

2020 Fiscal Year Work plan of AAPPS-DPP

2019.08.28

AAPPS-DPP CEO M. Kikuchi

1. Introduction

AAPPS-DPP was created in 2014 as voluntary organization based on the AAPPS council decision on January 20 at Taipei based on the proposal of 92 founding members. Since then, we made significant progress in developing our activities. First DPP Executive Committee (ExCo) was held on February 27, 2014. We started AAPPS-DPP's homepage since 11 March 2014 (http://aappsdpp.org/AAPPSDPPF/index.html) as developed by Dr. H. Nagai. Mailing service to DPP members started on 1 May 2014 using JAEA mail server and moved now to commercial system. DPP LOGO was defined in 17 July 2014. Foundation of S. Chandrasekhar Prize of Plasma Physics was decided based on recommendation of I-HAC on 30 July 2014 and DPP selected Laureate(s) 6 times (2014, 2015, 2016, 2017, 2018, 2019). DPP concluded a contract with Springer on our official journal RMPP (Reviews of Modern Plasma Physics) on April 4, 2016. Since then, we published 31 review articles until now (Aug 31). DPP made ~100 participations to APPC-13 in Brisbane (Dec. 4-8, 2016), where we had 2014-2016 S. Chandrasekhar Prize ceremony and also started AAPPS-DPP Young Research Award. DPP decided to start annual conference from 2017 and the first annual conference (Asia-Pacific Conference on Plasma Physics) was held at Chengdu hosted by SWIP (Southwestern Institute of Physics) during September 18-23, 2017. The first annual conference was great success having 506 participants. The second annual conference was held at Kanazawa hosted by Prof. Y. Uesugi in Kanazawa University during November 12-17, 2018. The second annual conference had 682 participants. DPP started U30 award and poster prize from this conference. DPP started to have financial authority on the annual conference at second annual conference.

Based on these success and financial responsibility, DPP decided to establish legal personality to share power and responsibility among members of Governing Board of Directors. DPP is registered legally to the ministry of justice on November 28, 2018 and all properties including bank accounts are moved to legally registered AAPPS-DPP Association Incorporation. Member of DPP Governing Board of Directors are M. Kikuchi (Chair& CEO), B. Wan (Chair-elect), Z. Yoshida (Vice chair), SH Chen (Vice Chair), JS Yoon (Vice Chair), XH Deng (Vice Chair), R. Matsumoto (Vice Chair), G. Zhuang (Vice Chair), M. Hole (Vice Chair), R. Rawat (Vice Chair), M. Shiratani (Vice chair for finance), H. Nagai (Executive officer). Observers are Y. Uesugi (Auditor), A. Das (Laser Plasma), X. Duan (Magnetic Fusion Plasma), Liu Chen (I-HAC chair), A. Sen (I-HAC vice chair), and Yong Liu (DPP secretary). DPP established our Articles of Incorporation as certified by the notary officer (http://aappsdpp.org/AAPPSDPPF/governance.html) and accepted by the ministry of justice branch office in Mito city. The first fiscal year was from date of establishment (November 28, 2018) to August 31, 2019 as set by our Articles of Incorporation. This society (AAPPS-DPP) will promote progress and dissemination of plasma physics knowledge and its application through research presentations, exchange of knowledge, and corporation among members and with other academic societies. We thereby aim to contribute to the development of academic research. To achieve this objectives, DPP's activities are 1) Operation of academic meetings such as annual conference and lecture meeting. 2) Publication of Journal and academic books. 3) Provision of information through homepage and mailing system. 4) Other business necessary to achieve purpose of this society. DPP has membership same as that during voluntary organization. DPP has "Regular Member" who has right to vote at the general assembly. "Regular Member" is those who paid registration fee to DPP for the annual DPP conference by which DPP will operate its service to the members.



