited

8 Plenaries: Bernard Bigot(ITER),Chandrashekhar Joshi(UCLA),Vladimir Nosenko(DLR), Hidenori Akiyama (Kunamoto U.), Hirotsugu Kojima (Kyoto U.), Tito Mendoca (IST), Valery Nakariakov (U.Warwick), K.Shibata (Kyoto U.)
Public lecture: Atsuo Iiyoshi (Chubu University, Japan)
Invited: 30 MCP [T.Donne (EuroFusion), A.Kallenbach (IPP-Garching), W.Heidbrink (UC Irvine), M.Xu (SWIP), P.H. Diamond(UCSD), S.Inagaki (Kyushu U.), T.Klinger (IPP-Greifswald), YK.In (NFRI), C.Angioni (IPP-Garching), K.Imadera (Kyoto U.), TS.Hahm (SNU), N.Miyato (JAEA), S.Briguglio (ENEA), T.Ido (NIFS), J.Ghosh (IPR), J.Berkery (PPPL), D.Zarzoso (Aix Marseille U.), V.Chan (USTC), E.Marmar (MIT), C.Theiler (CRPP), P.Martin (U. Padova, Italy), T.Kobayashi (NIFS), Q.Hu (HUST), M.Honda (JAEA), J.Garcia (CEA), H.Park (UNIST), V.Rozhansky (St. Petersburg P. U.), M.Muraglia (Aix Marseille U.), JE Menard (PPPL), W.Horton (U. Texas), Y.Ren (PPPL)]
20 LBP [V.Malka (LOA), P.Norreys (STFC, Oxford), G.Gregori (Oxford), W.Mori (UCLA), L.Silva (IST), Z.Najmudin (Imperial College London), J.Hua (Tsinghua U.), Y.Ding (Laser Fusion Research Center), C.Pai (Tsinghua U. & NCU), H. Azechi (Osaka University), C.H Nam (IBS Center), R.Trines (STFC), K.Krushelnick (U. Michigan, USA), D.Hinkel (LLNL), J.Vieira (IST), H.Chen (LLNL), B.Remington (LLNL), M.Rosen (LLNL), V.Tikhonchuk (LMJ), S.Weber (Extreme Light Infrastructure)]]
29 PA [I.Adamovich (Ohio State U.), Y.Akishev (Troitsk Institute Innovation & Thermonuclear Research), JP Boeuf (CNRS and U. Toulouse), R.Boswell (ANU), C.Charles (ANU), EH Choi (Kwang Woon U.), U.Czarnetzki (Ruhr U. Bochum), T.Gans (U. York, UK), D.Graves (UCB), JCC Hsu (National Taiwan U.), T.Kaneko (Tohoku U.), M.Keidar (George Washington U.), Y.Lebedev (Russian Academy of Science), T.Murphy (CSIRO), R.Ono (U.Tokyo), L.Pitchford (CNRS and U. Toulouse), S.Rauf (Applied Materials, Inc.), K.Takaki (Iwate U.), R. van de Sanden (FOM institute DIFFER), GY Yeom (SungKyunKwan U.), Y.Nishida (NCKU), S.Shinohara (TUAT), G.Cartry (Aix-Marseille U.), Y.Tanaka (Kanazawa University), J.Schulze (West Virginia University), K.Sasaki (Hokkaido University), G.Oehrlein (University of Maryland), JK Lee (Pohang University of Science and Engineering), A. Mase (Kyushu University)],
