

## Report on AAPPS-DPP 2024

2024.12.5 Mitsuru Kikuchi, AAPPS-DPP CEO rev1:12.22

### 1. 8<sup>th</sup> DPP Annual Conference

Division of plasma physics (DPP) annually holding Asia-Pacific conference on Plasma Physics. The eighth annual conference (AAPPS-DPP2024) was held at Grand Swiss Belhotel, Malacca, Malaysia during Nov 3-8, 2024. Figure 1 shows Opening session speakers and DPP award winners of AAPPS-DPP2024.



Figure 1 Opening session group photo of AAPPS-DPP2024

Table 1 Distribution of presentations (Female)

	Plenary	Top. Pl	Invited	Oral	Poster	Total
Opening	10	-	-	-	-	10 (0)
Chandra&PIP	2	-	-	-	-	2 (0)
Cross Discip.	3	8 (4)	20 (2)	4	6 (1)	41(7)
Fundamental	3	0	29 (1)	6	12 (5)	50(6)
Basic	3	0	40 (6)	12 (5)	23 (10)	78(21)
Applied	3 (1)	0	27 (6)	19 (2)	20 (3)	69(12)
Laser plasma	3	3 (1)	26 (3)	10 (2)	13 (3)	55(9)
Space/Geo	3	4	21 (9)	7 (1)	13 (8)	48(18)
Solar/Astro	3 (1)	0	28 (5)	15 (3)	12 (4)	58(13)
Mag. Fus.1	3	0	30	15 (2)	14 (1)	62(3)
Mag.Fus. 2	3	0	25 (2)	9 (1)	17	54(3)
Poster Prize	2	-	-	-	-	2(0)
Closing	3	-	-	-	-	3(0)
Total	44 (2)	15 (5)	246 (34)	97 (16)	130 (35)	532 (92)

Table 1 shows distribution of 532 presentations among plenary, topical plenary, invited, oral, and poster for various sub-disciplines. AAPPS-DPP2024 consists of 10 opening talks, 29 plenary talks, 15 topical plenary talks, 246 invited talks, 97 oral talks, and 130 poster presentations. Cross-disciplinary session led by P. Diamond, X. Garbet having 41 presentations. Fundamental session is fundamental discipline common to all plasma physics area led by Z. Qiu, H. Sugama, H. Jhang having 50 presentations. Basic session discussed methods common to all plasma physics as well as small scale plasma research and dusty/quantum plasmas led by T. Yamada, Z. Guo, F. Haas, Y. Feng, Y. Yang, K. Takahashi having 78 presentations. Applied session discussed applied plasma physics such as semi-conductor, medicine,

agriculture, led by T. Nozaki, T. Shao, R. Rawat having 69 presentations. Laser plasma session discussed Laser-plasma interaction, Laser fusion, wake-field acceleration led by Hyyong Suk, S. Fujioka, K. Lee, M. Chen, D. Gupta having 55 presentations. Space / Geomagnetism session discussed mostly space plasma physics and magnetic reconnection led by Y. Omura, P. Yoon, QM Lu, A. Chian having 48 presentations. Solar/Astro session discussed solar plasma physics and astro plasma physics led by PF Chen, R. Matsumoto, J. Cho having 58 presentations. Magnetic Fusion 1 session (Core plasma) is led by Gunsu Yun having 62 presentations. Magnetic Fusion 2 session (Core) is led by Jiansheng Hu, Ding Li, Guangzhou Hao, Choongki Sung, Suguru Masuzaki, having 54 presentations. Among them, 2024 S. Chandrasekhar lecture is given by Pisin Chen and 2024 Plasma Innovation Lecture given by Miran Mozetic. We also celebrated 6 U40 winners and 6 U30 winners.

Table 2 Regional distribution of participants

Region	No	Female	Region	No	Female
China	125	19	Nepal	2	1
Japan	91	7	Brazil	3	0
India	46	14	Canada	1	0
Malaysia	39	12	Denmark	2	0
USA	30	1	Slovenia	1	0
Korea	22	2	Swiss	3	0
Pakistan	20	10	Finland	3	1
Taiwan	15	1	Hong Kong	2	1
Germany	13	1	Indonesia	1	0
Singapore	13	1	Belgium	3	1
England	10	3	New Zealand	1	0
Thailand	9	1	Poland	1	0
France	8	2	Romania	2	1
Australia	8	0	Serbia	1	0
Philippines	6	2	Russia	2	1
Italy	5	0	Uzbekistan	2	0
Kazakhstan	5	3	Viet Nam	1	1
			Total	496	85

\* France include ITER organization

Table 2 shows distribution of region/countries and gender balance. Most notably, we note more participants from Pakistan and several from Kazakhstan and Thailand as well as Singapore and Malaysia.