2. Preparation of AAPPS-DPP& AAPPS Conferences

2.1 Third Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2019)

AAPPS-DPP2019 (http://aappsdpp.org/DPP2019/index.html) will be held at Hefei during Nov. 4-8. Preparation of 3^{ed} annual conference was started in 2018 before Kanazawa conference. Due to unavailability of conference venue in Korea, we decided to have third annual conference in China again at Hefei hosted by USTC. This has been announced at the Kanazawa conference. Since then, all standard process of call for plenary and invited speakers, call for contributed speakers are processed. As of August 31, we have ~450 speakers are expected. DPP failed to have financial authority for this conference and will have significant impact on budget balance in FY2020. Vice chair in charge of AAPPS-DPP2019 Ge Zhuang reported that no payment is possible for DPP works including DPP staff works and Japanese event-company works due to Chinese regulatory rule. We have to change the way to hold our DPP conference so that DPP can have financial authority in the coming years when we have annual conference, while it is possible in Japan. How to manage financial deficit from third annual conference is a critical issue in 2020.

As for the scientific front, contributing to AAPPS's APPC-14/APPC2019 in addition to AAPPS-DPP2019 needs a bit heavy works compared with previous years and faces reduced number of contributed abstract submission.

2.2 14th Asia Pacific Physics Conference

Asia-Pacific Physics Conference (APPC) is the general physics conference organized by AAPPS. Previous APPC are 13^a in Brisbane (2016), 12^a in Makuhari (2013), 11^a in Shanghai (2010), 10^a in Pohang (2007), 9^a in Hanoi (2004). The 14^a APPC will be held during Nov. 17-21, 2019 at Kuching, Malaysia. 2019 S. Chandrasekhar prize Laureates Profs. Liu Chen and Kazunari Shibata will give plenary talks. DPP also provide 2 more plenary and number of invited talks as well as orals and posters. DPP's participants will be ~130 and total APPC participants are expected to be ~500.

2.3 Fourth Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2020)

AAPPS-DPP2020 will be hosted by NFRI. Planned date and place are October 26-30, 2020 and Jeju Island, respectively. Key person in NFRI is Si-Woo Yoon (Director of the KSTAR Research Center). We will have more communications with NFRI to improve operation of DPP. During DPP's 2nd fiscal year (September 1, 2019-Aug. 31, 2020), large efforts have to be executed to attract number of participants comparable to previous annual conferences.

2.4 Fifth Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2021)

AAPPS-DPP2021 will be held in Japan. Planned date and place are September 26-October 1, 2021 and Fukuoka, respectively. Prof. M. Shiratani will be a LOC chair and DPP will have financial authority.

2.5 Sixth and Beyond

Beyond AAPPS-DPP2021 is still not decided yet. But conference place where DPP can have financial authority is crucially important to strength DPP capability.



Third Governing Board of Directors Meeting Aug 28, 2019 **3. Reviews of Modern Plasma Physics (RMPP)**

RMPP is review journal specialized to plasma physics. The first volume (2017) published 10 articles. The second volume (2018) published 9 articles and third volume (2019) already published 12 articles as of August 31. Especially, special issues (SI) on plasma propulsion by Prof. Igor Levchenko (Guest Editor) made a significant contribution (6 published out of 10).

12 papers published in 2019 as of Aug 31 are by Y. Todo (AE), S. Fujita (Magnetosphere), K. Takahashi (Helicon thruster), M. Xu (2017 F summary), Z. Zhang (ablative pulsed thruster), DR Lev (hollow cathode), O. Baranov (Direct current arc plasma thruster), J. Weiland (Drift wave), M.Y. Tanaka (Vortex in plasma), Yan Feng (Yukawa liquid), D. Kahnfeld (multi-stage plasma thrusters), F. Taccogna (modeling of hall thruster).

RMPP acknowledges authors by providing 100USD coupon by which they can purchase any books published by Springer-Nature. All authors of volume 1 and 2 received coupons.

Review articles proposed from AAPPS-DPP2018 are 32 articles and are still mostly under preparation and they are to be published until the end of 2019. We prepared honorarium for review articles proposed from AAPPS-DPP2018; 50,000 JPY/article in addition to Springer-Nature coupon.

