



2019.10.20

# 3<sup>rd</sup> Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2019)

November 4-8, 2019  
Crowne Plaza Hefei, Hefei, Anhui, China

**Organized by AAPPS-DPP**

Hosted by Department of Engineering and Applied Physics, USTC

AAPPS-DPP held 1<sup>st</sup> Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2017) during 18-23, September 2017 in Chengdu, China (<http://aappsdp.org/DPPP2017programlatest/index.html>) and the 2<sup>nd</sup> Asia-Pacific Conference on Plasma Physics (AAPPS-DPP2018) during 12-17, November 2018 in Kanazawa, Japan (<http://aappsdp.org/DPP2018/index.html>), successfully. AAPPS-DPP will have 3<sup>rd</sup> annual conference in Hefei. This conference is the annual plasma physics conference in Asia-Pacific region, similar to the APS-DPP and EPS-DPP conferences on plasma physics.

[1] Scope of the AAPPS-DPP2019:

AAPPS-DPP2019 is a plasma physics conference under the authority of AAPPS-DPP for scientific discussions on plasma physics. This conference should be physics oriented and provide interdisciplinary and in-depth discussions among and in various fields of plasma physics and application.

[2] Date: November 4(Monday) -8(Friday), 2019

[3] Conference Venue: Crowne Plaza Hefei: Building A, No.598 Huangshan Road, Hefei, 230088, China

[4] Organization:

AAPPS-DPP (<http://aappsdp.org/AAPPSDPP/>) is organizing body of this conference.

[5] Host: AAPPS-DPP 2019 is hosted by Department of Engineering and Applied Physics, USTC

[6] Endorsement/ Recognition/Sponsor

**Endorsed by,**

1. APS-DPP: Division of plasma physics, American Physical Society <https://www.aps.org/units/dpp/>
2. JPS: Physical society of Japan <https://www.jps.or.jp/english/>
3. JSAP: Japan society of applied physics <https://www.jsap.or.jp/english>
4. CPS-DPP: Division of plasma physics, Chinese physical society
5. KPS-DPP: Division of plasma physics, Korean physical society
6. PSSI: Plasma science society of India <http://www.pssi.in/>
7. ASJ: Astronomical society of Japan <http://www.asj.or.jp/en/>
8. CAS: Chinese Astronomical Society <http://english.astronomy.pmo.cas.cn>
9. ASI: Astronomical society of India <https://www.astron-soc.in/>
10. SGEPS: Society of Geomagnetism and Earth, Planetary and Space Science (SGEPSS) <http://www.sgeps.org/sgeps/index-e.html>
11. CSSR: Chinese society of Space Research <http://www.cssr.org.cn/pages/kxxhweb/jianjie.htm>
12. JSAP: Japan Society of Applied Physics <http://annex.jsap.or.jp/>
13. CMS-DPP: Division of plasma physics, Chinese society of theoretical and applied mechanics <http://en.cstam.org.cn/>
14. LSJ: The Laser society of Japan <http://www.lsj.or.jp/LSJHP/LSJindex.html>
15. CPS-DHEDP: Division of High Energy Density Physics, Chinese Physical Society
16. JSPF: The Japan society of Plasma Science and Nuclear Fusion Research <http://www.jspf.or.jp/eng/>
17. CNS-NFPP: Division of nuclear fusion and plasma physics, Chinese Nuclear Society
18. AAAPT: Asian African Association for Plasma Training <http://www.aaapt.org/>
19. Australian ITER Forum <https://fusion.ainse.edu.au/>

**Recognized by,**

1. Chinese Astronomical Society <http://english.astronomy.pmo.cas.cn/>
2. EPS: European Physical Society <https://www.eps.org/>

#### Financially supported by,

1. China International Nuclear Fusion Energy Program Execution Center
2. Hefei Municipal Bureau of Science and Technology
3. APCTP (Asia Pacific Center for Theoretical Physics) <https://www.apctp.org/main/>
4. Top Glove Foundation <http://www.topglove.com/top-glove-foundation/>
5. ENN Sci. & Tech Co. Ltd. <http://www.ennresearch.com/>
6. National Natural Science Foundation of China
7. Southwestern Institute of Physics
8. Institute of Plasma Physics, Chinese Academy of Sciences
9. University of Science and Technology of China
10. School of Physical Sciences, University of Science and Technology of China
11. Department of Engineering and Applied Physics, University of Science and Technology of China
12. Key Laboratory of Geospace Environment, Chinese Academy of Sciences
13. IFE Forum



#### [7] Scientific Program

3<sup>rd</sup> Asia-Pacific conference on Plasma Physics will cover following sub-disciplines of plasma physics.

1. CD Cross-disciplinary (Focused Topics)
2. F Fundamental plasma (Focused Topics)
3. B Basic plasma
4. A Applied plasma
5. L Laser plasma
6. SG Space plasma & Geomagnetism
7. SA Solar & Astro plasma
8. MF Magnetic Fusion plasma

1) CD focused topics: Nonlinear Wave-Particle Interaction, Transitions, Relaxation

2) F focused topics: The "Fundamental" category is for presentations that have universal impact disseminating to wide area of sciences. In this conference, F-PC chair will try to call contribution aiming at dissemination to general science. The sessions will be built around the following four subjects: 1. Nonlinear physics (including Hamiltonian structure, integrability, chaos, turbulence, etc.), 2. Linear theory (including spectral analysis, non-Hermitian system, symmetry breaking/chirality, etc.), 3. Statistical physics (including entropy, non-equilibrium system, SOC, turbulence, etc.), 4 Modeling (including toy model, topological dynamics, quantum/relativistic system, etc.)

3) "Basic" session will cover a variety of subjects in basic plasma physics (including topics on plasma diagnostics, numerical simulation, dusty plasma, plasma source, propulsion, and heating systems).

#### [8] Important Dates

Deadline for nomination of plenary and invited speakers	Feb 28 -> Extended to March 15 (Finished)
Deadline for nomination of 2019 S. Chandrasekhar Prize	March 31 -> Extended to April 15 (Finished)
Deadline for nomination of 2019 Innovation Prize (New)	March 31 -> Extended to April 15 (Finished)
Notification of plenary and invited speakers	Mid April -> May 22 (Finished)
Deadline for application to Financial Assistance	May 31 -> Closed
Deadline for nomination of DPP young research award	May 31 -> Closed June 15
Deadline for nomination of U30 Doctoral Scientist/Student award	May 31 -> Closed June 15
Call for contributed presentation (oral/poster)	April 1- June 15 -> Closed July 15
Call for post deadline (poster)	August 1 - September 20
Deadline for VISA application	September 30 (Hard deadline)
Deadline for early registration*	October 1
Conference (on-site payment is possible)	Nov. 4-8

\*: Early registration (commit to come) is highly recommended since LOC will determine number of printing program books based on this number while payment of registration fee is possible on-site.

#### [9] Basic Structure of Scientific Program

Conference will run from Monday (4 Nov.) to Friday (8 Nov.). Morning sessions will be plenary session (no parallel session) in principle which may include ~36 plenaries (30 minutes) and 9 summaries. Afternoon session will be dedicated for parallel sessions.

#### [10] Registration fee

Registration fee	fee (same at on-site)	Note
Member	500 US\$	Same for endorsed/recognizing societies
Non-member	600 US\$	
Student and retired	250 US\$	

**Note 1:** Member fee is applied to AAPPS-DPP members and members of endorsed societies. Registration fee includes 1) Admission to all conference sessions and 2) Conference Materials. Coffee break and welcome reception are free of charge. USTC bank account only accepts Bank Transfer. We have same registration fee on site.

- a) Welcome reception: There will be a free reception on Monday evening (Nov. 5) 19:00-21:00. Place will be noticed later.
- b) Lunch ticket: Buffet in Crowne Plaza Hefei is recommended. The buffet is 100Yuen/person.
- c) Conference diner: Conference diner will be held on Thursday evening (Nov. 7) 19:00-22:00.
- d) Conference tour: tbd
- e) Visit LOC HP (<http://ktx.ustc.edu.cn/AAPPSDPP2019.html>) for details.

#### [11] VISA requirement

Participants who need VISA should contact LOC at [myfang@ustc.edu.cn](mailto:myfang@ustc.edu.cn). There is an online form in the Google docs. Any person who need apply Chinese Visa, please fill the following form. Once the necessary information has been collected, we will send the official invitation letter for the visa application ASAP. Visit LOC HP (<http://ktx.ustc.edu.cn/AAPPSDPP2019.html>) for details.

Deadline for VISA process is **September 30 (strict deadline)** and LOC will send invitation letter who paid registration fee. In case participant can't come, paid fee will be reimbursed with some cost.

#### [12] Financial assistance

There will be limited resources to assist contributors from developing countries or retired persons who will give presentation. We closed application on May 31. <http://aapspdpp.org/DPP2019/financialassistance.html>.

[13] Hotel information

LOC reserved a block of rooms in Crowne Plaza Hefei (<http://hotel-rez.com/hw/a401754/location.html>) and Best Western Premier Hotel Hefei behind with discount price. Visit LOC HP (<http://ktx.ustc.edu.cn/AAPPSDPP2019.html>) for details.



Crowne Plaza Hefei (center) and Best Western Premier Hotel Hefei (left)

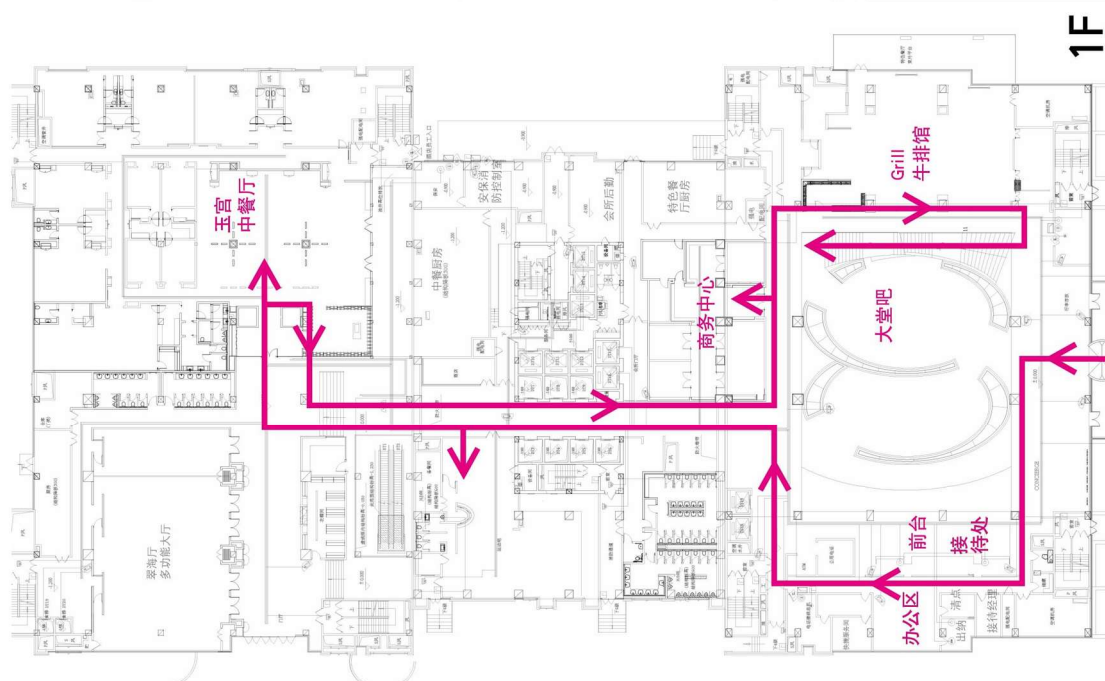




# [14] Venue detail

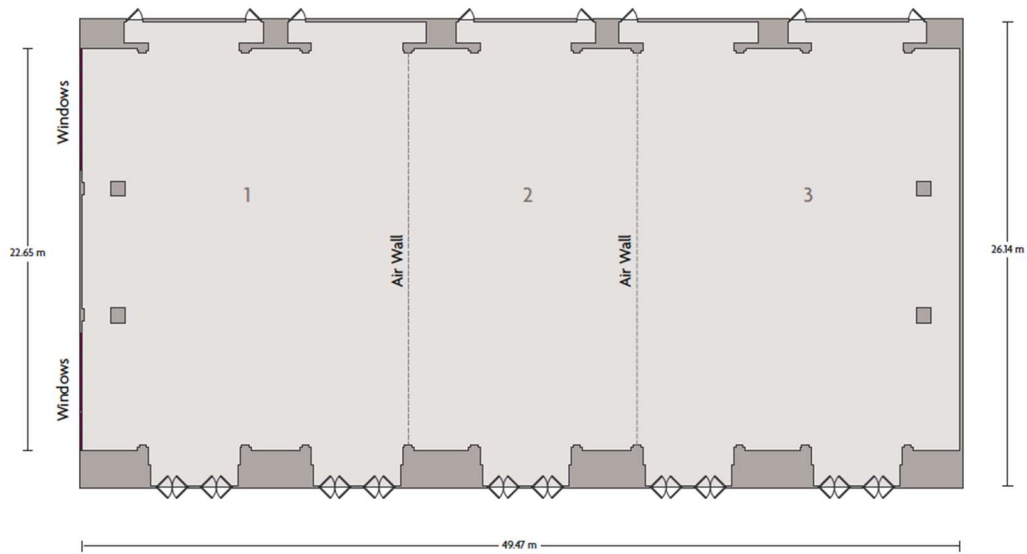
Conference venue is Crowne Plaza Hefei.