29 PDSI [TS Pedersen (IPP), J. Chung (NFRI), L. Reusch (University of Wisconsin–Madison), A. Melnikov (Kurchatov Institute), R. Magee (Tri Alpha Energy), W.Biel (FZJ, Germany), N.Luhmann (UC-Davis), J.Santos (CELIA, Bordeaux), K. Shigemori (Osaka University), R. Kumar (TIFR Mumbay), P. Patel (LLNL), K.Oades (AWE), W.Choe (KAIST), Milan Simek (Institute of Plasma Physics AVCR, Prague), Takayuki Ohta (Meijo U.), Greg Severn (UCSD), L.Boufendi (University of Orleans), J. Roepcke (INP Greifswald), HK Fang (ISAPS/NCKU), I.Yoshikawa (U. Tokyo), S.Barabash (Swedish Institute of Space Physics (IRF)), A.Fedorov (IRAP Toulouse), D.Knudsen (U.Calgary), B. Ergun (U.Colorado), KH Glassmeier (U.Braunschweig), D.Miles (U.Alberta), Y.Saito (ISAS), KW Min (KAIST), A.Zaslavsky (OBSPM)]
19 BPP [N.Hurst (UCSD), G.Tynan (UCSD), C.Crabtree (NRL), G.Livadiotis (Southwest Research Institute), Y.Kosuga (Kyushu U.), V.Ilgisonis (Kurchatov National Center), M.Inomoto (U.Tokyo), T.Killian (Rice U.), Y.Nishimura (NCKU), K. Takahashi (Tohoku U.), B.Van Compernolle (UCLA), Y. Xu (Southwestern Institute of Physics), S. Usami (NIFS), M. Koepke (West Virginia U.), H.Bailung (Institute of Advanced Study in Science and Technology), MC Firpo (CNRS-Ecole Polytechnique), M. Toida (NIFS), E. de GD Pino (U. Sao Paulo), N. Nishizuka (National Institute of Information and Communications Technology)]
24SP [G. Parks (UC Berkeley), LJ Chen (U. New Hampshire), Y. Lin (Auburn U.), P. Delamere (U.Alaska), B. Anderson (Applied Physics Laboratory), C. Kletzing (U. Iowa), H. Li (LANL), J.Buechner (Max Planck Institute), D.Shklyar (IKI Russian Space Agency), D.Summers (Memorial University of Newfoundland), I.Cairns (U. Sydney), M.Hoshino (U.Tokyo), Y.Ebihara (Kyoto U.), K. Kusano (Nagoya U.), K. Seki (U.Tokyo), G.Choe (Kyung Hee U.), Q.Zong (Peking U.), Ya-Hui Yang (NCU), B.Lembege (LATMOS), M.Wan (U.Delaware), H.Hara (NAOJ), A.Vaivads (Swedish Institute of Space Physics), C.Kuranz (U.Michigan), S.Fu (Peking U.)]
26AP [H. Hotta (High Altitude Observatory), H.Takahashi (NAO), B.Reville (Queen's U. Belfast), E.Amato (INAF/Osservatorio Astrofisico di Arcetri), Ganfranco Brunetti (INAF Istituto di Radioastronomia), T.Amano (U.Tokyo), J.Cho (Chunganm National U.), D.Ryu (UNIST), B.Li (School of Space Science and Physics, Shandong U.), S.Xu (PKU), A.Larzarian (U.Wisconsin), A.Bykov (Ioffe Institute), P.Drake (U.Michigan), M.Baring (Rice U.), F.Casse (U. Paris Diderot Paris VII), M.Nakamura (ASIAA), B.Qiao (Peking U.), T.Terasawa (U.Tokyo), M.Zhang (National Astronomical Observatories), S.Inutsuka (Nagoya U.), C.Forest (U.Wisconsin), Z.Yao (Institute of High Energy Physics), P.Bellan (Caltech), T.Suzuki (Nagoya U.), H.Ji (Princeton U.), C.Li (MIT)]