Review papers submitted from AAPPS-DPP2018 are Yan Feng, Ken Ostrikov, V. Yadav, Y. Ebihara, H. Saleem, F. Sahraoui, Y. Ezoe and R. Keppens as of Aug.31. Remaining articles are T. Tajima (Chandrasekhar lecture), Ruirui Ma (Avalanche), A.P. Misra (Surface plasmon), Kwo Ray Chu (non-uniform microwave heating), Mike Campbell (Direct drive), G. Sarri (Strong-field quantum electrodynamics), Alex Casner (turbulence in high energy density plasmas), GR Kumar (Ultra-intense Laser-Plasma interaction), T. G.Blackburn (radiation reaction and high-intensity Laser), G. Ganguli (space plasma by laboratory experiments), J. Buechner (electron acceleration by reconnection), Cong Yu (Twist-induced Eruption), Chun Xia (Solar prominence), Jun Lin (multi-scale physics in CME), W. Zhong (turbulence and multi-scale interaction), Y. Liang (ELM control), R. Neu (plasma-wall interaction), P. Diamond (CD-summary), GY Fu (F-summary), Y. Kishimoto (B-summary), Jung-Sik Yoon (A-summary), Amita Das (L-summary), Xiaohua Deng (SG summary), Ryoji Matsumoto (SA summary), Xuru Duan (MF summary). We also have significant delay of submission from 2017 S. Chandrasekhar Laureates LC Lee and CZ Cheng.

Continuation of honorarium for Hefei conference is uncertain at this stage. Even if it is possible, who will pay honorarium is subject of Vice Chair, Ge Zhuang (LOC chair) since DPP will not receive money for honorarium from AAPPS-DPP2019.

Activity of inviting review article is strongest in Space plasma physics by chief editor Yu Lin. There is significant diversity of activity among sub-disciplines. We need to have active Editor for some sub-disciplines. RMPP will add sub-discipline of Magnetic Fusion plasma. Chief editor will be Prof. JQ Dong (SWIP). Composition of chief/associate editors and Board of Editors will be rearranged along with this addition of new sub-discipline.

DPP discussed with Springer-Nature Japan about how to progress Web of Science evaluation for Journal Impact Factor. Dr. Nakajima (Springer-Nature Tokyo) is preparing the first step (ESCI: Emergent Source Citation Index) evaluation. But it will delay since processing other Springer journals is still waiting. We will continue pushing ESCI evaluation in FY2020.

RMPP participated APS publication committee (S. Sabbagh, chair) in 2017 (M. Kikuchi) and 2018 (Yu Lin). DPP should send someone to report status of RMPP in APS-DPP 2019.

Managing activity of RMPP is still much lower than those for DPP conferences. Such situation has to be improved by lowering the CEO load for DPP conferences. This will need active DPP secretary capable to help CEO to handle annual conference. If DPP continues to fail to have financial authority for annual conference except in Japan, secretary who can work for many years must be volunteered from some institute.



4. Prize and Award

4.1 S. Chandrasekhar Prize of Plasma Physics

DPP is recognizing pioneering and seminal contribution to plasma physics annually since 2014 as S. Chandrasekhar Prize of Plasma Physics. Call for 2020 S. Chandrasekhar prize is planned early 2020 and selection committee will be set based on distribution of candidates among region/country and sub-disciplines. Chair shall be selected from region of no-candidate.

Sponsorship of Chandrasekhar cash prize (5000USD/person) has been provided by number of organizations such as Chengdu Tongchuang Applied Plasma Technology Center (2014), Future Energy Research Association (2015), Australian Nuclear Science and Technology Organization (ANSTO) (2016), Hefei Kejugao Technology (2017), NFRI (2018), ENN Energy Research Institute and Top Globe Cooperation (2019). Medal for Chandrasekhar Prize has been contributed by PSSI and IPR since 2014. Sponsorship for 2020 will be pursued from Asia-Pacific organization.