Session name	Room name	Capacity
Plenary	Fenghua Ballroom1+2+3	650 Seats
Cross Disciplinary session	Mahogany Room 紫檀厅	area 89 m <sup>2</sup> , max 60 Seats
Fundamental plasma session	Willow Room 杨柳厅	area 89 m <sup>2</sup> , max 60 Seats
Basic plasma session-1	Acacia Room 藤金厅	area 84 m <sup>2</sup> , max 60 Seats
Basic-2/Applied-2	Oak Room 橡树厅	area 82 m <sup>2</sup> , max 60 Seats
Applied plasma session-1	Birch Room 白桦厅	area 84 m <sup>2</sup> , max 60 Seats
Laser plasma -1 (inc. L-semi plenary)	Fenghua Ballroom3	area 500 m <sup>2</sup> , 265 Seats
Laser plasma session -2	Maple Room 红枫厅	area 89 m <sup>2</sup> , max 60 Seats
Space and Geomagnetism plasma session	Cypress Room2	160 m <sup>2</sup> , 60 Seats
Solar and Astro plasma session	Cypress Room1	228 m <sup>2</sup> , 110 Seats
Magnetic Fusion plasma session-1	Fenghua Ballroom1	area 500 m <sup>2</sup> , 265 Seats
Magnetic Fusion plasma session-2	Fenghua Ballroom 2	area 328 m <sup>2</sup> , 120 Seats
Poster session	Pre-function Area (Foyer)	567m <sup>2</sup>



**Fenghua Grand Ballroom: Plenary, MF-1,2, L-1**

**Crowne Plaza® Hefei - Fenghua Grand Ballroom**

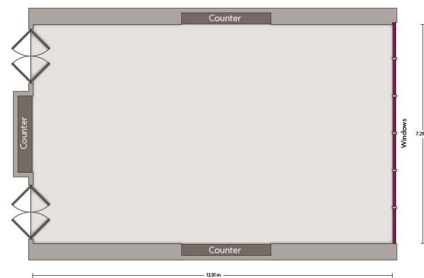
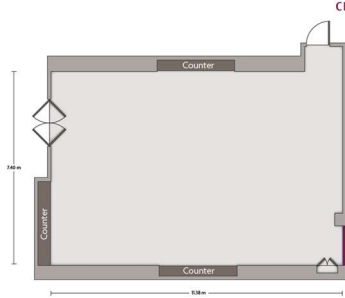


**Basic-1(Acacia), Basic-2/ Applied-2(Oak), Applied-1(Birch)**

Crowne Plaza® Hefei - Acacia



Crowne Plaza® Hefei - Oak



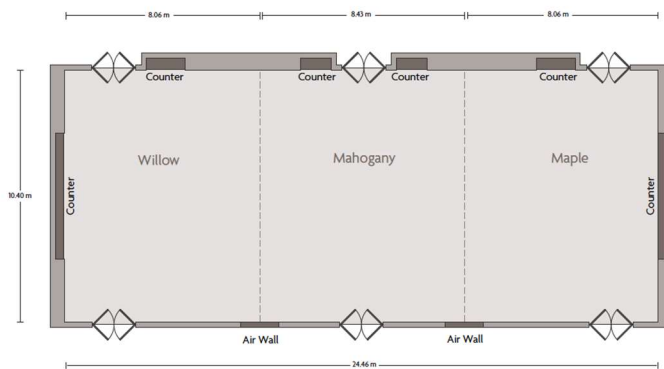
Birch : no photo

**CD (Cross-disciplinary) : Mahogany Room 紫檀厅**

**F (Fundamental) : Willow Room 杨柳厅**

**Lase-2 : Maple Room 红枫厅**

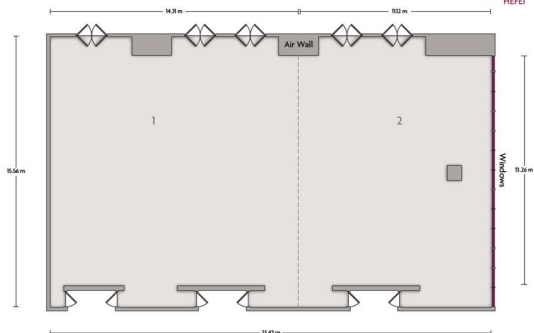
Crowne Plaza® Hefei - Willow, Mahogany & Maple



**Space and Geomagnetism plasma: Cypress Room2**

**Solar and Astro plasma : Cypress Room1**

Crowne Plaza® Hefei - Cypress












2019.10.20

Sunday (03, Nov)	Monday (04, Nov)	Tuesday (05, Nov)	Wednesday (06, Nov)	Thursday (07, Nov)	Friday (08, Nov)	Saturday (09, Nov)
	7:00~ Registration ( )	7:00~ Registration ( )	7:00~ Registration ( )	7:00~ Registration ( )	7:00~ Registration ( )	Conference Tour Shouxian County 9:00-16:00
	8:30-10:00: Opening [Fenghua] Chair: Ge Zhaung Detail is shown at Bottom Right Corner	8:30-10:30 Plenary 2 [Fenghua] Chair: Pat Diamond [Sanae I. Itoh Memorial Session]	8:30-10:30 Plenary 4 [Fenghua] Chair: Ryosuke Kodama	8:30-10:30 Plenary 6 [Fenghua] Chair: Chuan Sheng Liu	8:00-10:00 Parallel Session 9 B-9(Acacia) A-9(Birch) L-12(Mahogany) L-13(Maple) SG-9(Cypress2) MF-17(Cypress1)	
		8:00-8:30: PL5 Chang Hee Nam	8:00-8:30: PL14 Min Xu	8:00-8:30: PL23 Xianzu Gong		
		8:30-9:00: PL6 Pallavi Jha	8:30-9:00: PL15 Weixing Wang	8:30-9:00: PL24 Gurbax Lakhina		
		9:00-9:30: PL7 Xavier Garbet	9:00-9:30: PL16 Yoshiharu Omura	9:00-9:30: PL25 Hirotaka Toyoda		
		9:30-10:00:PL8 Lin I	9:30-10:00:PL17 Michel Koenig	9:30-10:00:PL26 Kazuhiko Endo		
		10:00-10:30 PL9 Young-Hoon Song	10:00-10:30 PL18 Baifei Shen	10:00-10:30 PL27 Qiugang Zong		
	10:00-11:00: <b>Photo &amp; Coffee</b>	10:30-11:00: <b>Coffee break</b>	10:30-11:00: <b>Coffee break</b>	10:30-11:00: <b>Coffee break</b>	10:00-10:30: <b>Coffee break</b>	
	11:00-13:00 Plenary 1 [Fenghua] Chair:Baonian Wan	11:00-13:00 Plenary 3 [Fenghua] Chair: Tohru Hada	11:00-13:00 Plenary 5 [Fenghua] Chair: Wonho Choe	11:00-13:00 Plenary 7 [Fenghua] Chair: Yong Liu	10:30-12:00 Plenary 8 [Fenghua] Chair: Sudip Sengupta	
	11:00-11:30: PL1 RoderickW. Boswell	11:00-11:30:PL10 James Drake	11:00-11:30:PL19 Richard Buttery	11:00-11:30:PL28 Troy Carter	10:30-11:00 PL32 Dominique Escande	
	11:30-12:00: PL2 Yuming Wang	11:30-12:00:PL11Alexandre Lazarian	11:30-12:00:PL20 Si-Woo Yoon	11:30-12:00:PL29 JinLin Han	11:00-11:30:PL33 Jin-Xiu Ma	17:00-17:30:X. Duan: Poster Prize 17:30-18:00 Closing Remark and Next Conference in Jeju Island/ Korea YX Wan/ M. Kikuchi and Si-Woo Yoon
	12:00-12:30: PL3 Chi Wang	12:00-12:30:PL12 Philip Morrison	12:00-12:30:PL21 Hitoki Yoneda	12:00-12:30:PL30 David Hughes	11:30-12:00:PL34 Frederck Skiff	
	12:30-13:00: PL4 Ryoji Matsumoto	12:30-13:00:PL13 Yoshifumi Kimura	12:30-13:00:PL22 Jiayu Dai	12:30-13:00:PL31 Jie Jiang	12:00-13:00: Lunch	
13:00-18:00 Registration at	13:00-14:00: <b>Lunch</b>	13:00-14:00: <b>Lunch</b>	13:00-14:00: <b>Lunch</b>	13:00-14:00: <b>Lunch</b>	13:00-17:30 Plenary 9 [Fenghua] Chair: Yuanxi Wan & Mitsuru Kikuchi	
	14:00-16:00 Parallel Session 1	14:00-16:00 Parallel Session 3	14:00-16:00 Parallel Session 5	14:00-16:00 Parallel Session 7	13:00-13:30: PL35 Yi-Kang Pu	
	CD-1(Mahogany) F-1(Willow), B-1(Acacia), A-1(Birch), LSP-1(Fenghua3) SG-1(Cypress2) SA-1(Cypress1) MF-1(Fenghua1) MF-2(Fenghua2)	CD-3(Mahogany), F-3 Poster(Foyer) B-3 Poster(Foyer) A-3 Poster(Foyer) L-1(Fenghua3) L-2(Maple) SG-3(Cypress2) SA-3(Cypress1) MF-5(Fenghua1) MF-6(Fenghua2)	CD-5(Mahogany), F-5 Poster(Foyer) B-5(Acacia) A-5(Birch) L-5(Fenghua3) L-6(Maple) SG-5(Cypress2) SA-5(Cypress1) MF-9 Poster(Foyer) MF-10 (Fenghua2)	CD-7(Mahogany) F-7(Willow) B-7(Acacia) A-7(Birch) L-9 Poster(Foyer) SG-7 Poster(Foyer) SA-7 Poster(Foyer) MF-13(Fenghua1) MF-14(Fenghua2)	13:30-14:00: PL36 P.D. Diamond 14:00-14:30: PL37 Zensho Yoshida 14:30-15:00: PL38 Tomo-Hiko Watanabe 15:00-15:30: PL39 Jian Zheng 15:30-16:00: PL40 Xiaohua Deng 16:00-16:30: PL41 Siming Liu 16:30-17:00: PL42 Ge Zhuang	
	16:00-16:30: <b>Coffee Break</b>	16:00-16:30: <b>Coffee Break</b>	16:00-16:30: <b>Coffee Break</b>	16:00-16:30: <b>Coffee Break</b>	17:00-17:30:X. Duan: Poster Prize	
	16:30-18:30 Parallel Session 2	16:30-18:30 Parallel Session 4	16:30-18:30 Parallel Session 6	16:30-18:30 Parallel Session 8 -	17:30-18:00 Closing Remark and Next Conference in Jeju Island/ Korea	
	CD-2(Mahogany) F-2(Willow) B-2(Acacia) A-2(Birch) LSP-2 (Fenghua3) SG-2(Cypress2) SA-2(Cypress1) MF-3(Fenghua1) MF-4(Fenghua2)	CD-4 Poster (Foyer) B-4(Acacia) A-4(Birch) L-3(Fenghua3) L-4(Maple) SG-4(Cypress2) SA-4(Cypress1) MF-7(Fenghua1) MF-8(Fenghua2)	CD-6(Mahogany) F-6(Willow) B-6(Acacia) A-6(Birch) L-7(Fenghua3) L-8(Maple) SG-6(Cypress2) SA-6(Cypress1) MF-11(Fenghua1) MF-12 Poster(Fenghua2)	F-8(Willow) B-8(Acacia) A-8(Birch) L-10(Fenghua3) L-11(Maple) SG-8(Cypress2) SA-8(Cypress1) MF-15(Fenghua1) MF-16(Fenghua2)	04 November 8:30-10:00:Opening [Fenghua] Chair: Ge Zhuang  1. USTC Chancellor (10min) 2. Local Government (10min) 3. MOST Delong Luo (10min) 4. IOC Chair: Yuanxi Wan (10min) 5. DPP Chair M.Kikuchi Chandrasekhar Prize (10min) 6. U 40 Selection Chair Liu Chen & U30 Selection Chair Kunioki Mima (20min) 7. AAPS-DPP Innovation Prize Ceremony Introduction by Yi-Kang Pu (20 min)	
	19:00-22:00: Reception (Cypress1) [Yuanxi Wan, Ge Zhuang]	19:00-20:00: EV-1 (M. Kikuchi) Status and Issues of AAPS-DPP Chair: Liu Chen (Fenghua3)	19:00-20:00:EV-2 EV-2-1 Bernard Bigot (ITER) ITER Project (Remote Talk) EV2-2Delong Luo (MOST): Chinese Fusion Program Chair: Baonian Wan (Fenghua3)	19:30-22:00: Conference Dinner (Award intro.) (Fenghua)		





## Part III

## Scientific Program

## 1. Opening, Plenary, Parallel sessions and Closing

Conference Registration, Nov. 4 (Mon), 7:00~	
Opening Session [Nov 4(Mon) 8:30-10:00 [Chair: Ge Zhuang]	
	8:30-8:40: USTC Chancellor
	8:40-8:50: Local Government
	8:50-9:00: MOST Delong Luo
	9:00-9:10: IOC Chair Yuanxi Wan
	9:10-9:15: DPP Chair Mitsuru Kikuchi 9:15-9:20: Introduction of 2019 S. Chandrasekhar Winners
	9:20-9:40: U40 selection chair Liu Chen, U30 selection chair Kunioki Mima
	9:40-10:00: 2019 AAPPS-DPP Innovation Prize Ceremony Introduction of first winner by Yi-Kang Pu on behalf of selection committee

10:00-11:00: Photo session and Coffee Break [Ge Zhuang]






Plenary Session 1 [Nov 4(Mon) 11:00-13:00 [Chair: Baonian Wan]				
PL-1		Roderick W. Boswell	Australian National University	Innovation prize winner (1)
PL-2 (MF)		Yuming Wang	USTC	Solar Wind Transients in 3D
PL-3 (SG)		Chi Wang	National Space Center, CAS	The SMILE mission: science and technical status
PL-4 (SA)		Ryoji Matsumoto	Chiba University	Magnetic Activities of Black Hole Accretion Disks

Lunch [13:00-14:00]





Topical Sessions [14:00-18:30]

Reception [Nov 4(Mon) 19:00-22:00 [Yuanxi Wan, Ge Zhuang]
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Nov. 5 (Tue), 7:00 ~ Conference Registration,				
Plenary Session 2 (Sanae Inoue Itoh memorial session) [Nov 5(Tue) 8:00-10:30 [Chair: Patrick Diamond]				
PL-5 (L)		Chang Hee Nam	IBS	Exploration of nonlinear Compton scattering between a laser-accelerated GeV electron beam and a PW laser
PL-6 (IN)		Pallavi Jha	University of Lucknow	Wakefields in Plasma: Particle Acceleration and Terahertz Generation
PL-7 (CD)		Xavier Garbet	CEA	Entropy and relaxation processes
PL-8 (B)		Lin I	National Central University	Cooperative excitations in dusty plasma liquids and nonlinear dust acoustic waves: from order to turbulence
PL-9 (A)		Young-Hoon Song	Korea Institute of Machinery and Materials	Application of plasma technologies for air pollution control






Coffee Break [10:30-11:00]

Plenary Session 3 [Nov 5(Tue) 11:00-13:00 [Chair: Tohru Hada ]				
PL-10 (SG)		James Drake	University of Maryland	Confronting reconnection simulations with MMS observations
PL-11 (SA)		Alexandre Lazarian	University of Wisconsin-Madison	Intimate Connection of Astrophysical Magnetic Reconnection and Turbulence
PL-12 (F)		Philip Morrison	The University of Texas at Austin	Hamiltonian Description of Plasma and other Matter
PL-13 (CD)		Yoshifumi Kimura	Nagoya University	Vortex reconnection and a finite-time singularity of the Navier-Stokes equations