Appendix 3 EPS-DPP 2016 Program Committee

Plenary:

1. Prof. O. Sakai (Shiga prefectural university)"Plasma metamaterials as novel nonlinear and cloaking media". He will be talking about Cloaking (you may know Harry potter's invisible mant) by negative permittivity. (Low temperature and dusty plasmas)

Evening session (W7-X start of operation) : Klinger, Hidalgo, and

1. Prof. Morisaki, Recent results from LHD, and near-term plans.

Invited:

1. H. Park (Korea): ELM suppression experiment with the low n(=1,2) magnetic perturbation and ELM dynamics in KSTAR (MCF)
2. W. Zhong (China):Impact of Fueling and Impurity on Pedestal Dynamics and Instabilities in the HL-2A Tokamak (MCF)
3. S. Ide (Japan):Integrated modeling and validation of the physics models using tokamak experiments in EU and Japan for high beta tokamak physics (MCF)
4. Chihiro Suzuki (Japan): joint session spectroscopic diagnostics
5. R. Kumar (India): Turbulent giant magnetic fields in laser produced plasmas and their astrophysical relevance
6. Yutong Li (China): Bursts of terahertz radiation from relativistic laser-plasma interactions
7. T. Johzaki (Japan): Integrated simulation of magnetic-field-assist fast ignition scheme of inertial confinement fusion.

Chair: P. Mantica, Istituto di Fisica del Plasma "P.Caldirola", CNR, Italy

Magnetic Confinement Fusion Plasma

(sub-chair) G. Giruzzi, CEA, IRFM, France

H. Meyer, Culham Centre for Fusion Energy (CCFE), Culham Science Centre, Abingdon, UK, M. Valisa (IT), G. Sips, JET Exploitation Unit, Culham Science Centre, UK, M. Mantsinen, ICREA-Barcelona Supercomputing Center (BSC), Barcelona, Spain, T. Sunn Pedersen, Director of Stellarator Edge and Divertor Physics Max-Planck Institute of Plasma Physics Professor of Physics, Ernst-Moritz Arndt University Greifswald, Paolo Ricci, Centre de recherches en physique des plasmas, Ecole Polytechnique Federale de Lausanne, Switzerland, Sergei Lebedev (RU), T. Baelmans (BE)

V. Igochine, Max-Planck Institute of Plasma Physics, Garching, Germany

M. Kikuchi, AAPPS-DPP Chair, NF BoE chair, JAEA, Japan (AAPPS-DPP representative)

Basic, Space and Astrophysical Plasmas

(sub-chair) E. Amato, INAF - Osservatorio Astrofisico di Arcetri, Italy

A. Ciardi, Sorbonne University (UPMC) and Observatoire de Paris, PSL Research University, France

A. Stockem (DE), T. Neukirch (UK), Eve Virginia Stenson (DE), Max Planck Institute for Plasma Physics, Germany

Beam Plasmas and Inertial Fusion

(sub-chair) M. Fajardo, Instituto de Plasmas e Fusão Nuclear, IST-ID, Lisbon, Portugal

S. Weber, ELI-Beamlines, Institute of Physics, Academy of Sciences of the Czech Republic

V. Tikhonchuk, Centre Lasers Intenses et Applications, Universite de Bordeaux, France, D. Neely, Central Laser Facility, STFC, UK, U. Zastrau, Group leader HED, European XFEL, Hamburg, Germany, R. Piriz, University of Castilla-La Mancha, Spain, D. Meyerhofer, Laboratory for Laser Energetics & U. Rochester, USA (APS-DPP representative)

Low Temperature and Dusty Plasmas

(sub-chair) T. Gans, University of York, UK

A.L. Thomann, CNRS/university of Orleans, GREMI laboratory, Orleans, France, P. Awakowicz (DE)

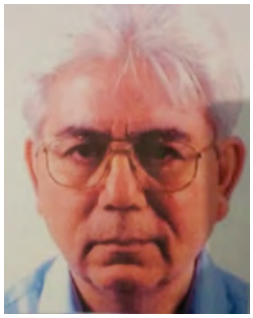
E. Stamate, Technical University of Denmark, Department of Energy Conversion and Storage, Roskilde, Denmark