4.2 AAPPS-DPP Plasma Innovation Prize

DPP is recognizing pioneering and seminal contribution to plasma application annually since 2019 as AAPPS-DPP Plasma Innovation Prize. Call for 2020 AAPPS-DPP Plasma Innovation Prize is planned early 2020 and selection committee will be set based on distribution of candidates among region/country and sub-disciplines. Chair shall be selected from region of no-candidate.

Plasma Innovation cash prize (3000USD/person) will be given within the AAPPS-DPP2019 budget. Laureate will also receive medal and certificate. DPP will seek sponsorship of this top plasma application prize in new fiscal year.

4.3 AAPPS-DPP Young Research Award

DPP is recognizing young talented plasma researchers not more than 40 years old since 2016 as AAPPS-DPP Young Research Award (U40). Since 2018, winners of U40 award are receiving cash prize 500USD, plates and certificate. All cost will be covered within annual conference budget. Call for U40 Award is planned early 2020.

4.4 AAPPS-DPP U30 Doctoral Scientist / Student Award

DPP is recognizing young talented doctoral scientists/ students not more than 30 years old since 2018 as AAPPS-DPP U30 Doctoral Scientist / Student Award. This award is sponsored by IFE-Forum. Winners will receive cash prize 300USD, plate, and certificate. All cost will be covered by IFE-Forum. Call for U30 Award is planned early 2020.

4.5 AAPPS-DPP Poster Award

DPP is recognizing significant poster presentation at the annual conference as AAPPS-DPP Poster Prize since 2018 for both students and young/senior researchers. Winner will receive certificate and a gift (Springer Book). 2019 selection will be made during third annual conference in Hefei. All cost will be covered within AAPPS-DPP2019 budget.



5. Financial Support Program

DPP continues to have financial support program for researchers from developing countries and retired researchers as well as Chandrasekhar Prize Laureates since APPC-13 in Brisbane supported by Asia-Pacific Center for Theoretical Physics (APCTP).

For first DPP conference in Chengdu, 27 persons were supported within the AAPPS-DPP2017 budget. Regional distribution is 11 from IN, 6 from CN, 2 from FR, 2 from TW, 2 from NP, 1 from UK, 1 from US, 1 from MY, 1 from JP.

For the second DPP conference, 32 persons were supported. Regional distribution is 23 from IN, 3 from JP, 1 from TW, 1 from BD, 1 from PK, 1 from ID, 1 from MM, 1 from CH.

For AAPPS-DPP2019, DPP will support similar number of researchers (currently 23 persons, 15 from India, 2 from Nepal, 2 from Japan, 1 from Malaysia, 1 from Pakistan, 1 from US, 1 from France) for AAPPS-DPP2019. Other 6 requested are unfortunately not awarded.

In FY 2020, we also have APPC-14 in November 2019. APPC-14 LOC is allocating budget to support large number of participants (~40) since it is held at Malaysia and there are many developing countries nearby. This year, Sarawak Convention Bureau will support air ticket and accommodation for 2 S. Chandrasekhar Laureates.

6. AAPPS-DPP Membership

AAPPS-DPP started from 92 founding members in 2014. Since then, Dr. Kenji Imadera (Kyoto University) helped to recording membership until Dr. Yong Liu took over him after Chengdu conference as new DPP secretary. As of May 31, 2019, we have 1815 members all over the world. Regional distribution are India (782), Beijing (355), Japan (303), Korea (106), US (44), Australia (43), Taipei (30), Nepal (23), Thailand (18), France (15), Pakistan (13), Malaysia (12), UK (9), Philippines (8), Italy (8), Indonesia (8), Iran (5), Singapore (4), Vietnam (3), Netherland (3), Bangladesh (3), Russia (2), Lao (2), Switzerland (1), Sweden (1), Myanmar (1), Egypt (1), Czech (1), Canada (1), Belgium (1).