Lunch [13:00-14:00]

Topical Sessions [14:00-18:30]

Evening Session 1 [Nov 5(Tue) 19:00-19:40 [Chair: Liu Chen]	
	<b>EV1-1:</b> Mitsuru Kikuchi: Status and Issues of AAPS-DPP



Nov. 6 (Wed), 7:00 ~ Conference Registration				
Plenary Session 4 [Nov 6(Wed) 8:00-10:30] [Chair: Ryosuke Kodama]				
PL-14 (MF)		Min Xu	Southwestern Institute of Physics	Advances in understanding of turbulent transport and confinement improvement in the HL-2A tokamak
PL-15 (CD)		Weixing Wang	Princeton Plasma Physics Laboratory	ExB shear flow structure and plasma self-driven current generation in magnetic island
PL-16 (SG)		Yoshiharu Omura	Kyoto University	Dynamic variation of Earth's outer radiation belt due to nonlinear wave-particle interactions
PL-17 (L)		Michel Koenig	Ecole Polytechnique	Overview of Laboratory Astrophysics Experiments at LULI
PL-18 (L)		Baifei Shen	Shanghai Normal University	Physics for laser power from 1 PW to 100 PW






Coffee Break [10:30-11:00]

Plenary Session 5 [Nov 6(Wed) 11:00-13:00] [Chair: Wonho Choe]				
PL-19 (MF)		Richard Buttery	General Atomics	The Advanced Tokamak Path to a Compact Fusion Pilot Plant
PL-20 (MF)		Si-Woo Yoon	National Fusion Research Institute	Overview of KSTAR results and Plan
PL-21 (L)		Hitoki Yoneda	University of Electro-Communications	Progress of inner-shell ionized hard x-ray laser pumped by intense XFEL pulses
PL-22 (B)		Jiayu Dai	National University of Defense Technology	Electron-ion coupled dynamics and structures in warm dense plasmas





Lunch [13:00-14:00]

Topical Sessions [14:00-18:30]

Evening Session 2 [Nov 6(Wed) 19:00-19:40] [Chair: Yuanxi Wan]	
	<b>EV2-1:</b> Bernard Bigot (ITER Organization): ITER Project (Remote Talk)
	<b>EV2-2:</b> Delong Luo (Ministry of Science and Technology): Chinese Fusion Program

Nov. 7 (Thurs), 7:00 ~ Conference Registration				
Plenary Session 6 [Nov 7(Thurs) 8:00-10:30 [Chair: Chuan Sheng Liu]				
PL-23 (MF)		Xianzu Gong	ASIPP	Overview of experimental results in EAST Tokamak
PL-24 (SG)		Gurbax Lakhina	Indian Institute of geomagnetism	Boundary Layer Waves in Space Plasmas
PL-25 (A)		Hirotaka Toyoda	Nagoya University	One-dimensionally long-scale atmospheric-pressure plasma for large-area surface treatment
PL-26 (A)		Kazuhiko Endo	Tohoku University	Atomic Layer Etching, Deposition and Modification Processes for Novel Nano-materials and Nano-devices
PL-27 (SG)		Qiugang Zong	Peking University	Magnetospheric Response to Solar Wind Forcing: ULF wave – Particle Interaction Scenario

Coffee Break [10:30-11:00]

Plenary Session 7 [Nov 7(Thurs) 11:00-13:00 [Chair: Yong Liu ]				
PL-28 (B)		Troy Carter	UCLA	Overview of the Basic Plasma Science Facility: the physics of waves relevant to space, astrophysical and fusion plasmas
PL-29 (SA)		JinLin Han	National Astronomical Observatories of China	Observing Interstellar and Intergalactic Magnetic Fields
PL-30 (CD)		David Hughes	University of Leeds	Dynamo action in rapidly rotating convection with no inertia
PL-31 (SA)		Jie Jiang	Beihang University	Predictability of Solar Cycle




Lunch [13:00-14:00]

Topical Sessions [14:00-18:30]










Banquet [Nov 6(Thursday) 19:00-22:00]

Nov. 8 (Friday) Topical Sessions 8:00-10:00,

Coffee Break [10:00-10:30]

Plenary Session 8 [Nov 8(Fri) 10:30-12:00 [Chair: Sudip Sengpta ]				
PL-32 (F)		Dominique Escande	Aix-Marseille University	Relation of the Vlasovian and of the N-body descriptions of microscopic plasma physics
PL-33 (A)		Jin-Xiu Ma	USTC	Basic experiments on ion waves excitation and propagation
PL-34 (B)		Fredrick Skiff	University of Iowa	Observing plasma kinetic degrees of freedom using advanced diagnostics

Lunch [12:00-13:00]

Plenary Session 9 (Summary) [Nov 8(Fri) 13:00-17:30 [Chair: Yuanxi Wan & Mitsuru Kikuchi ]				
PL-35 (A)		Yi-Kang Pu	Tsinghua University	Summary of Applied plasma session
PL-36 (CD)		P.D. Diamond	UCSD	Summary of Cross Disciplinary session
PL-37 (F)		Zensho Yoshida	The University of Tokyo	Summary of Fundamental plasma session
PL-38 (B)		Tomo-Hiko Watanabe	Nagoya University	Summary of Basic plasma session
PL-39 (L)		Kunioki Mima	GPI	Summary of Laser plasma session
PL-40 (SG)		Xiaohua Deng	Nanchang University	Summary of Space plasma and Geomagnetism session
PL-41 (SA)		Siming Liu	Purple Mountain Observatory	Summary of solar and astro plasma session
PL-42 (MF)		Ge Zhuang	USTC	Summary of magnetic fusion plasma session
		Xuru Duan	SWIP	Poster Prize Ceremony

Plenary Session 10 (Closing) [Nov 8(Fri) 17:30-18:00 [Chair: ]				
		YX Wan/ M. Kikuchi and Si-Woo Yoon		Closing remark and Next Conference in Jeju Island/ Korea

## 2. Program Detail of Topical Sessions

### 2.1 Cross Disciplinary

CD-1 [Memory in Turbulence ,Chair: David Hughes ] 14:00-16:00, Nov. 4, Mahogany			
CD-I1	Patrick Diamond	UCSD	Spontaneous Transport Barriers Quench Turbulent Diffusion in 2 Dimensional and reduced MHD
CD-I2	Linda Sugiyama	PPPL	Steady States for Solar Coronal Loops
CD-I3	Kohei Inayoshi	Peking Univ.	Rapid black hole formation and growth
CD-I4	Kiori Obuse	Okayama Univ.	Zonal flow formation in two-dimensional Rossby wave turbulence on a rotating sphere
CD-Discussion1(Garbet)		(20')	Memory in Turbulence

CD-2 [Flows and Turbulence, Chair: Yusuke Kosuga] 14:00-16:00, Nov. 4, Mahogany			
CD-I5	Yuejiang Shi	SNU	New experimental findings of non-local transport in J-TEXT and KSTAR
CD-I6	Ting Long	SWIP	Studies of Reynolds Stress and the Turbulent Generation of Edge Poloidal Flows on the HL-2A Tokamak
CD-I7	Peng Shi	HUST	Experimental Investigations of MARFE and Density Limit on J-TEXT Ohmic Plasma
CD-I8	Maxime Lesur	Lorraine Univ.	Description of turbulent transport in the velocity space
CD-O1	Haiyun Tan	Soochow Univ.	The characteristics of PBGs in 1-D plasma photonic crystals

CD-3 [Plasma Rotation, Chair: Xavier Garbet ] 14:00-16:00, Nov. 5, Mahogany			
CD-I9	George Tynan	UCSD	Generation of intrinsic parallel flows from drift turbulence with broken symmetry
CD-I10	Shigeru Inagaki	Kyushu Univ.	Flows, Waves and Turbulence in Laboratory Plasma
CD-I11	Lu Wang	HUST	Intrinsic current driven by electromagnetic electron temperature gradient turbulence in tokamak plasmas
CD-O2	Vijay Jha	Tribhuvan Univ.	Measurement of Floating Potential and Ion Concentration in Arc Plasma at Atmospheric Pressure
CD-Discussion2 (Kosuga)		(30')	Uses of Basic Experiments

CD-4 [poster session] 16:30-18:30, Nov. 5, Foyer			
CD-P1	De-Xuan Hui	Dalian University of Technology	Modulation of ion beams in two-component plasmas: Three-dimensional particle-in-cell simulation
CD-P2	Lipeng Wang	Peking University	Simulations and Applications of Reduced MHD
CD-P3	Zhengjun Mao	Peking University	Phase dynamics mechanism of coupling between shear flow and turbulence
CD-P4	Qinghao Yan	SWIP	On Target Pattern Formation in the CHNS system
CD-P5	Giovanni Di Giannatale	Università di Padova	Lagrangian Coherent Structures as skeleton of transport in low collisionality and chaotic magnetic systems
CD-P6	Weixin Guo (U30 winner)	HUST	Impurity transport driven by parallel velocity shear turbulence in hydrogen isotope plasmas

CD-5 [Pattern Formation , Chair: Patrick Diamond] 14:00-16:00, Nov. 6, Mahogany			
CD-I12	Zhibin Guo	Peking Univ.	How Phase Patterning Drives and Saturates Zonal FLOW
CD-I13	Yusuke Kosuga	Kyushu Univ.	Interplay among 3D flows in turbulent plasmas
CD-I14	Weixin Guo	HUST	Scale selection and feedback loops for patterns in drift wave-zonal flow turbulence
CD-O3	Ning Ning	Xi'an jiaotong University	Metabolomics analysis of inactivating tumor cells by plasma treatment
CD-Discussion3 (Diamond)		(30')	Staircases, and Phases

CD-6 [Structure Formation , Chair: Kiori Obuse ] 16:30-18:30, Nov. 6, , Mahogany			
CD-I15	Li-Feng Wang	IAPCM	Progress on weakly nonlinear hydrodynamic instabilities in spherical geometry
CD-I16	<del>Srimanta Maity</del>	<del>IPR</del>	<del>Equilibrium structure formation and dynamical response of strongly coupled dusty plasmas: A Molecular Dynamics study</del>
CD-I17	Kenichiro Terasaka	Kyushu Univ.	Inhomogeneous neutral gas flow field structure in a partially ionized ECR plasma
CD-I18	Michikazu Kobayashi	Kyoto Univ.	Theoretical study of quantized vortices and quantum turbulence
CD-O4	Mithun Karmakar	IPR	Excitation of Plasma Wakefields by Relativistic Proton Beam

CD-I16 Maity cancel

CD-7 [Anisotropic Flows and Turbulence, Chair: Zhibin Guo ] 14:00-16:00, Nov. 7, Mahogany			
CD-I19	Takeshi Ido	NIFS	Nonlinear wave-particle interaction in magnetized high temperature plasmas confined in Large Helical Device
CD-I20	Julian Mak	Univ. Oxford	Role of energetically constrained turbulent transport coefficients in ocean climatology
CD-I21	Naoto Yokoyama	Osaka Univ.	Energy fluxes in anisotropic turbulence
CD-O5	Naila Noreen	Forman Christian College	Electron contribution in mirror mode instability in quasilinear regime

There is no CD-8, CD-9 sessions.



## 2.2 Fundamental Plasma Physics [Invited 30 min, Oral 20 min]

F-1 [vortex dynamics , Chair: Z. Yoshida ] 14:00-16:00, Nov. 4, Willow			
F-I1	Tomoo Yokoyama	Kyoto University	Topological fluid data analysis: COT representations of surface flows and their implementations
F-I2	Michael Wheatland	Univ. of Sydney	Magnetic helicity and open magnetic fields
F-O1	Hiroto Aibara	Univ. of Tokyo	The partition of enstrophy between zonal and turbulent components
F-O2	Liu Chen	Zhejiang Univ.	Self-consistent kinetic theory with nonlinear wave-particle resonances
F-O11	Rupak Mukherjee (U30 winner)	IPR	Recurrence in three dimensional magnetohydrodynamic plasma

F-2 [Nonlinear phenomena, Chair: Liu Chen ] 16:30-18:30, Nov. 4, Willow			
F-I3	Chihiro Matsuoka	Osaka City Univ.	Deterministic representation of chaotic attractors and capture of all homoclinic points in Henon map
F-I4	Yasuhiko Igarashi	Univ. of Tokyo	Sparse modeling for a data-driven approach in Plasma Physics
F-O3	Cong Meng	Peking Univ.	Phase dynamics in nonlinear three-wave coupling
F-O4	Haruhiko Saitoh	Univ. of Tokyo	Chaos of energetic positron orbit in a dipole magnetic field configuration
F-O5	Prabhakar Srivastav	IPR	Finite Plasma Beta Effect on Turbulent Particle and Energy Transport in Electron Temperature Gradient driven Turbulent

F-3 [Poster session, fundamental aspect of plasma physics] 14:00-16:00, Nov. 5, Foyer			
F-P1	Matthew Hole	ANU	Topical review: the use of Bayesian inference to model complex systems.
F-P2	Liu Chen	Zhejiang Univ.	GeFi-E&B: A New Particle Simulation Scheme using Electromagnetic Fields
F-P3	Zhiyong Qiu	ANU	High frequency mode generation by toroidal Alfvén eigenmodes
F-P4	Dominique Escande	Aix-Marseille Univ.	Relation of the Vlasovian and of the N-body descriptions of microscopic plasma physics
F-P5	Zhaoyang Liu	USTC	On deterministic nature of intermittent geodesic acoustic mode observed in tokamaks
F-P6	Naoki Kenmochi	Univ. of Tokyo	Deep learning for tomographic reconstruction of imaging diagnostics
F-P7	Shinya Maeyama	Nagoya Univ.	Methodology for extracting and modeling electron-scale effects in multi-scale plasma turbulence
F-P8	Robert Dewar	ANU	Time-dependent relaxed magnetohydrodynamics — inclusion of cross helicity constraint using phase-space action
F-P9	Yohei Kawazura	Univ. of Tokyo	Action principles for relativistic extended magnetohydrodynamics: A unified theory of magnetofluid models
F-P10	Hiroto Aibara	Univ. of Tokyo	The partition of enstrophy between zonal and turbulent components