While participation from EPS(52) and US (30) are significant, we had participants from a South American country, i.e. Brazil(3).

As for the gender balance, we had 85 female participants (17.1%). Many female researchers joined from China, India and Pakistan, especially.

We had 4 satellite meetings, 1) Mini-symposium on Women in Plasma Physics organized by Anisa Qamar, 2) Min Workshop in honor of Robert Dewar, 3) Public Lecture by Prof. K. Koga, 4) MIP conference (PERFIK2024).

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Figure 2 Group photo of participants

## 2. AAPPS-DPP S. Chandrasekhar Prize

DPP select S. Chandrasekhar Prize annually to recognize outstanding contributions to plasma physics since 2014. Chandrasekhar prize selection committee chaired by Chang Hee Nam selected 2024 laureate is Prof. Pisin Chen. Medal is sponsored by IPR/PSSI.



Fig. 3 2024 Chandrasekhar prize certificate, Medal from IPR/PSSI, DPP chair A. Sen, 2024 Laureate Pisin Chen, Selection committee chair Chang Hee Nam.

## 3. AAPPS-DPP Plasma Innovation Prize

DPP select Plasma Innovation Prize annually since 2019 Year to recognize outstanding contributions to experimental and / or theoretical research in all fields of plasma applications, focusing on impacts on industry. Plasma Innovation Prize selection committee chaired by Sudeep Bhattacharjee selected Prof. Miran Mozetic as 2024 Laureate.



Fig. 4 2024 Plasma Innovation Prize certificate, 2024 Laureate Miran Mozetic, Selection committee chair Sudeep Bhattacharjee

## 4. AAPPS-DPP Young Researcher (U40) Award

DPP is recognizing annually young talented plasma researchers not more than 40 years old since 2016 as AAPPS-DPP Young Researcher Award (U40).



Figure 5 2024 AAPPS-DPP Young Researcher Awardees, from top left, T. Kobayashi, Ya Zhang, G. Liao, X. Tao, BB Karak, W. Zhang with X. Garbet (on behalf of T. Hoang).



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U40 selection committee chaired by Tuong Hoang selected 6 young talents; Tatsuya Kobayashi (Fundamental, NIFS), Ya Zhang (Applied, Wuhan University), Guoqian Liao (IOP, CAS), Xin Tao (Space, USTC), Bidya Binay Karak (Solar, IIT-Varanasi), Wei Zhang (Magnetic Fusion, ASIPP) as 2024 U40 winners. Their citations are seen at <http://aappsdpp.org/AAPPSDPPF/youngawardtable.html>. Winners received cash prize 500USD, plates and certificate.

### 5. U30 Scientist and 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. 2022 U30 award selection committee chaired by K. Mima selected 6 scientists/students as 2024 Winners; Hao-Wei Hu (Basic, NCU), Linzheng Wang (Laser, SJTU), Shiyu Zhou (Laser, Tsinghua University), Shimou Wang (Space, USTC), Jinhau Guo (Solar/Astro, Nanjing University), Haowei Zhang (Magnetic Fusion, Zhejiang University) (Figure 6). Winners received cash prize 300USD, plate, and certificate. Their citation can be seen at <http://aappsdpp.org/AAPPSDPPF/U30awardtable.html>



Figure 6 AAPPS-DPP 2024 U30 Awardees. From top left, Hao-Wei Hu, Shiyu Zhou, Shimou Waang, Jinhau Guo, Haowei Zhang with Y. Kishimoto (on behalf of K. Mima).

### 6. AAPPS-DPP2024 Poster Prize

DPP is recognizing significant poster presentation at the annual conference as AAPPS-DPP Poster Prize since 2018 for both students and young/senior



researchers. Among 130 poster presentations, 29 posters were selected by the selection committee chaired by A. Sen. Winners received certificate and a Springer book on plasma physics (when appeared in poster prize ceremony) <http://aappsdpp.org/AAPPSDPPF/posteraward.html>.



Figure 7 AAAPPS-DPP Poster Prize winner who received certificate and Springer book gifts

A new poster prize for students called Elsevier Student and PhD Poster Award was created. Selection committee (F. Porcelli, P. Yoon, Min Chen, P. Attri) selected Sachin Sharma & Abb Rauoof Wani, and Ze-Fan Yin.



Figure 8 Elsevier student and PhD poster award winners Sachin Sharma and Ab Rauoof Wani with selection committee members.