AAPPS-DPP membership does not need any membership fee. But DPP member receives many merits as DPP member. [1] DPP member can participate DPP conference with reduced registration fee. [2] DPP member has free access to our official journal RMPP using the token service. [3] DPP member can receive DPP News including conference information, job opportunity, DPP's event information, new book information, etc. [4] Eligibility to be nominated to various DPP prizes and awards. DPP will try to provide more scientific merit to DPP members as member wishes.

AAPPS has concluded reciprocating agreement with APS. However, there is little merit at present since each member is already member of national physical society that has reciprocating agreement with APS.

7. AAPPS-DPP Homepage

DPP Executive officer Dr. H. Nagai provided long-standing service from its initiation in 2014. From 2014 to 2018, he worked voluntarily without payment. Now DPP pays very small salary from April 2019 for his outstanding contribution.

In the first fiscal year (2018.11.28-2019.08.31), homepage for legal entity has been prepared (<u>http://aappsdpp.org/DPPhoujin/index.html</u>). For FY2020, annual operation of DPP's main homepage (<u>http://aappsdpp.org/AAPPSDPPF/index.html</u>), completion of AAPPS-DPP 2019 homepage (<u>http://aappsdpp.org/DPP2019/index.html</u>) including AAPPS -DPP2019 Abstracts and startup of AAPPS-DPP2020 homepage are key workloads.

AAPPS-DACG has also homepage that is somewhat different structure and various activities (http://www.resceu.s.u-tokyo.ac.jp/AAPPS_DACG/).



8. Committees

8.1 General Assembly

In the first fiscal year (Nov28 2018-Aug 31 2019), there was no DPP annual conference. Therefore regular members were founding members for legal entity (M. Kikuchi, M. Shiratani, H. Nagai, Y. Uesugi). We held 5 general assemblies during first fiscal year. First four are extraordinary and 5^{\pm} one is regular general assembly. First one was held on December 12, 2018 to make minor change on Articles of Incorporation and assign 6 members of BoD (B. Wan, JS Yoon, RS Rawat, Z. Yoshida, R. Matsumoto, XH Deng). Second one was held on December 18, 2018 to add M. Hole as member of BoD. Third one was held on January 8, 2019 to add SH Chen as member of BoD. Fourth one was held on March 1, 2019 to determine total remuneration for officers. Fifth one (ordinary general assembly) will be held on August 29 to approve FY2020 work plan. While articles of incorporation intended to have large number of regular members from AAPPS-DPP2019, the registration fee can't be collected by DPP due to Chinese regulation. This means no new regular members can be added. We will have minimum required general assemblies to fulfill functions defined in the Articles of Incorporation in the second fiscal year. Prospect for normal operation of general assembly critically depends whether future annual conference can be operated under the financial authority of AAPPS-DPP. DPP will negotiate with NFRI about this issue for AAPPS-DPP2020.

8.2 Board of Directors

Min Xu will replace Xuru Duan for remaining term as Vice Chair for Magnetic Fusion Plasma when he got and send notary documents, DPP will register both Ge Zhuang and Min Xu as member of BoD while Amita Das will be kept as observer since she declined to commit responsibility as member of BoD. All decisions will be made at BoD except those to be decided at the general assembly. Membership of BoD must be renewed at the FY2021 regular general assembly at AAPPS-DPP2020 (planned date is October 26-30, 2020) or around.

AAPPS-DPP has two directors representing AAPPS-DPP; i.e. Chairman and CEO. Next chairman is B. Wan to be appointed at the BoD in AAPPS-DPP2020 after appointment as member of BoD at the regular general assembly and we have to select new director as candidate of next Chair-Elect at the FY2021 general assembly. DPP will have call for nomination sufficiently before. All these transitional arrangement has to be approved at the BoD in AAPPS-DPP2019.