O. Kylian, Charles University in Prague, Prague, Czech Republic

Appendix 4 2015 Subramanyan Chandrasekhar Prize of Plasma Physics

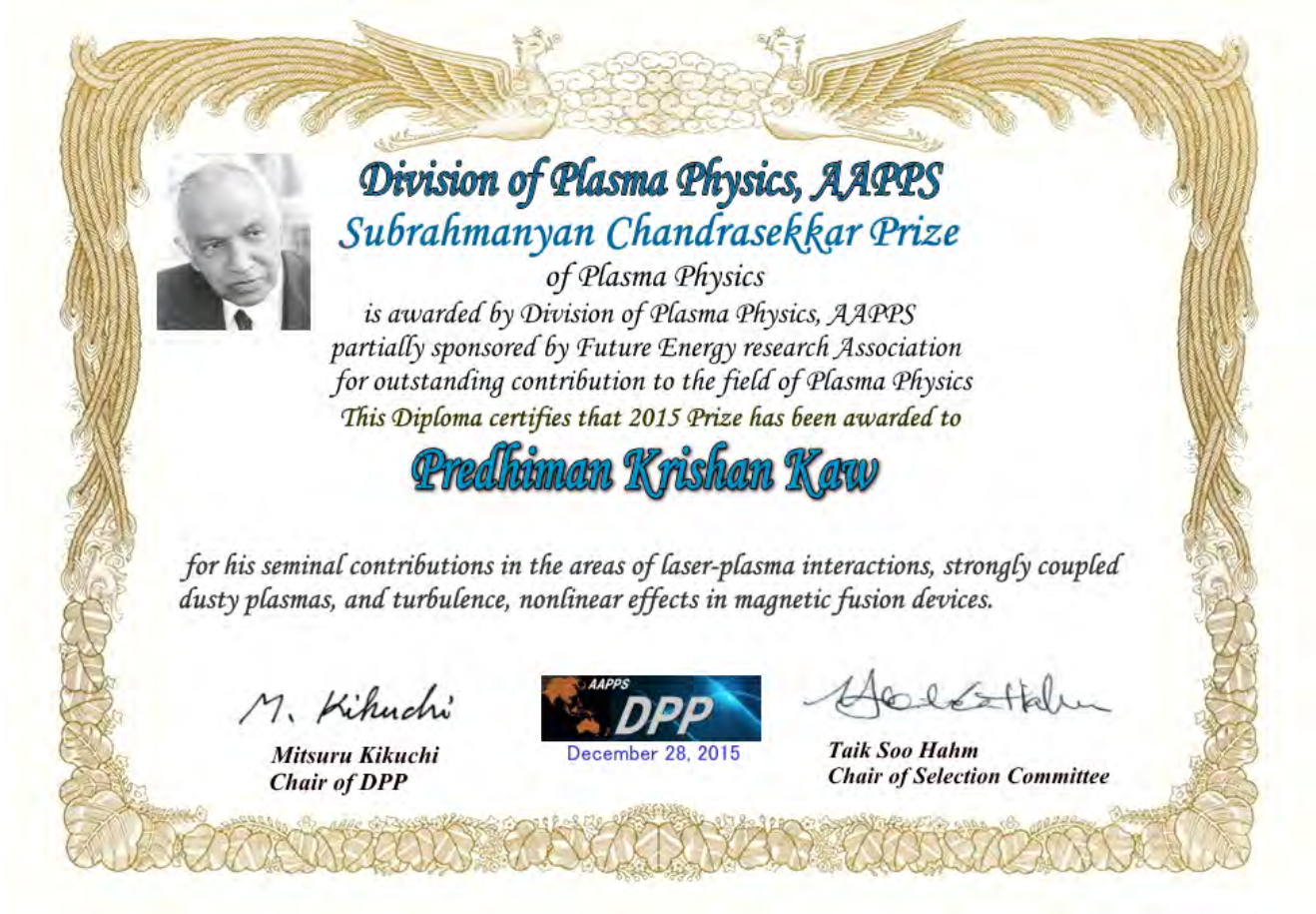
– Prof. Predhiman K. Kaw is selected as 2nd Laureate (2015) –

The Division of Plasma Physics (Chair: Mitsuru Kikuchi) under Association of Asia Pacific Physical Societies selected Prof. Predhiman K. Kaw of the University of Tokyo as the first Laureate of S. Chandrasekhar Prize of Plasma Physics, which is awarded to a scientist who has made seminal / pioneering contribution in the field of plasma physics Dec. 28, 2015.