F-4 [No session ] 16:30-18:30, Nov. 5, Willow			
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F-5 [Hamiltonian structure, Chair: P.J. Morrison] 14:00-16:00, Nov. 6, Willow			
F-I5	Natalia Tronko	Max Planck IPP	Geometrically reduced kinetic simulations of fusion plasmas
F-I6	Masaru Furukawa	Tottori University	MHD equilibria via simulated annealing and their stability -- negative energy modes and additional constraints
F-I7	Rong Zou	Zhejiang Normal Univ.	Three-dimensional azimuthal magnetorotational instability of a MHD flow
F-O6	R.L. Dewar	ANU	Time-dependent relaxed magnetohydrodynamics — inclusion of cross helicity constraint using phase-space action

F-6 [Beltrami Fields, Chair: R.L. Dewar] 16:30-18:30, Nov. 6, Willow			
F-I8	Naoki Sato	Kyoto University	Local Clebsch parametrization of Beltrami equilibria
F-I9	Yao Zhou	PPPL	Variational integration for ideal MHD and formation of current singularities
F-I10	Dhairya Malhotra	New York Univ.	A boundary integral equation solver for computing Taylor states in toroidal geometries
F-I11	Zhisong Qu (U30 winner)	ANU	Stepped pressure equilibrium with flow

F-7 [Multi-scale numerical methods, Chair: D. Escande] 14:00-16:00, Nov. 7, Willow			
F-I12	Tao Wang	Zhejiang Univ.	Hybrid simulations of shear Alfvén fluctuations in burning fusion plasmas
F-I13	Zhe Gao	Tsinghua Univ.	Theory of Quasi-mode Parametric Decay in Plasmas
F-O7	Ryusuke Numata	Univ. of Hyogo	Gyrokinetic simulations for understanding self-organization and turbulent transport in magnetospheric plasmas
F-O8	Shinya Maeyama	Nagoya Univ.	Methodology for extracting and modeling electron-scale effects in multi-scale plasma turbulence

F-8 [spin/chirality/relativity, Chair: P.J. Morrison] 16:30-18:30, Nov. 7, Willow			
F-I14	Pavel Andreev	Lomonosov Moscow State Univ.	Hydrodynamic representation of the many-particle spin-1/2 Pauli equation for quantum plasmas
F-I15	Jianxing Li	XJTU	Determination of the Carrier-envelope phase of PW laser pulses and generation of spin-polarization relativistic electron beams via a single-shot ultra-intense laser pulse
F-O9	Zensho Yoshida	Univ. of Tokyo	Deformation of Lie-Poisson algebras producing chirality
F-O10	Yohei Kawazura	Univ. of Tokyo	Action principles for relativistic extended magnetohydrodynamics: A unified theory of magneto fluid models

F-9 [No session] 8:00-10:10, Nov. 8, Willow

### 2.3 Basic Plasma Physics

B-1 [Waves and plasmas (I), Chair: Tomo-Hiko Watanabe] 14:00-16:00, Nov. 4, Acacia			
B-I1	Amar Prasad Misra	Visva-Bharati Univ.	Stimulated scattering in relativistic plasmas
B-I2	Taiichi Shikama	Kyoto Univ.	Detection of anisotropy in the electron velocity distribution produced by electron cyclotron resonance heating using the polarization of helium atom emission lines
B-I3	Ashild Fredriksen	The Arctic Univ. Norway	On the ion beams and energetic electrons through a current-free double layer (CFDL)
B-I4	Richard Sydora	Univ. Alberta	Stimulated Excitation of Thermal Waves in Magnetized Plasmas and Use in Thermal Conductivity Measurement
B-O1	Surabhi Jaiswal	Auburn Univ.	Excitations of dust density waves with discharge polarity reversal

B-2 [Quantum and atomic processes in plasmas, Chair: Amar Misra] 16:30-18:30, Nov. 4, Acacia			
B-I5	Tobias Dornheim	Helmholtz-Zentrum Dresden Rossendorf	Ab initio simulations of warm dense matter
B-I6	Ke Yao	Fudan Univ.	Resonant electron ion recombinations: reliable atomic data for high temperature plasmas
B-I7	Hirofumi Takahashi	Tohoku Univ.	Application of an RF plasma source for divertor plasma study and its recent results
B-I8	Masafumi Yoshida	Yamaguchi Univ.	Property for production of the hydrogen negative ions by surface production process on the inner surface of the aperture
B-O2	Dongdong Kang	NUDT	Quantum simulation of structure and thermodynamic properties of dense hydrogen

B-3 Poster session [		14:00-16:00, Nov. 5, Foyer	
B-P1	Sima Roy	VISVA-BHARATI	Stability of electromagnetic solutions in relativistic degenerate plasmas
B-P2	Kishan Kumar	Univ. Rajasthan Jaipur	Large amplitude ion acoustic double layers in warm negative ion plasma
B-P3	Kohei Fukuyama	Hiroshima Univ.	Emission spectroscopy of high-density helium plasmas in a cascade arc discharge source
B-P4	Papihra Sethi	Guru Nanak Dev Univ	2-D Nonlinear Structures In a Non-Maxwellian Strongly Coupled Dusty Plasma
B-P5	Sona Bansai	Sikh national college	Theoretical analysis of electron-acoustic shock waves in magnetized superthermal plasma with electron beam
B-P6	Xiobo Li	PKU	Research on density limit in tokamak
B-P7	Sunidhi Singla	Guru Nanak Dev Univ	Head On Collision Of Low Frequency Shock Waves In Quantum Dusty Plasma
B-P8	Rupinder Kaur	Guru Nanak Dev Univ	Interaction Of Electron Acoustic Waves In Relativistic Quantum Plasmas
B-P9	Xiao-Juan Wang	Dalian University of Technology	Directional drift and merging of focal spots in nonlinear evolution of the current filamentation instability
B-P10	Si Thu Htun	Mandalay Technological Univ	Fundamental Studies for Electrical Properties of Dielectric Barrier Discharge Plasma with Different Positioning Electrodes at Different Pulsed Voltages
B-P11	Thijs van der Gaag	Tokyo institute of Technology	Determination of arbitrary EEDF by continuum spectrum analysis of atmospheric-pressure plasma using a genetic algorithm
B-P12	Bo-long Zhu	USTC	Excitation and Evolution of Ion Waves in ECR Plasma
B-P13	Guodong Yu	Zhejiang Univ.	Design of Optimized Stellarators with Simple Coils
B-P14	Takahiro Shugyo	Hiroshima Univ.	Generation of a high-density Ar plasma for plasma window applications
B-P15	Avnish Kumar Pandey	IPR	Floating sheath characteristic of a negative ion emitting electrode in electronegative plasma
B-P16	Takeharu Sugawara	Tohoku Univ.	Axial and radial momentum fluxes lost to a radial wall of a helicon plasma thruster
B-P17	Alexandra Frolov	IPP, Czech Academy of Sciences	Long-gap laboratory atmospheric discharge
B-P18	Debjani Chatterjee	VISVA-BHARATI	Generation of wakefields and EM solitons in a relativistic degenerate plasma
B-P19	Surendra Kumar Jain SK	Govt. College Dhoplur	Ion-acoustic Solitary wave in superthermal plasmas with two electron temperature distribution
B-P20	Jitendra Kumar Chawla JKC	Govt. Girls College Banswara	Small amplitude ion acoustic solitary wave in negative ion plasma with superthermal electron

B-P11: cancel (09.10)

B-4 [Dusty plasma, Chair: Lin I]		16:30-18:30, Nov. 5, Acacia	
B-I9	Weili Fan	Hebei Univ.	Self-organized pattern formation in dielectric barrier discharge and kinetic simulations
B-I10	Modhuchandra Laishram	USTC	A dusty plasma model for characteristics of vortices in Jupiter's atmosphere
B-I11	Yan Feng	Soochow Univ.	Shear modulus of 2D dusty plasma solids
B-I12	Khare Avinash	Central Univ. Sikkim	Phase transitions in gravitational dusty plasmas
B-O3	Hao-Wei Hu	NCU	Structural rearrangements in confinement-induced layering of quenched dusty plasma liquids

B-5 [Numerical methods and simulations, Chair: Zhihong Lin]		14:00-16:00, Nov. 6, Acacia	
B-I13	Jianyuan Xiao	USTC	Structure-preserving Geometric Particle-in-Cell Algorithms
B-I14	Akira Kageyama	Kobe Univ.	4-D Street View: Movie-based visualization method for HPC
B-I15	Daniele Bonfiglio	Consorzio RFX	Nonlinear MHD modelling of helical self-organization in the RFP: effect of a realistic boundary and predictions for RFX-mod2
B-I16	Pallavi Trivedi	IPR	Kinetic Eulerian Simulation of Electrostatic Phase Space Vortices (PSVs) In A Driven-Dissipative

			Vlasov-Poisson System
B-O4	Abid Ali Abid	USTC	Electrostatic solitary structures in an electron beam-plasmas using 1-D particle in cell simulation

B-6 [Simulations and Experiments on transport, Chair: Richard Sydora ]			16:30-18:30, Nov. 6, Acacia
B-I17	Zhihong Lin	UC Irvine	Verification and Validation of Integrated Simulation of Energetic Particles in Toroidal Plasmas
B-I18	Rui Ke	SWIP	Observation of energetic particle transport via passive beam emission spectroscopy diagnostic system on HL-2A tokamak
B-I19	Kenneth Gentle	Univ. Texas	The Nonlinearly Saturated State of Strong Interchange Turbulence
B-I20	Weiwen Xiao	ZJU	Experimental research on particle transport in Tokamak plasmas
B-O5	Sita Sundar	IIT Madras	Influence of collisions on wake due to grain in non-Maxwellian plasmas

B-7 [Basic plasma experiments, Chair: Frederic Skiff ]			14:00-16:00, Nov. 7, Acacia
B-I21	Shunjiro Shinohara	TUAT	Development of Electrodeless Thruster using High-Density Helicon Plasma Sources
B-I22	Kazunori Takahashi	Tohoku Univ.	Many aspects of plasma expansion physics in the magnetic nozzle and space applications
B-I23	Seong Ling Yap	Univ. Malaya	Optimization of deuteron beam yield in a low-energy dense plasma focus device
B-I24	Hiroshi Tanabe	University of Tokyo	Full-2D imaging measurement of ion heating/transport process during high field merging experiment in TS-6
B-O6	Lei Chang	Sichuan Univ.	Plasma instability of magnetically enhanced vacuum arc thruster

B-8 [Diagnostics, Chair: Kazunori Takahashi ]			16:30-18:30, Nov. 7, Acacia
B-I25	Yang Yang	Fudan Univ.	High resolution x-ray spectroscopy of Tungsten and Molybdenum for fusion diagnostic
B-I26	Mohammed Koubiti	Aix-Marseil Univ.	Reviewing spectroscopic techniques used for divertor plasmas of magnetic fusion devices
B-I27	Jinbang Yuan	SWIP	Gas Puff Imaging Measurements During Resonant Magnetic Perturbations on HL-2A Tokamak
B-I28	Chunfeng Dong	SWIP	Estimation of tungsten influx rate and study of edge tungsten behavior based on the observation of EUV line emissions from W6+ ions in HL-2A

B-9 [Waves and plasmas (II), Chair: Shunjiro Shinohara ]			8:00-10:00, Nov. 8, Acacia
<del>B-I29</del>	<del>Nareshpal Singh Saini</del>	<del>Guru Nanak Dev Univ.</del>	<del>Interaction of solitons and shocks in dusty plasmas</del>
B-I30	Shogo Isayama	NCU	Underlying mechanisms in the dynamic profile formation of high-density helicon plasma
B-I31	Chengran Du	Donghua University	Study of wave spectra of square-lattice domains in a disordered q2D binary complex plasma
B-O7	Garima Arora	IPR	Excitation of stationary structures in a flowing dusty plasma
B-O8	Neelanjan Buzarbaruah	IPR	Interaction of Charged particles in an Inertial Electrostatic Confinement device

B-I29 cancel

## 2.4 Applied Plasma Physics [Invited 30 min, oral 15min]

A-1 [Plasma Agriculture, Chair: Hirotaka Toyoda]			14:00-16:00, Nov. 4, Birch
A-I1	Kazunori Koga	Kyushu Univ. /NINS	Impact of Atmospheric Pressure Plasma Irradiation to Seeds on Agricultural Productivity
A-I2	Hiroshi Hashizume	Nagoya University	Improvement of growth and yield of rice plants with plasma treatment
A-I3	F. Huang	China Agricultural Univ.	Different patterns during particle growth process in an rf discharge dusty plasma system
A-O1	Jiao Jiao Zhang	Southwest Univ.	Non-thermal DBD plasma regulates chicken Sertoli cell proliferation via AMPK-mTOR signaling pathway
A-O2	Cheng Feng	Soochow Univ.	The effect of APGD plasma treatment on silk fabric

A-2 [Plasma Medicine, Chair: Feng Huang]			16:30-18:30, Nov. 4, Birch
A-I4	<del>Michael Keidar</del>	<del>George Washington Univ.</del>	<del>Adaptive plasmas for biomedicine</del>
A-I5	Zilan Xiong	HUST	Cold Atmospheric Plasma (CAP) Treatment of Onychomycosis: Application and Mechanism
A-I20	Se Youn Moon	Chonbuk National University	Atmospheric pressure plasma surface modification: from surface treatment to thin film deposition
A-O3	<del>G.P. Panta</del>	<del>Kathmandu Univ.</del>	<del>Atmospheric Pressure Co-axial Cylindrical Dielectric Barrier Discharge Ozone Generation For Water Treatment Applications</del>
A-O4	Naoyuki Iwata	Meijyo Univ.	Evolution of chemical composition in radical-activated water for one month

A-I4, A-O3 cancelled

A-3 [Applied plasma poster session]			14:00-16:00, Nov. 5, Foyer
A-P1	Peiyu Ji	Soochow University	Fabrication of vertically-oriented graphene using helicon wave plasma chemical vapor deposition
A-P2	JianQiao Li	USTC	Simulation of a novel reactor for plasma pyrolysis of hydrocarbons to prepare nano-carbon materials
A-P3	Dai Zhang	Fudan University	Fabrication of graphene-based plasmonic nanostructure using argon plasma
A-P4	Yuan Hao	Kyushu Univ.	Effects of Pressure on Characteristics of a-Si:H Films Desosited using Multi-Hollow Discharge Plasma CVD
A-P5	Yue Chen	USTC	Si-B-N Ternary Films on Mg-Li Alloys
A-P6	Takashi Kanki	Japan Coast Guard Academy	Trajectory simulations of negative ions for developing novel plasma processing
A-P7	Asahi Kani	Meijo University	Effect of radical assist using atmospheric pressure plasma jet for synthesis of zinc oxide thin film by mist CVD
A-P8 (PD)	Hokuto Sekine	The University of Tokyo	Experimental observation of Ion behavior in an Inductive Radio- frequency Plasma Accelerator
A-P9 (PD)	Sobhy Ghalab	Jouf University	Characterization of 50 Hz Dielectric Barrier Discharge Plasma Actuator Operating in Atmospheric pressure