8.3 I-HAC (International Honorary Advisory Committee)

DPP continues I-HAC as advisory body for BoD. In new fiscal year, there should be some re-assignment of members. SI Itoh passed away. President/ Chairman of national DPP has been changed. DPP will have I-HAC at AAPPS-DPP2019 same as in Kanazawa to listen to their advice. We will ask Liu Chen and A. Sen to propose renewed I-HAC membership.

9. Legal Actions

DPP will take legal action in FY2020 as necessary such as execution of BoD and General Assembly, registration of new BoD to ministry of justice.



Third Governing Board of Directors Meeting Aug 28, 2019 10. DPP Budget Balance Sheet

	2020 Plan (2019.9.1-2019.08.31)	Note
13,784,703	<u>(2019.9.1-2019.08.31)</u> 11,775,324	
USD 772	USD 10,572	
13,502,299	0	Chinese regulation prohibit income to DPP
USD 772	0	Chinese regulation promote meonie to D11
03D 772	USD 2,300	Operating Web for APPC-14.
292.251		Operating web for AFFC-14.
282,351 53	280,000	
NA	KRW10,000,000	
	USD 5,000	ENN Energy Research Institute
	USD 2,500	Top Globe Cooperation
0	11,495,324	
13,784,703	11,775,324	
USD 772	USD 10,572	
1,970,000	1,167,141	
		Adding 8 directors / Add 2 more
10,108	10,108	Adding 8 directors / Add 2 more
7,300	7,300	Ibaraki-prefecture local tax
-	20,000	To be paid after General Assembly if not waived
216,864		MAC Air
237,000		MAC Air broken/repair and Purchase Pro
10,239		Backup HD
22,231		Hub 5, 599, USB-C 1,944, Adapter 14,688
43,297	50,000	Brother MFC-L3770
1,684	2,000	A4 paper 496, Paper for certificates 1,188
41,688		NTT-DOCOMO
31,678	120,000	Should add Aug(~10,000) / 12 months
6,912	20,736	1,728/month x 4 / 1,728 x 12
15,430	15,430	Mailing system
5,508	12,960	Mitsubishi UFJ Bank (Furikomi, etc.)
6,088	12,900	RMPP IF issue (Train 2270+3818)
146,232		NEC Lavie
,		
600	250 524	DPP exempler
802,859	258,534	
1,167,141	908,607	
3,600,000	3,945,840	
1,466,300	3,181,440	293.260 x 5 months / 265.120 x 12 months
20,220	80.880	6,740 x 3 months / 12months
20,220	683,520	56,960/M x 12 ((28,140 +680) x12 by Inc.)
1,486,520	005,520	50,500/11 X 12 ((20,140 +000) X12 Uy IIIC.)
2,113,480		
_,		
1,600,000	1,600,000	
0	1,600,000	Postponed to FY2020
	0	To be included in AAPPS-DPP2019 account
1,600,000		
0	KDW10.000.000	For APPC-14 but may shift to Hefei partly
0	KRW10,000,000	FOR AFTC-14 but may smit to Helel partly
	10,000	
	USD 10,000	
	USD 10,000	USD 2,500 from DPP
	10,000	555 2,500 Holli D11
	0	To be included in AAPPS-DPP budget
	0	DPP print them
	0	
	630,000	
	630,000	Should be paid from Hefei conf. Budget
((14 70)	4 100 0 10	
, ,		
	6,614,703 USD 772	<i>6,614,703 4,422,343</i>

*: Unit : JPY if not specified.



Third Governing Board of Directors Meeting Aug 28, 2019 11. DPP Property List

Item	Item ID	Value	Note
DPP Printer-1	DPP-2019-001	86,826	Brother MFC-L3770CDW(Kanazawa conf.)
DPP Printer-2	DPP-2019-002	86,826	Brother MFC-L3770CDW(Kanazawa conf.)
DPP PC-1	DPP-2019-003	216,864	Mac Book Air
DPP PC-2	DPP-2019-004	237,000	Mac Book Pro
DPP PC-3	DPP-2019-005	145,476	NEC Lavie