Prof. Predhiman Kaw

Citation : For his seminal contributions in the areas of laser-plasma interactions, strongly coupled dusty plasmas, and turbulence, nonlinear effects in magnetic fusion devices.



Selection committee: T.S. Hahm(chair, Korea), K. Mima (Japan), Y. Omura (Japan), L. Chen (Beijing), B. Wan (Beijing), R. Dewar (Australia), T. Murphy (Australia), R. Pal (India), Y. Saxena (India), Chang-hee Nam (Korea), Lin I (Taipei).

ITER NEWSLINE -

An award for India's PK Kaw

newsline I An award for India's PK Kaw

The Subrahmanyan Chandrasekhar Prize has been awarded to Professor Kaw (left) for "outstanding contributions" in the field of plasma physics.

Professor Predhiman Krishan Kaw from the Institute for Plasma Research in India has been named the 2015 laureate of the Subrahmanyan Chandrasekhar Prize for "outstanding contributions" in the field of plasma physics, said a press release issued on 13 January by the Association of Asia-Pacific Physical Societies (AAPPS), Division of Plasma Physics.

Recognized internationally for significant contributions to many areas of plasma physics, Professor Kaw has authored over 380 research publications in scientific journals. The prize specifically recognizes "seminal contributions in the areas of laser-plasma interactions, strongly coupled dusty plasmas, turbulence, and non-linear effects in magnetic fusion devices."

After obtaining a PhD at age 18 from the Indian Institute of Technology, Delhi, Professor Kaw spent time as a researcher at the Physical Research Laboratory in Ahmedabad, India, and the Princeton Plasma Physics Laboratory, New Jersey, US. In 1982 he returned to India to spearhead the establishment of a national magnetic fusion program, founding the Institute for Plasma Research and playing a leading role in gaining international recognition for the national program. Named Year of Science Chair by the Indian Department of Science & Technology, he continues to be active in research and in the mentoring and training of the younger generation of plasma physicists in India.

Professor Kaw was the first Chair of the ITER Council Science and Technology Advisory Committee and led the committee's deliberations from 2007 to 2009.

"Those of us within the ITER community who have worked with Professor Kaw over many years in the pursuit of fusion energy have appreciated not only his deep insight into plasma physics issues, but also his tireless enthusiasm for the achievement of our common goal," said ITER Director-General Bernard Bigot. "Over a long and productive career he has greatly enriched our understanding of physics processes in very different types of plasma with important implications for applications in many areas of modern plasma research."

Professor Kaw is the second laureate of the Subrahmanyan Chandrasekhar Prize, which was founded by AAPPS (Department of Plasma Physics) in 2014 to recognize outstanding contributions to experimental and/or theoretical research in fundamental plasma physics and plasma applications in all fields of physics. The prize is sponsored by the **Future Energy Research Association**.

Subrahmanyan Chandrasekhar was an Indian astrophysicist (1910-1995) who received a Nobel Prize in Physics for his work on the structure and evolution of stars, work which was seminal in the development of the theory of black holes. The Association of Asia Pacific Physical Societies (AAPPS) is an umbrella organization for physical societies and institutes in the Asia Pacific region devoted to the joint promotion of research, teaching and regional collaboration in physics.