A-4 [DBD Discharge, Chair: Young-Hoon Song]			16:30-18:30, Nov. 5, Birch
A-I6	D.P. Subedi	Kathmandu Univ.	Optical Characterization of Atmospheric Pressure Dielectric Barrier Discharge (DBD) in Air Using Transparent Electrode
A-I7	Ryuta Ichiki	Oita Univ.	Nitrogen doping technique with dielectric barrier discharge under high temperature
A-I8	Cheng Zhang	Institute of Electrical Engineering, CAS	The discharge propagation and the evolution of electric field and surface charge in nanosecond-pulse surface dielectric barrier discharge
A-I9	R.B. Tyata	Khwopa College of Engineering	Surface Modification of Polymers and Textiles by Atmospheric Pressure Argon Glow Discharge

A-5 [Plasma Source, Chair: Wonho Choe]			14:00-16:00, Nov. 6, Birch
A-I10	<del>Hirotaka Toyoda</del>	<del>Nagoya Univ.</del>	<del>One dimensionally long scale atmospheric pressure plasma for large area surface treatment</del>
A-I11	Shinya Kumagai	Meijo Univ.	Plasma-on-Chip: A micro device for irradiating single cells with non-thermal atmospheric pressure plasma
A-I12	Shuqun Wu	Nanjing University of aeronautics and astronautics	High-electron-density microplasmas generated inside capillaries
A-I13	D.N. Ruzic	Univ. of Illinois	Advanced Low Temperature Processes at the University of Illinois

Toyoda moved to plenary, A-I13 to be given by Daniel Andruczyk

A-6 [Plasma Diagnostics, Chair: Hai-Xing Wang]			16:30-18:30, Nov. 6, Birch
A-I14	Keigo Takeda (U40 winner)	Meijo Univ.	Electrical, optical, and physicochemical behaviors of atmospheric pressure plasma jet generated in open air
A-I15	Wonho Choe	KAIST	Tomography-based 2D plasma imaging for low and high temperature large-scale plasmas
A-I16	Hiroshi Akatsuka	TIT	Optical emission spectroscopic (OES) analysis of electron temperature and density in atmospheric-pressure non-equilibrium argon plasmas
A-O7	Yan Yang	Soochow Univ.	Preparation and properties of longevity-enhanced high-quality Al <sub>2</sub> O <sub>3</sub> and its composite Al <sub>2</sub> O <sub>3</sub> /Er <sub>2</sub> O <sub>3</sub> TPB coatings

A-7 [Nano Material, Chair: Daniel Andruczyk]			14:00-16:00, Nov. 7, Birch
A-I17	Makoto Kambara	The University of Tokyo	High throughput production of silicon nanorod from powder feedstock by plasma flash evaporation
A-I18	Suresh Sharma	Delhi Technological University	Effect of Process Parameters on the Growth and Field Emission Properties of Graphene -Carbon Nanotube Composite
A-O8	Zhongshan Lu	USTC	Effect of hydrogen/carbon ratio on graphene synthesis using magnetically stabilized gliding arc discharge
A-O9	Dongning Li	USTC	Continuous synthesis of graphene nano-flakes by non-thermal plasma with a magnetically rotating arc at atmospheric pressure
A-O10	Xianhui Chen	USTC	Effect of hydrogen addition and temperature on morphology of thermal Ar/C <sub>2</sub> H <sub>2</sub> plasma synthesized carbon nanomaterials
A-O15	Xiaoyu Zhang	Kyushu Univ.	Effect of carbon sources on the formation of carbon-coated silicon nanoparticles by induction thermal plasma

A-8 [Low pressure discharge, Chair: R. Boswell]			16:30-18:30, Nov. 7, Birch
A-I19	Alejandro Alvarez Laguna	Ecole Polytechnique, Palaiseau	Fluid and hybrid modeling of low-temperature plasmas at low pressure
A-O11	Hokuto Sekine	The University of Tokyo	Experimental Identification of Azimuthal Induced Current and Ion Acceleration in an Inductive RF Plasma Thruster
A-O12	Jiali Chen	Soochow University	Preparation of N-doped diamond-like carbon films by helicon wave plasma chemical vapor deposition

A-I20 (Moon) moved to A2

A-9 [Thermal plasmas, Chair: Jin-Xiu Ma]			8:00-10:00, Nov. 8, Birch
A-I21	Manabu Tanaka	Kyushu University	Generation of innovative thermal plasma with diode-rectification technique
A-I22	Hai-Xing Wang	Beihang University	Chemical non-equilibrium simulation of arc attachment on anode of a high-intensity transferred arc
A-O13	He-Ping Li	Tsinghua University	Research progress on the characterization and modulation of high-pressure gas discharge plasmas
A-O14	Zihan Pan	USTC	The effects of particle groups vapor in arc plasma



## 2.5 Laser Plasma Physics [LPL:40min, Invited 30min, oral 15 min]

LSP-1 (semi-plenary) [Laser semi-plenary-1, Chair: Kunioki Mima ] 14:00-16:00, Nov. 4, Fenghua3			
LPL-1	Ryosuke Kodama	Osaka Univ.	Exploration of high energy density science in various scales of structures with high power lasers
LPL-2	Chuan S. Liu	Univ. of Maryland	Raman scattering: A summary of five decades of theory, experiment and simulations
LPL-3	Dimitri Batani	Univ. of Bordeaux	Progress in shock ignition

LSP-2 [Laser semi-plenary-2, Chair: Yutong Li] 16:30-18:30, Nov. 4, Fenghua3			
LPL-4	Min Chen (U40winner)	SJTU	Recent progresses on high quality and staged laser wakefield acceleration at SJTU
LPL-5	Ke Lan	IAPCM	Progress in spherical hohlraum studies and experimental campaign on high energy laser facilities in China
LPL-6	Yasuaki Kishimoto	Kyoto Univ.	Generation and application of self-organized high energy density plasma produced by the interaction between high intensity laser and structured medium

L-1 [Relativistic Laser , Chair: Chang Hee Nam ] 14:00-16:00, Nov. 5, Fenghua3			
L-I1	Liming Chen	IOP, CAS	Ultrahigh charge electron acceleration from solid target
L-I2	Yuji Fukuda	QST	Quasimonoenergetic proton bunch via interactions of micron-scale hydrogen cluster targets with PW-class laser pulses
L-I3	Amol Holkundkar	Birla Institute of Technology and Science	Higher harmonics and attosecond pulse generation by laser interaction with atomic clusters via Thomson scattering
L-I4	Ki Hong Pae	GIST	Generation of a high-density high-energy proton jet from the interaction of an ultra-intense laser pulse with a thin solid target

L-2 [High Energy Density Physics, Chair: Masakatsu Murakami ] 14:00-16:00, Nov. 5, Maple			
L-I5	Claire Michaut	Université de la Côte d'Azur	Numerical Simulations of High-Mach Number Astrophysical Radiative Flows with HADES
L-I6	Guang-yue Hu	USTC	Laboratory exploration of astrophysical outflow morphology regulated by magnetized disk wind
L-I7	Hui Chen	LLNL	Review of New Results on Laser produced MeV Electron Positron Pair Experiments
L-I8	Youichi Sakawa	Osaka Univ.	Ion acceleration by high-intensity laser-driven collisionless electrostatic shock

L-I7 cancel

L-3 [ Relativistic Laser , Chair: Yuji Fukuda] 16:30-18:30, Nov. 5, Fenghua3			
L-I9	Hamad Ahmed	Queen's Univ. Belfast	Accelerator quality beams of high-energy protons guided by intense-laser driven helical coils
L-I10	Akifumi Yogo	Osaka Univ.	Developments of laser neutron source and diagnostics in Japan
L-I11	Kitae Lee	KAERI	Generation of quasi-monoenergetic ion spectra from layered targets irradiated by an ultraintense laser pulse
L-O1	Olivier Zabiolle	Amplitude Laser Group	Towards high repetition rate ultra-intense lasers, latest developments at Amplitude Laser

L-4 [High Energy Density Physics, Chair: Youichi Sakawa] 16:30-18:30, Nov. 5, Maple			
L-I12	Dominik Kraus	Helmholtz-Zentrum Dresden-Rossendorf	Ionization dynamics in CH plasmas at Gbar pressures
L-I13	Mrityunjay Kundu	IPR	Short pulse laser cluster interaction: unification of resonances
L-O2	Taiwu Huang	Shenzhen Technology Univ.	Control of laser-driven compact ion sources using plasma fibers
L-O3	Atur Kumar	IPR	Excitation of magnetosonic solitons in with high power, pulsed CO2 laser in an overdense gas-jet target
L-O4	Bao Du	IAPCM	Overcoming the forest-effect in probing the Weibel instability generated electric and magnetic fields from proton radiography

L-5 [ Laser Fusion, Chair: Ke Lan ] 14:00-16:00, Nov. 6, Fenghua3			
L-I14	Haifeng Liu	IAPCM	Equation of state in wide regime for Hydrogen: Construction and Validation
L-I15	Hideo Nagatomo	Osaka Univ.	An optimum design of a cone-inserted target implosion for reactor scale Fast Ignition
L-I16	Hong-bo Cai	IAPCM	Study of the kinetic effects in indirect-drive inertial confinement fusion hohlraums
L-I17	Feng Wang	Laser Fusion Research Center	Progress of ICF Diagnostic techniques and experimental results based on Shenguang laser facility in China

L-6 [Relativistic Laser, Chair: Kitae Lee] 14:00-16:00, Nov. 6, Maple			
L-I18	Masakatsu Murakami	Osaka Univ.	Relativistic proton emission from ultrahigh-energy-density nanosphere generated by micro-bubble implosion
L-I19	Wei Lu	Tsinghua Univ.	Ultrafast Intense laser technology and plasma based accelerator research at Tsinghua University
L-I20	Domenico Doria	Extreme Light Infrastructure - Nuclear Physics	Extreme laser-matter interaction investigation at ELI - Nuclear Physics
L-I21	Qing Jia	USTC	Magnetized plasma based q-plate for generation of ultraintense optical vortices

L-7 [Laser Fusion, Chair: Michel Koenig ] 16:30-18:30, Nov. 6, Fenghua3			
L-I22	Keisuke Shigemori	Osaka Univ.	The role of hot electrons on ultrahigh pressure generation relevant to shock ignition conditions
L-I23	Xiaohu Yang	National Univ. of Defense Technology	Transport of ultra-intense laser-driven fast electrons in dense plasmas
L-I24	Leejin Bae	GIST	Investigation of relativistic electron transport in solid targets irradiated by ultrahigh intensity laser pulses
L-O5	Hui Cao	IAPCM	Laser repointing scheme for spherical hohlraum with 6 laser entrance holes on the SG Facility and the National Ignition Facility
L-O6	Kai Li	IAPCM	Escape of $\alpha$ -particle from hot-spot for inertial confinement fusion

L-8 [Relativistic Laser, Chair: Sudip Sengupta ] 16:30-18:30, Nov. 6, Maple			
L-I25	Min Chen (U40winner)	SJTU	Recent progresses on high quality and staged laser wakefield acceleration at SJTU
L-I26	Alexander Pirozhkov	QST	BISER at the keV spectral range
L-I27	Wenchao Yan	ELI-Beamlines, IoP, ASCR	Inverse Compton X/ $\gamma$ Source Based on Laser Wake-Field Accelerator
L-O6	Sandeep Kumar	Lovely Professional University Phagwara	Self Action Effects of Multi Gaussian Laser Beams in Thermal Quantum Plasma

L-O6 S. Kumar cancel, L-I25 moved to Laser semi-plenary (LPL-4).

L-9 [Laser plasma poster session ] 14:00-16:00, Nov. 7, Foyer			
L-P1	Jiahao Wang	Hiroshima Univ.	Lithium-like aluminum ion recombination plasma X-ray laser at 15.5nm
L-P2	Seong Geun Lee	GIST	Characterization of Laser-induced Ion Acceleration by Modulation of Spectrum Generated during Laser-Plasma Interaction
L-P3	Prakash Chand Singhadiya	Govt. College Kaladera	Small amplitude of ion-acoustic soliton in magnetized plasma with nonthermal electrons

L-10 [Relativistic Laser, Chair: Min Chen] 16:30-18:30, Nov. 7, Fenghua3			
L-I28	Frédéric Pérez	LULI	The electromagnetic PIC code Smilei: physics, performance and highlights
L-I29	Bengt Eliasson	Univ. of Strathclyde	Vlasov simulations of relativistic Raman and Compton instabilities
L-I30	Sudip Sengupta	IPR	Spatio-temporal evolution of Buneman instability: A Particle-in-Cell simulation study
L-O7	Dong Wu	Zhejiang Univ.	Relativistic intense beam solid interactions: a ‘comprehensive’ simulation framework
L-O8	Ratan Bera	IPR	Effect of transverse dimensions on the driver beam dynamics and transformer ratio in plasma wakefield acceleration

L-I29, L-O8: cancel

L-11 [High Energy Density Physics , Chair: Claire Michaut ] 16:30-18:30, Nov. 7, Maple			
L-I31	Taichi Morita	Kyusyu Univ.	Laser astrophysics experiments for studying collisionless shock and magnetic reconnection
L-I32	Amit Dattatraya Lad	Tata Institute of Fundamental Research	Two-Dimensional (2-D), Femtosecond Resolved High Resolution Doppler Spectrometry for Spatio-Temporal Mapping of Hot-Dense Intense Laser Produced Plasma
L-I33	Chang Gao	Peking Univ.	Self-energy shift and energy band theory for warm dense matter
L-O9	M. Yano (U30 winner)	Osaka University	Possibility for observing Hawking-like effects via the interaction of multi-PW class laser pulses with plasmas
L-O10	Xiaofei Shen (U30 winner)	Peking University	Ionization-stabilized Laser Ion Radiation Pressure Acceleration

L-12 [Laser fusion& HEDP, Chair: Hongbo Cai] 8:00-10:00, Nov. 8, Mahogany			
L-I34	Peter Amendt	LLNL	High-efficiency rugby-shaped hohlraum designs for driving large gas-filled capsules on the NIF