### 7. WIPP Workshop

Woman in Plasma Physics is now a formal activity in AAPPS-DPP. One of newly assigned Board of Director Prof. Anisa Qamar is in charge of WIPP activity and held a 2<sup>nd</sup> WIPP WS on Nov. 4<sup>th</sup> after AAPPS-DPP2023 in Port Messe Nagoya.







Figure 9 2<sup>nd</sup> WIPP WS participants and Women Participants

## 8. DPP-LOC joint work for AAPPS-DPP2024

This conference is 1<sup>st</sup> DPP conference out of Japan, where DPP take financial responsibility. City of venue Malacca is world heritage good to stay and cheap food and accommodation. LOC team led by MIP president Prof. Tou made excellent job to operate this conference in cost-effective way with DPP executive team (M. Kikuchi, R. Matsumoto, Y. Uesugi, R. Nomura). This enables DPP jointly with MIP to support 75 participants having financial difficulty to join this conference. This conference is supported by IUPAP, APCTP, IFE forum, Springer, PSSI, Malaysian Convention and Exhibition Bureau, Powerwell Holding Berhad, Malaysia, Elsevier.

## 10. Overall Program

Whole program we operated is shown below.

### 8<sup>th</sup> Asia-Pacific Conference on Plasma Physics (AAPPS-DPP 2024)

*Grand Swiss-Belhotel Melaka 3-8, Nov, 2024*

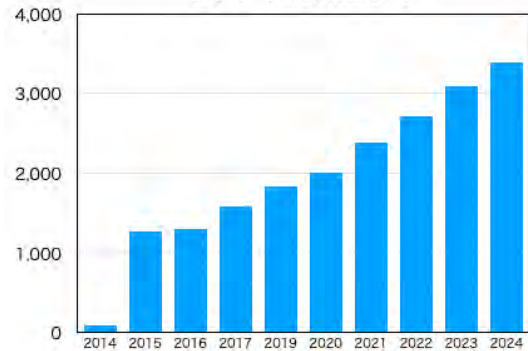
Sunday (2024.11.3)	Monday (2024.11.4)	Tuesday (11.5)	Wednesday (11.6)	Thursday (11.7)	Friday (11.8)
	Registration: 7:30~	Registration: 8:00~	Registration: 8:00~	Registration: 8:00~	Registration: 8:00~
	8:30-10:15: Opening (Chair: TY Tou)	8:30-10:30: Plenary 2 Chairs: G. Yun, M. Faitsch, P. Diamond, D. Escande	8:30-10:30: Plenary 4 Chairs: K. Hori, Y. Omura, R. Matsumoto, P. Yoon	8:30-10:30: Plenary 6 Chairs: M. Nakata, Y. Kotoga, T. Yamada, G. Sips	8:30-11:00: Plenary 8 Chairs: K. Hanada, A. Sen, M. Vasquez, N. Rubab, H. Jhang
	10:15-11:00: Photo & Coffee Break	10:30-11:00: Coffee break	10:30-11:00: Coffee break	10:30-11:00: Coffee break	10:30-11:00: Coffee break
	11:00-12:30: Plenary 1 Chairs: C. H. Nam, S. Bhattacharjee, R. Rawat	11:00-12:30: Plenary 3 Chairs: Weizong Wang, N. Tanaka, PF Chen	11:00-12:30: Plenary 5 Chairs: M. Nishihara, H. Sak, R. Maingi	11:00-12:30: Plenary 7 Chairs: M. Hoshino, Min Chen, F. Parra-Diaz	11:00-12:00: Early Lunch
	12:30-13:30: Lunch	12:30-13:30: Lunch	12:30-13:30: Lunch	12:30-13:30: Lunch	12:30-13:30: Lunch
	13:30-15:40: Topical 1	13:30-15:40: Topical 3	13:30-15:40: Topical 5	13:30-15:40: Topical 7	13:30-15:40: Topical 9
	15:40-16:00: Coffee Break	15:40-16:00: Coffee Break	15:40-16:00: Coffee Break	15:40-16:00: Coffee Break	15:40-16:00: Coffee Break
	16:00-18:10: Topical 2	16:00-18:10: Topical 4	16:00-18:10: Topical 6	16:00-18:10: Topical 8	16:00-18:10: Topical 10
	18:10-19:30: EV-1 (Room1): Mini-workshop for Women in Plasma Physics	18:10-19:30: EV-2 (Room1): 7 <sup>th</sup> General Assembly			

## 9. Membership Status

AAPPS-DPP started from 92 founding members in 2014. Figure 8 shows increase in DPP members in 10 years. As of Aug 24, 2024, DPP members reached 3390.

After the conference, “Join DPP” are registered and DPP member reached 3464 as of Nov.19.

DPP members



Regional distribution of AAPPS DPP Membership by DPP secretary 2024.08.24