Appendix 5 AAPPS-DPP Journal

1. Name of journal: "***Reviews of Modern Plasma Physics***" in short ***RMPP***
2. Concept of RMPP:
   - High quality international review journal specialized in plasma physics
   - High impact factor above 10 (target)
   - Cutting-edge reviews and tutorials of modern plasma physics for the Asia-Pacific region
3. Term: first contract may be 5 years subject to renewal.
4. Journal model: ***hybrid journal model***, i.e. a subscription journal with an option to choose open access. If author wants to select open access, he/she has to pay. First two years will be fully open access and from 3rd year, all articles will be closed access (subscription).
5. Publication model: ***Continuous article publishing*** model.
6. Royalty to AAPPS-DPP: ***25% of net revenue*** after 3rd year.
7. Merit for AAPPS-DPP members: ***Free access to individual DPP members*** but not for institutional members. For authors, USD 100$ book voucher.
8. S. Chandrasekhar prize laureates are requested to write review papers.

Appendix 6 AAPPS-DPP Education program

AAPPS-DPP co-sponsors ASEAN plasma and nuclear fusion school (ASPNF2016, Jan. 18-22) organized by TINT (Thailand Institute of Nuclear Technology). From AAPPS-DPP, M. Kikuchi (JAEA), H. Nagatomo (Osaka U.), S. Odachi (NIFS), A. Fukuyama (Kyoto U.) joined as lecturers. From Korea, M. Kim gave talk on KSTAR. AAPPS-DPP chief division secretary T. Onjun is lead organizer of this school.

Number of participants increased from 26 in 2015 to 58 (28 from Thailand, 30 from other) in 2016, while 92 (India 19, Indonesia 12, Japan 1, Laos 13, Malaysia 11, Myanmar 1, Nepal 2, Philippines 4, Thailand 24, Vietnam 4) applied (final application>100). Talks are mostly fusion plasma physics on tokamak, helical and laser fusion and one space plasma physics. It is a big surprise to see such interests all over the ASEAN countries.

Group photo of 5th East-Asia School and Workshop on Laboratory, Space, Astrophysical Plasmas

Summary of the 5th East-Asia School and Workshop on Laboratory, Space, Astrophysical Plasmas

Dongsu Ryu (SOC Co-chair) & Gunsu Yun (LOC Chiar)

The 5th East-Asia School and Workshop on Laboratory, Space, Astrophysical Plasmas was held at APCTP, POSTECH, Pohang, Korea (https://apctp.org/plan.php/eastplasma2015) during August 17 to 22, 2015. There were about 80 participants.

Plasma physical processes play an important role in various laboratory, space, and astrophysical environments, including fusion experiment, Earth magnetosphere, Sun, interstellar medium, and intergalactic medium. The scope of this school/workshop included 1) lectures on basic plasma physics in laboratory, space, and astrophysical contexts with emphasis on training young scientists, 2) invited talks on latest research results to encourage exchanging ideas among different disciplines, and 3) discussion sessions to foster future collaborations especially in the East-Asian region and also around the world.

There were 11 lectures and 35 invited talks.
The lectures provided a balanced combination of history, basic principles, scientific questions, and mainstream research activities pertinent to individual plasma physics categories including magnetic reconnection, particle-in-cell simulation, turbulence, gyrokinetic simulation, dynamo, wave-particle interactions, and MHD simulations. These lectures were a venue for the students to obtain a perspective on the plasma physics research and academic career opportunities and for the young scientists to broaden their research interests.
The invited talks presented the forefront research activities, which encouraged heated discussions among the participating scientists. However, many students found it difficult to grasp the contents of many talks partly because the talks were too technical given the short time allocated. Session chairs tried to encourage students' engagement but such attempts were not very successful.
The discussion sessions were a very active and focused arena with in-depth questions/answers, comments from different perspectives, clarification of important concepts, and ideas for future collaboration.

This series of meeting on laboratory, space, astrophysical plasmas were previously held at Peking, China in 2011, at Jeju, Korea in 2012, at Tokyo, Japan, 2013, and at Harbin, China at 2014. This was the 5th of the series. The next meeting will be held in Japan.