<b>L-I35</b>	Dong Yang	Research Center of Laser Fusion	Laser Plasma Instability in Indirect-Drive Inertial Confinement Fusion on Shengguang Laser Facilities
<b>L-I36</b>	Rui Yan	USTC	Laser Plasma Instabilities at Large-Angle Oblique Laser Incidence
<b>L-I37</b>	Yoshitaka Mori	GPI	Present status of pellet injection system for repetitive inertial confinement fusion experiments

<b>L-13 [High Energy Density Physics , Chair: Jian Zheng ] 8:00-10:00, Nov. 8, Maple</b>			
<b>L-I38</b>	Takayoshi Sano	Osaka Univ.	Laser-plasma interaction in overdense plasmas under strong magnetic fields
<b>L-I39</b>	Paul Mabey	LULI	Towards higher resolution X-ray radiography using lithium fluoride detectors
<b>L-I40</b>	Guoqian Liao	Rutherford Appleton Laboratory	Intense tunable terahertz bursts from picosecond laser-foil interactions
<b>L-I41</b>	Wenpeng Wang	SIOM, CAS	Optical manipulation of particle beam by relativistic vortex cutter

## 2.6 Space& Geomagnetism Plasma Physics [Invited 30 min, Oral 15min]

SG-1 [Waves and Turbulence I, Chair: Bruce Tsurutani]			14:00-16:00, Nov. 4, Cypress2
SG-I1	Roberto Bruno	INAF-IAPS	Observing turbulence in the solar wind from fluid to kinetic scales
SG-I2	Jiansen He	Peking University	Spectra of dissipation and dispersion measures in space plasma kinetic turbulence at kinetic scales
SG-I3	Vipin K Yadav	SPL/VSSC/ISRO	Plasma waves around comets
	Discussions		

SG-2 [Waves and Turbulence II, Chair: Tohru Hada]			16:30-18:30, Nov. 4, Cypress2
SG-I4	Bruce Tsurutani	CALTECH	The detection and consequences of coherent electromagnetic plasma waves
SG-I5	Quanqi Shi	Shandong Univ.	Magnetic cavities in space plasmas: from MHD to kinetic scale
SG-I6	Naritoshi Kitamura	Univ. of Tokyo	Direct measurements of two-way wave-particle energy transfer in a collisionless space plasma
	Discussions		

SG-3 [Waves and Turbulence III, Chair: Yoshiharu Omura]			14:00-16:00, Nov. 5, Cypress2
SG-I7	Yuto Katoh	Tohoku Univ.	Simulation study of the whistler-mode chorus generation in the Earth's inner magnetosphere
SG-I8	Xinliang Gao	USTC	Multiband chorus waves in Earth's magnetosphere
SG-I9	Xin Tao	USTC	Nonlinear dynamics of electrons in excitation of whistler waves with adiabatic and non-adiabatic frequency chirping
SG-I10	Zhigang Yuan	Wuhan Univ.	Simultaneous trapping of EMIC and MS waves by background plasmas

SG-4 [Magnetosphere, Chair: Quanming Lu]			16:30-18:30, Nov. 5, Cypress2
SG-I11	Kanako Seki	Univ. of Tokyo	Roles of interaction between the ULF waves and energetic particles in acceleration of relativistic electrons in the Earth's inner magnetosphere
SG-I12	Binbin Ni	Wuhan Univ.	Formation and evolution of radiation belt electron reversed energy spectra
SG-I13	Tomo-Hiko Watanabe	Nagoya Univ.	Spontaneous excitation of auroral structures and Alfvénic turbulence
SG-O1	Suping Duan	NSSC, CAS	Conjunction observations of energetic oxygen ions O <sup>+</sup> accumulated in the sequential flux ropes in the high-altitude cusp
	Discussions		

SG-5 [Space Plasma I, Chair: Gurbax Lakhina]			14:00-16:00, Nov. 6, Cypress2
SG-I14	Seiji Zenitani	Kobe Univ.	Boris-type particle solvers in particle-in-cell (PIC) simulation
SG-I15	Xuzhi Zhou	Peking Univ.	Nonlinear drift resonance between charged particles and ultra-low frequency waves
SG-I16	Tohru Hada	Kyushu Univ.	Anomalous transport and acceleration of cosmic rays in the presence of MHD turbulence
SG-O2	Kirollos Girgis	Kyushu Univ.	Geomagnetic storm effects on proton flux in South Atlantic Anomaly
	Discussions		

SG-6 [Space Plasma II, Chair: Tomo-Hiko Watanabe]			16:30-18:30, Nov. 6, Cypress2
SG-I17	Zhongwei Yang	NSSC, CAS	Analysis of energy spectra measured by New Horizons: PIC simulation results versus observations in the environment of Pluto
SG-I18	Shuichi Matsukiyo	Kyushu Univ.	Kinetic radial structure of heliospheric boundary
SG-I19	Fumiko Otsuka	NIT,Kurume College	Self-consistent simulation of field-aligned ion beams and upstream waves in quasi-parallel collisionless shock
SG-O3	Qingsong Feng	IAPCM	Superthermal electron generation by two-stage acceleration of backward and forward stimulated Raman scattering in high electron density region
	Discussions		

SG-7 [Chair: X.H. Deng, Space Poster]			14:00-16:00, Nov. 7, Foyer
SG-P1	Xiancai Yu	USTC	Non-ideal electric field observed in the separatrix region of a magnetotail reconnection Event
SG-P2	Kai Fan	USTC	The effects of thermal electrons on whistler-mode waves excited by anisotropic hot

			electrons: Linear theory and 2-D PIC simulations
SG-P3	Shimou Wang	USTC	Anisotropic electron distributions and whistler waves in a series of the flux transfer events at the magnetopause
SG-P4	Huayue Chen	USTC	Statistical analysis of relativistic electron precipitation in the magnetosphere from POES observations
SG-P5	Guoqing Zhao	Luoyang Normal Univ	Study on electromagnetic cyclotron waves in the solar wind
SG-P6	Lican Shan	IGG, CAS	Observation study of low frequency waves at Venus and Mars
SG-P7 (PD)	Jiwoo Kim	Chungnam National University	Preferential Propagation of Equatorial Noise in Earth's Inner Magnetosphere: Event Study and PIC Simulations
SG-P8	Chuanyi Tu	Peking University	New observations and new thoughts on solar wind turbulence

SG-8 [Magnetic Reconnection I, Chair: Seiji Zenitani] 16:30-18:30, Nov. 7, Cypress2			
SG-I20	Meng Zhou	Nanchang Univ.	MMS observations of electron diffusion regions in the Earth's magnetosphere
SG-I21	Shiyong Huang	Wuhan Univ.	Observations of flux ropes associated with magnetic reconnection in the Earth's magnetosphere
SG-I22	Rongsheng Wang (U40 winner)	USTC	Interaction of magnetic flux ropes: in situ evidence
SG-O4	Kui Jiang	Wuhan Univ.	The role of upper hybrid wave playing in magnetotail reconnection electron diffusion region
	Discussions		

SG-9 [Magnetic Reconnection II, Chair: Meng Zhou] 8:00-10:00, Nov. 8, Cypress2			
SG-I23	Keizo Fujimoto	Beihai Univ.	Large-scale energy conversion of magnetic reconnection in collisionless plasma
SG-I24	Zhaojin Rong	IGG, CAS	A new mechanism for the flapping motions of Earth's magnetotail current sheet
SG-O5	Yongyung Yi	Nanchang Univ.	Particle-in-cell simulation of energy conversion during multiple X-lines reconnection
SG-O6	Hengyan Man	Nanchang Univ.	In situ observation of magnetic reconnection with a large guide field at the boundary of a flux rope
	Discussions		



### 2.7 Solar & Astro Plasma Physics [Invited 30 min, Oral 15 min]

SA-1 [Particle Acceleration, Chair: Hui Tian ]			14:00-16:00, Nov. 4, Cypress1
SA-I1	Quanming Lu	USTC	Formation of power law spectra of energetic electrons during coalescence of magnetic islands
SA-I2	Jiro Shimoda	Tohoku Univ.	Blamer lines as diagnostics of collisionless shocks: acceleration of non-thermal particles, the nature of shock precursor and ion-electron temperature ratio
SA-I3	Dawei Yuan	NAO-CAS	Experiment revealing the characteristics of Weibel instability with optical diagnostics
SA-O1	Siming Liu	PMO	Origin of Galactic Cosmic Rays

SA-2 [ Magnetic Reconnection/Jet, Chair: Ryoji Matsumoto ]			16:30-18:30, Nov. 4, Cypress1
SA-I4	Lei Ni	Yunnan Observatories	Magnetic Reconnection in the partially ionized low solar atmosphere
SA-I5	Muni Zhou	MIT	Magnetic island merger as a mechanism for inverse magnetic energy transfer
SA-I6	Li Feng	Purple Mountain Observatory (PMO)	Understand solar eruptions with the Advanced Space-based Solar Observatory (ASO-S) mission
SA-O2	Hui Tian (U40 winner)	Peking University	UV Bursts: Magnetic Reconnection in the Lower Solar Atmosphere
SA-O3	<del>Hamid Saleem</del>	<del>IST</del>	<del>Theoretical model for creation of jet-like flows in plasma and neutral fluid</del>

#### SA-O3 cancel

SA-3 [Turbulence, Chair: Alex Lazarian ]			14:00-16:00, Nov. 5, Cypress1
SA-I7	Siyao Xu	Univ. of Wisconsin	Turbulent dynamo in a weakly ionized medium
SA-I8	Minping Wan	Southern University of Science and Technology	Energy cascades and dissipation in kinetic plasma turbulence
SA-I9	Kun-Han Lee	Academia Sinica	Voyager 1 observations of interstellar electron and magnetic turbulence spectra
SA-O4	Madhurjya P Bora	Gauhati University	MRI induced turbulence and nonlinear structures in an protoplanetary disks

SA-4 [Heating, Chair: Simin Liu ]			16:30-18:30, Nov. 5, Cypress1
SA-I10	Fabio Sattin	Consorzio RFX	Relevant heating of the solar corona by quenching Alfvén waves: a result of adiabaticity breakdown
SA-I11	Lulu Zhao	Florida Institute of Technology	Modeling the precipitation and releasing pattern of solar energetic particles in the solar corona magnetic fields
SA-I12	Linghua Wang	Peking Univ.	Solar Energetic Electron Events
SA-O5	Liu Yang	Peking Univ.	On the relation between in situ properties and coronal source regions of ~0.1-200 keV electrons at quiet times

SA-5 [Sun, Chair: Yang Guo ]			14:00-16:00, Nov. 6, Cypress1
SA-I13	Piyali Chatterjee	Indian Institute of Astrophysics	Understanding solar atmospheric dynamics through MHD simulations
SA-I14	Rui Liu	USTC	Buildup of Magnetic Flux Ropes toward Eruptions in the Solar Corona
SA-O6	Ramesh Chandra	Kumaun Univ.	EUV Wave Event and their Mode Conversion
SA-O7	Yikang Wang	Univ. of Tokyo	Fast and slow MHD waves in heating solar magnetic chromosphere by realistic simulation
SA-O8	Sudip Mandal (U30 winner)	Max Planck Institute for Solar System Research	Reflection Of Propagating Slow Magneto-acoustic Waves In Hot Coronal Loops

SA-6 [Sun, Chair: Rui Liu ]			16:30-18:30, Nov. 6, Cypress1
SA-I15	Yang Guo	Nanjing Univ.	Solar Magnetic Flux Rope Eruption Simulated by a Data-driven Magnetohydrodynamic Model
SA-I16	Takafumi Kaneko	Nagoya Univ.	Evolution of dynamic internal structures of prominence in reconnection-condensation scenario
SA-I17	Ling Chen	Purple Mountain Observatory	The resonant and nonresonant instability of Kinetic Alfvén Waves driven by fast electron beams in the beam-return current system
SA-O9	<del>Donald Melrose</del>	<del>Univ. of Sydney</del>	<del>Weak beam instability revisited for solar radio bursts</del>
SA-O10	Mefdi Yousefzadeh	Shandong Univ.	Velocity distribution of energetic particles within large-scale twisted and untwisted loops in the corona

#### SA-O9 cancel.

SA-7 [Solar and Astro plasma poster session ]			14:00-16:00, Nov. 7, Foyer
SA-P1	Neha Srivastava	Univ. of Mumbai	Role of anomalous diffusivity on plasmoid formation in magnetic reconnection
SA-P2	Fabio Sattin	Consorzio RFX	Relevant heating of the solar corona by quenching Alfvén waves: a result of adiabaticity breakdown

SA-8 [Solar Wind, Chair: Lulu Zhao ]			16:30-18:30, Nov. 7, Cypress1
SA-I18	Jungjoon Seough	Korea Astronomy and Space Science Institute	What regulates temperature anisotropy in the expanding solar wind?
SA-I19	Kyungguk Min	Korea Astronomy and Space Science Institute	Potential Role of Mirror and Ion Bernstein Instabilities on scattering of Pickup Ions in the Outer Heliosheath

SA-I20	Liang Xiang	Purple Mountain Observatory	Evolution of proton beams in the solar wind
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SA-9 [No session ]	8:00-10:00, Nov. 8, Cypress1
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## 2.8 Magnetic Fusion Plasma Physics

MF-1 [Model Edge, Chair: Xuru Duan]			14:00-16:00, Nov. 4, Fenghua1
MF-I1	Dan Thomas	GA	Closure, Detachment, and Energy Dissipation Studies Using the DIII-D Small Angle Slot Divertor
MF-I2	Di Hu	Beihang University	Simulation and analysis of MHD response and radiation asymmetry after Shattered Pellet Injection in ITER plasmas
MF-I3	Nami Li	DIT	Simulations of radial electric field and divertor heat flux width using the BOUT++ transport code with drifts
MF-O1	Yiping Chen	ASIPP	Simulations of SOL-Divertor Plasmas in EAST by using SOLPS-ITER
MF-O2	W. Shen	ASIPP	Hybrid simulation of fishbone instabilities with reversed safety factor profile
MF-O3	Liang Chen	ASIPP	Experimental study of the H-L power threshold and transition dynamics in EAST under RF heating and carbon (dominant) divertor operation

MF-2 [Exp/Operation, Chair: Juhyung Kim ]			14:00-16:00, Nov. 4, Fenghua2
MF-I25	Zhanhui Wang	SWIP	Self-consistent multi-scale integrated modeling of ELM mitigation due to SMBI
MF-I26	Jinil Chung	NFRI	Experimental studies on advanced operation scenarios in KSTAR
MF-I27	Francesca Poli	PPPL	Integrated modeling: successes, challenges and path forward to ensure the success of ITER
MF-O25	Nick Walkden	CCFE	MAST Upgrade status and first results
MF-O21	Linge Zang	SWIP	Observation of a beam-driven low-frequency mode in Heliotron J
MF-O27	Hao Liu	SWIP	Progress of linear plasma device LEAD in SWIP

**O26 and O21 are swapped.**

MF-3 [Exp Edge, Chair: Matthew Hole ]			16:30-18:30, Nov. 4, Fenghua1
MF-I4	Guizhong Zuo	ASIPP	Improvement of plasma performance with flowing liquid lithium PFCs in EAST
MF-I5	Mike Dunne	MPI for Plasma Physics	Pedestal physics for burning plasmas at AUG
MF-I6	Dmitry Borodin	EUROfusion JET	Plasma-surface interaction studies in preparation of JET-ILW TT and DT operation: insight and extrapolation to ITER by the ERO2.0 modelling
MF-O4	T. Macwan	IPR	Effect of Electrode Biasing Generated Radial Electric Field on Edge Electrostatic Fluctuations and Runaway Electrons in ADITYA-U Tokamak
MF-O5	Manni Jia	ASIPP	Three dimensional divertor flux control using optimized dynamic resonant magnetic perturbations
MF-O6	Kedong Li	ASIPP	Radiative divertor study for partial detachment in the grassy ELM H-mode in EAST

MF-4 [Confine, SS, Chair: Andrea Garofalo]			16:30-18:30, Nov. 4, Fenghua2
MF-I28	Lei Qi	NFRI	Gyrokinetic Simulation Study of Zonal Flow Staircases in a KSTAR L-mode Plasma
MF-I29	Kenji Imadera	Kyoto Univ.	Effect of kinetic electron dynamics on ITB formation in flux-driven ITG/TEM turbulence
MF-I30	Bo Lyu	ASIPP	Overview of experimental investigation of LHCD's effect on plasma rotation on EAST
MF-O28	Lei Xue	SWIP	Integrated scenario analysis for HL-2M high-performance operation
MF-O29	Jiale Chen	ASIPP	Progress in Design of CFETR Plasma
MF-O30	Shuanghui Hu	Guizhou Univ.	Resonant Excitations of Alfvén Modes in Burning Plasmas

MF-5 [Exp confin., Chair: Jerome Bucalossi]			14:00-16:00, Nov. 5, Fenghua1
<del>MF-I7</del>	<del>Henri Weisen</del>	<del>EPFL &amp; JET</del>	<del>Isotope dependence of energy, momentum and particle confinement in tokamaks</del>
MF-I8	Linming Shao	ASIPP	Recent progress of L-H transition physics and H-mode power threshold studies in EAST
MF-I9	Guosheng Xu	ASIPP	Advances in understanding high-performance small/no ELM H-mode regimes
MF-O7	Yihang Chen	SWIP	Evidence for Electron Heat Flux – Temperature Gradient Hysteresis During Modulated ECRH Experiments on the HL-2A Tokamak
MF-O8	Xuemei Zhai	ASIPP	Analysis of wave kinematics and dynamics in phase space for EAST and HL-2A plasmas
MF-O9	Wenbin Liu	Tsinghua Univ.	Observation of multiple shear layers and long-range transport events on HL-2A tokamak

**MF-I7: cancel**

MF-6 [Edge Model, Chair: Francesca Maria Poli]			14:00-16:00, Nov. 5, Fenghua2
MF-I31	Monica Spolaore	Consorzio RFX	Edge Localized Modes electromagnetic fine structure in the Scrape-Off Layer of tokamak discharges
MF-I32	Julien Dominski	PPPL	Emerging Picture on the Pedestal Dynamics and Triggering Mechanism of ELMs
MF-I33	Cameron Samuell	LLNL	Velocity Imaging for Understanding Particle Transport in the Boundary of Magnetically Confined Plasmas

MF-O31	Qian Xu	ASIPP	Simulation of carbon deposition inside gaps of castellated tungsten blocks of different shapes
MF-O32	Daniel Andruzyk	Univ. of Illinois	Liquid Lithium/Metal Research for Fusion at the University of Illinois
MF-O33	Dongrui Zhang	ASIPP	Self-consistent simulation of transport and turbulence in tokamak edge plasma by coupling SOLPS-ITER and BOUT++

MF-7 [Model Confine, Chair: Max Austin]			16:30-18:30, Nov. 5, Fenghua1
MF-I10	Tim Happel	Max Planck IPP	Overview of ASDEX Upgrade I-mode results and extrapolation to future devices
MF-I11	Jerome Bucalossi	CEA	First experiments in WEST with tungsten plasma facing components
MF-I12	Guoyao Zheng	SWIP	Integrated analysis of core and edge for HL-2M operation
MF-O10	Fulvio Zonca	ENEA	Gyrokinetic transport theory of phase space zonal structures
MF-O23	Ding Li	IOP, CAS	On Theoretical Research for Nonlinear Tearing Mode
MF-O12	Emi Narita	QST	Quasilinear turbulent transport modeling with semi-empirical and mixing-length-like saturation rules

MF-O23 and MF-O11 are swapped.

MF-8 [Chair: Jinil Chung, Model Stab.]			16:30-18:40, Nov. 5, Fenghua2
MF-I34	Samuele Mazzi	Aix-Marseille University	Impact of fast ions on microturbulence and transport: expectations for JT-60SA and ITER
MF-I35	Fabio Riva	UKAEA	Comparison of three-dimensional plasma edge turbulence simulations in realistic double null tokamak geometry with experimental observations
MF-I36	M. Kikuchi	Osaka Univ.	Advances in physics basis of L-mode edge negative triangularity tokamak reactor
MF-I37	Sadruddin Benkadda	Aix-Marseille University	A New Artificial Intelligence Approach of Electromagnetic Self-organization and Multiscale Physics in Magnetized Plasma
MF-O34	Yi Zhang	Peking Univ.	Shear-dynamo and the excitation of kink modes
MF-O35	Tianyang Xia	ASIPP	Simulations on the transient heat fluxes for the RF wave heating H-mode on EAST

MF-I37 cancel

MF-9 [Chair: Huishan Cai, MF poster session]			14:00-16:00, Nov. 6, Foyer
MF-P1	Jilei Hou	ASIPP	Density compensation and stored energy recovery in RMP suppressed-ELM H-mode plasmas using pellet fueling on EAST
MF-P2	Huajie Wang	SWIP	Briefly Introduction of LEAD and Some Recently Experimental Results
MF-P3	Bo Shi	Army Academy of Artillery and Air Defense	Suppressing the appearance of tearing mode during increasing plasma current
MF-P4	Heng Lan	ASIPP	Observation of electromagnetic fluctuations correlating with the inter-ELM pedestal evolution on EAST
MF-P5	Ying He	HUST	Suppressing the appearance of tearing mode during increasing plasma current
MF-P6	Sanjib Sarkar	ASIPP	Fast imaging of intrinsic dust events in experimental advanced superconducting tokamak
MF-P7	Minmin Xue	ASIPP	Fiber optical current sensor (FOCS) for plasma current on EAST tokamak
MF-P8	Zhichen Feng	Zhejiang Univ.	Design of a new stellarator with linked mirrors
MF-P11	Wilkie Choi	PPPL	Simultaneous injection of lower hybrid power at two frequencies on EAST
MF-P12	Emi Narita	QST	Quasilinear turbulent transport modeling with semi-empirical and mixing-length-like saturation rules
MF-P13	Tatsuya Yokoyama	Univ. of Tokyo	Applied study of feature extraction using exhaustive search on high-beta disruption in JT-60U
MF-P14	Xiaoxue He	DUT/SWIP	Simulations of particle and heat fluxes in an ELMy H-mode discharge on HL-2A
MF-P15	Nong Xiang	ASIPP	Fast electron effects on plasma-wall interactions on EAST tokamak
MF-P16	Valeria Fusco	ENEA	Tearing mode study with the MARS code: from an analytical approach to a comparison with experiments in FTU tokamak
MF-P17	Guanqi Dong	SWIP	Edge stability analysis for a DIII-D EHO plasma
MF-P18	Chengxi Zhou	HUST	Simulation Analysis of Triangularity Effects for CFETR Plasmas
MF-P19	Yueheng Huang	Shenzhen Univ.	Modeling for high temperature scenario on EAST
MF-P20	Chunyun Gan	ASIPP	Modeling of ICRF coupling with realistic antenna structure on EAST

MF-10 [Chair: Kenji Imadera, Confinement]			14:00-16:00, Nov. 6, Fenghua2
MF-I38	Jun Cheng	SJTU	Experimental study of the interaction between oscillation flows and turbulence across a transition to H mode in edge plasma
MF-I39	Jeronimo Garcia	CEA	On the validity of scale invariance and power laws for describing and predicting

			confined plasmas
MF-I40	Andrea Garofalo	GA	The high poloidal beta path towards steady state tokamak fusion
MF-O36	Laurie Porte	EPFL	Experimental Studies of Negative Triangularity on TCV
MF-O37	Yanqing Huang	ASIPP	The energy analysis of the nonlinear simulation about the EAST coherent mode
MF-O38	Mingkun Han	DUT	Multiple Ion Temperature Gradient Modes and Impurity Turbulent Transport in Transport Barriers

MF-11 [Chair: Jeronimo Garcia, Model/ Diagnostics]			16:30-18:30, Nov. 6, Fenghua1
MF-I13	Matthew Hole	ANU	The impact of anisotropy on ITER scenarios and ELMs
MF-I14	Juhyung Kim	NFRI	Effects of resonant magnetic perturbations on nonlinear resistive reduced MHD simulations
MF-I15	Jo-Han Yu	UC-Davis	Revolution in Microwave Imaging of Magnetic Fusion Plasmas
MF-O13	Yilun Zhu	UC-Davis	Deep analysis of millimeter-wave imaging diagnostics data
MF-O14	Mutia Meireni	Aix-Marseille/ Diponegoro Univ.	Spectroscopic Diagnostic on Magnetic Fusion Plasmas – Application to ITER
MF-O15	Bili Ling	ASIPP	Predesign of 1mm microwave interferometer with high stability and wide dynamic range for EAST steady-state plasmas

MF-12 [Chair: Guoliang Xiao, MF poster 2]			16:30-18:30, Nov. 6, Foyer
MF-P9	D.Bonfiglio	Consorzio RFX	Nonlinear MHD modelling of helical self-organization in the RFX:effect of a realistic boundary and predictions for RFX-mod2
MF-P10	M. Furukawa	Tottori Univ.	Free-boundary stability analysis of tokamak plasmas by ERMHDT (Eigenvalue code for Resistive MHD in Toroidal geometry)
MF-P21	Wen He	HUST	Intrinsic current drive by electromagnetic electron drift wave turbulence in tokamak pedestal region
MF-P22	Haotian Huang	HUST	The effects of resonant magnetic perturbations on the orbit losses of energetic ions
MF-P23	Zhipeng Liu	XJTU	Simulation of heat flux during ELMs for the CFETR hybrid scenario using BOUT++ framework
MF-P24	Jing Ou	ASIPP	Ion energy distribution at the wall of a radio-frequency plasma containing energetic ions
MF-P25	Hanhui Li	HUST	Effects of non-axisymmetric magnetic field on neoclassical transport and ambipolar electric field in tokamak plasmas
MF-P26	Hui Li	SWIP	Characteristics of particle transport due to TEM and ITG turbulence in tokamak plasmas
MF-P27	Ningfei Chen	Zhejiang Univ.	Effects of energetic-particle-induced geodesic acoustic mode on ion-temperature gradient driven mode stability
MF-P28	Lei Ye	ASIPP	Re-splitting $\delta f$ method for gyrokinetic simulation of tokamak plasmas
MF-P29	Shizhao Wei	Zhejiang Univ.	Nonlinear coupling of toroidal Alfvén eigenmode and reverse shear Alfvén eigenmode in Tokamak plasmas
MF-P30	Shahab-ud-din Khan	national tokamak fusion program	Theoretical Calculation and Simulation Studies of Magnetic field points descriptions for the consequences of plasma energy
MF-P31	Hassan Muhammad	ASIPP	Magnetic field points descriptions for Asymmetric forces on the EAST plasma in Kink mode ( $n=1$ , $m=1$ )
MF-P32 (PD)	Yongfu Shi	SWIP	Integrated simulations of CFETR steady-state scenario with METIS code
MF-P33 (PD)	Jixing Yang	USTC	M3D-K Simulations of High Frequency Fishbone Instability in Tokamak Plasmas
MF-P34 (PD)	JC Li	Nankai Univ.	Effects of trapped electrons and impurity ions on ITG modes in reversed-field pinch plasmas
MF-P35	Zhisong Qu (U30 winner)	ANU	Energetic Geodesic Acoustic Modes Associated with Two-Stream-like Instabilities

MF-13 [Chair: Cameron Samuel, Edge/Divertor.]			14:00-16:00, Nov. 7, Fenghua1
MF-I16	Guoliang Xiao	SWIP	The Mechanism of ELM Mitigation with Different External Source Input on HL-2A Tokamak
MF-I17	Qiping Yuan	ASIPP	Achievements of active feedback control of divertor heat load in EAST Plasma Control System
MF-I18	Zhongshi Yang	ASIPP	Experiments and simulations for power exhaust by impurity seeding on EAST and future devices
MF-O16	Feifei Nian	ASIPP	Modelling of heat flux deposition on the CFETR first wall with impurity seeding
MF-O17	Hai Xie	ASIPP	Core-edge simulations of impurity behaviour for the CFETR advanced scenarios
MF-O18	Hailong Du	SWIP	Modeling of detachment bifurcation in HL-2M with X-Divertor by SOLPS

MF-14 [Chair: Fatima Ebrahimi, Stability]			14:00-16:00, Nov. 7, Fenghua2
MF-I41	Devon Battaglia	PPPL	Enhanced Pedestal H-mode Regime on NSTX
MF-I42	Zheng Yan	University Wisconsin	Role of turbulence and shear flow dynamics in the L-H transition and power threshold scaling
MF-I43	Arash Ashourvan	PPPL	Formation of a Staircase Pedestal in High Confinement DIII-D Plasmas with RMP Suppressed Edge-Localized-Modes
MF-O39	Yaowei Yu	ASIPP	Fuel recycling control for long pulse H-mode operation in EAST superconducting tokamak
MF-O40	Gianluca Pucella	ENEA	<del>Evaluation of the effective charge profile and analysis of the impurity mixture influence on the current density and safety factor profiles on JET</del>
MF-O41	Tatsuya Yokoyama	Univ. of Tokyo	Data-driven study of high-beta disruption prediction in JT-60U using exhaustive search

**MF-O40 cancel**

MF-15 [Exp. Confinement, Chair: Wulyu Zhong]			16:30-18:30, Nov. 7, Fenghua1
MF-I19	Zhen Sun	PPPL	Real-time impurity injection for ELM and H-mode pedestal control in EAST
MF-I20	Max Austin	University of Texas	Confinement and stability in DIII-D negative triangularity discharges and relevance for reactor devices
MF-I21	Erik Gilson	PPPL	Initial Experimental Results on Boron and Boron Nitride Powder Injection Into KSTAR Discharges
MF-O19	Ting Wu	SWIP	Effect of RMP on boundary plasma turbulence and transport on J-TEXT tokamak
MF-O20	Chu Zhou	USTC	Investigation of the Kelvin-Helmholtz instability in EAST
MF-O26	Jiaxian Li	SWIP	Preliminary analysis of breakdown and startup conditions for the first plasma of HL-2M

**MF-O21 and O26 swap.**

MF-16 [Waves, Chair: Mitsuru Kikuchi]			16:30-18:30, Nov. 7, Fenghua2
MF-I44	Ivan Novikau	Max Planck IPP	Nonlinear dynamics of energetic-particle driven geodesic acoustic modes in ASDEX Upgrade
MF-I45	Hao Wang	NIFS	Nonlinear simulation of energetic particle driven geodesic acoustic mode channeling in LHD
MF-I46	Fatima Ebrahimi	PPPL	Plasmoid-mediated magnetic reconnection: From space to fusion plasmas
MF-O42	Yahui Wang	ASIPP	Radiative damping of RSAEs in NOVA-K code
MF-O43	Xingquan Wu	ASIPP	The drift kinetic effects of the magnetic coherent mode in the H-mode pedestal of EAST
MF-O44	Wei Zhang	Max Planck IPP	Interaction between turbulence and ICRF

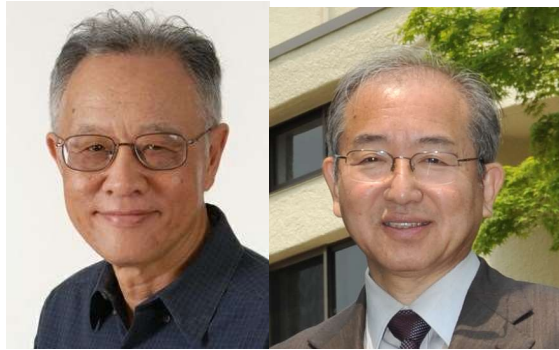
MF-17 [Stability/Waves, Chair: Guosheng Xu]			8:00-10:00, Nov. 8, Cypress1
MF-I22	Peiwan Shi	SWIP	Destabilization of beta induced and reversed shear Alfvén eigenmode on HL-2A tokamak
MF-I23	Liming Yu	SWIP	Observation of High-frequency Chirping Modes Driven by Energetic Ions on HL-2A
MF-I24	Wei Chen (U40 winner)	SWIP	Nonlinear Dynamics of Alfvén Eigenmodes in HL-2A NBI Plasmas
MF-O22	Jervis R. Mendonca	IPR	Simulations Of Internal Kink(m=1) Modes in a two fluid regime
MF-O11	Xue Bai	SWIP	Destabilization of resistive plasma resistive wall mode by anisotropic thermal transport
MF-O24	Hooman Hezaveh Hesar Maskan	ANU	Modelling of a long range chirping global Alfvén eigenmode in tokamaks

MF-18 [no session]			8:00-10:00, Nov. 8, Fenghua2



## [18] Prize and Award

### 1. 2019 S. Chandrasekhar Prize of Plasma Physics:



Professor Liu Chen and Kazunari Shibata (5<sup>th</sup> Laureates)

**Liu Chen :** For his pioneering and seminal theoretical contributions to physics of both magnetic fusion and space plasmas; including, notably, geomagnetic pulsation theory, nonlinear gyrokinetic theory, Alfvén wave heating and kinetic Alfvén waves, toroidal Alfvén eigenmodes, "fishbone" and energetic particle modes, and excitation of zonal flow in toroidal plasmas.

**Kazunari Shibata:** For his pioneering and seminal contributions in solar and astrophysical magnetohydrodynamics (MHD), including the first non-steady MHD numerical simulations of astrophysical jets from magnetic accretion disks, the discovery of coronal X-ray jets and chromospheric anemone jets in the solar atmosphere and theories and numerical simulations for solar jets and mass ejections based on the MHD reconnection mechanism, his pioneering proposal of plasmoid-induced-reconnection and fractal reconnection, and his suggestion that superflares, observed on Sun-like stars, may also occur on the Sun.

Selection committee: Donald Melrose (Chair), Sanae I. Itoh, Yasushi Ono, Ding Li, Guosheng Xu, Yong-Seok Hwang, Jungyeon Cho, Robert Dewar, Ravindra Kumar, G.C. Anupama, Lin Ni Hau, Kerchung Shaing

### 2. 2019 AAPPS-DPP Innovation Prize:



Professor Roderick W. Boswell (First Laureate)

**Roderick William Boswell:** *“For wide-ranging contributions to fundamental plasma physics and applications to terrestrial and space industries, in particular for discovery and invention of high-density low pressure radiofrequency plasma source called a ‘helicon plasma source’, with broad and significant impact on low-temperature plasma physics, plasma processing for microelectronics represented by plasma etching and focused ion beam source, and plasma thrusters, in which he exerted leadership to pioneer new scientific research fields and industrial applications.”*

Selection committee: Masaharu Shiratani (Chair), Yi-Kang Pu, Jing Zhang, Rikizo Hatakeyama, Tony Murphy, Jenq-Gong Duh, Jang-Hsing Hsieh, Abhijit Sen, Sudeep Bhattacharjee, Wonho Choe, Jung-Sik Yoon

### 3. 2019 AAPPS-DPP Young Researcher Award (U40):

- 1) **Min Chen** (Laser): For his original contributions on ionization injection and stage coupling for laser plasma wakefield acceleration towards high quality and high energy electron beams and tunable X-ray sources.
- 2) **Wei Chen** (MF-Experiment): For his outstanding contributions to the experimental discoveries of energetic-electron-driven beta Alfvén eigenmode as well as nonlinear interactions between toroidal Alfvén eigenmode and tearing mode in the HL-2A tokamak.
- 3) **Hui Tian** (Solar): For his significant contributions to the generation and characteristics of small-scale magnetic activities, as well as their role in mass and energy transport that occurs in the magnetohydrodynamic environment of the solar atmosphere.
- 4) **Rongsheng Wang** (Space): For his outstanding contributions to the elucidation of the roles of flux ropes in energy dissipation and electron acceleration during collisionless magnetic reconnection.
- 5) **Zhiyong Oiu** (F-Theory): For his fundamental contributions to the understanding of stability and radial structures of energetic-particle-driven geodesic acoustic modes, and nonlinear parametric interactions of zonal structures, drift wave turbulence and Alfvén eigenmodes.
- 6) **Keigo Takeda** (Applied): For his outstanding contributions to understanding the physicochemical reactions of reactive and energetic species both in the gas phase and on the surface of plasma processes with nano-fabrication as well as bio-medical applications.

Selection committee: Liu Chen (Chair), Abhijit Sen, Shih-hung Chen, Dominique Escande, Dong-hun Lee, Hogun Jhang, Manuel Garcia-Munoz

### 4. AAPPS-DPP U30 Doctoral Scientist/Student Award:

- 1) Sudip Mandal (India Inst. Astro., / Max Planck Institute): "For the significant contribution in The understanding of various properties of propagating slow magneto-acoustic waves in hot coronal loops"
- 2) Xiaofei Shen (Peking Univ.): "For the significant contribution in Understanding the stabilization dynamics of laser-driven radiation pressure acceleration of ions "
- 3) Zhisong Qu (ANU): "For significant contribution to Energetic Geodesic Acoustic Modes Associated with Two-Stream-like Instabilities in Tokamak Plasmas "
- 4) Masahiro Yano (Osaka Univ.): "For the significant contribution in Possibility for observing Hawking-like effects via the interaction of multi-PW class laser pulses with under dense plasmas"
- 5) Rupak Mukherjee (IPR): "For the significant contribution in Recurrence in three dimensional magnetohydrodynamic plasma"
- 6) Weixin Gao (HUST): "For the significant contribution in Impurity transport driven by parallel velocity shear turbulence in hydrogen isotope plasmas"

Selection committee: Prof. Kunioki Mima (Chair), TS Hahm, Ding Li, R. Kodama, David Pfefferie, R. Ganesh, F. Cheng

### 5. AAPPS-DPP 2019 Poster Prize:

Selection committee: Xuru Duan (Chair)

## [19] IOC Members

**IOC Chair:** Yuanxi Wan (CN), I-HAC, Professor, ASIPP/USTC

### IOC Co-chairs:

Mitsuru Kikuchi (JP), AAPPS-DPP Chair/CEO, RMPP chair, Baonian Wan (CN), DPP Chair-Elect, Director, ASIPP, Abhijit Sen (IN), I-HAC co-chair, Professor, IPP, Hyeon Park (KR), I-HAC, Professor, UNIST

**General PC Co-chair:** Xuru Duan (CN), DPP Vice Chair, Vice President, SWIP

**AAPPS-DPP I-HAC chair:** Liu Chen (CN), I-HAC chair, Professor, Zhejiang University

**APS-DPP chair:** David Newman, Professor, University of Alaska

**EPS-DPP chair:** Richard Dendy (EU), Professor, University of Warwick

**LOC-Chair:** Ge Zhuang (CN), Professor, USTC

**JPS (plasma chair):** Hideo Sugama (JP), Professor, Kyushu University

**CPS-DPP chair:** Xiaogang Wang (CN), Professor, HIT

**KPS-DPP Chair:** Dong-o JEON (KR), Institute for Basic Science

**Plasma Science SI, President:** Prabal K Chattopadhyay (IN), Professor, IPR

**Astronomical Society of Japan, President:** Kazunari Shibata, I-HAC, Professor, Kyoto University

**Chinese Astronomical Society, President:** Yipeng Jing, Professor, Shanghai Jiaotong University

**SGEPSS, President:** Yasuharu Omura (JP), Professor, Kyoto University

**Chinese society of Space research, Director general:** Ji Wu (CN), Professor, National Space Science, CAS

**Laser Society of Japan, President:** Yoshiaki Kato (JP), President, GPI

**JSPF, President:** Zensho Yoshida (JP), Fundamental PC chair, Professor, the University of Tokyo

**JSAP-DPE, Chair:** Mineo Hiramatsu (JP), Professor, Meijiyo University

**AAAPT, President:** Rajdeep S. Rawat (SG), DPP Vice Chair, Associate Professor, NTU

**Australian ITER Forum, Chair:** Matthew Hole (AU), DPP chief secretary, A. Professor, ANU

### Representatives from fields

#### Cross-Disciplinary:

Patrick Diamond (US/CN), I-HAC, CD PC chair, distinguished Professor, UCSD

#### Fundamental:

Akira Hasegawa (JP), I-HAC, Em Professor, Osaka University, Robert Dewar (AU), I-HAC, RMPP-HE, Em Professor, ANU, Sanae I. Itoh (JP), I-HAC, Em Professor, Kyushu University, Chio Zong Cheng (TW), I-HAC, Chandrasekhar Laureate, Em. Professor, NCKU, ChuanSheng Liu (US), I-HAC, Professor, University of Maryland, Yasushi Ono (JP), RMPP-AE, Professor, the University of Tokyo, Guoyang Fu (CN), Professor & Director, Zhejiang University, Taik Soo Hahm (KR), RMPP-CE, Professor, SNU, Fulvio Zonca (IT), Prof./Dr., ENEA& Zhejiang University, Dominique Escande (FR), Professor, Aix-Marseille Universite, CNRS, PIIM

#### Basic:

Tomohiko Watanabe (JP), Basic PC chair, RMPP-AE, Professor, Nagoya University, Lin I (TW), Basic PC co-chair, I-HAC, Academician & Professor, NCU, Shunjiro Shinohara (JP), Basic PC co-chair, Professor, TUAT, Shin-Hung Chen (TW), DPP Vice Chair, Professor, NCU, Horoshi Akatsuka (JP), Professor, TITECH, Rajaraman Ganesh (IN), RMPP-AE, Professor, IPR, A A Mamun (BG), RMPP-AE, Professor, Jahangirnagar University, Yaming Zou (CN), Professor, Modern Physics Institute, Fudan University, Kwo Ray Chu (TW), Professor, National Taiwan University, Chiow-San Wong (MY), I-HAC, Em. Professor, University of Malaya, Osamu Ishihara (JP), I-HAC, President, Chubu University, Choong-Seock Chang (US), Chief Scientist, Princeton Plasma Physics Laboratory, Cary Forrest (US), Professor/Director, University of Wisconsin, Yoshiharu Uesugi (JP), Professor, Kanazawa University, Mike Mauel (US), Professor, Columbia University

#### Applied:

Yi-Kang Pu (CN), Applied PC chair, RMPP-CE, Professor, Tsinghua University, Wonho Choe (KO), Applied PC co-chair, Professor, KAIST, Masaharu Shiratani (JP), Applied PC co-chair, DPP vice chair, Kyushu University, Roderick Boswell (AU), I-HAC, Applied PC co-chair, RMPP-CE, Professor, ANU, Jung-Sik Yoon (KR), DPP Vice Chair, National Fusion Research Institute, Rikizo Hatakeyama (JP), I-HAC, Em Professor, Tohoku University, Francis F. Chen (US), I-HAC, Professor, UCLA, Masaru Hori (JP), Professor, Graduate school of Engineering, Nagoya University, Paul Kim Ho Chu (HK), Chair Professor, City University of Hong Kong, Suk Jae Yoo (KO), I-HAC, President, National Fusion Research Institute, Ashish Gangul (IN), Professor, Indian Institute of Technology, Deepak Prasad Subedi (NP), Director of Research, RDC, Kathmandu University, Teck Yong Tou (MY), Multimedia University

#### Laser and Particle Beams:

Jie Zhang (CN), Laser PC Chair, Professor, IOP, Kunioki Mima (JP), I-HAC, Laser PC co-chair, Professor, GPI, Zheng Ming Sheng (CN), Laser PC co-chair, Professor, SJTU, G. Ravindra Kumar (In), Laser PC co-chair, Professor, Tata Institute of Fundamental research, Hyyong Suk (KR), Laser PC co-chair, Professor, Chair, GIST, Amita Das (IN), DPP Vice Chair, RMPP-AE, Professor, IPR, Ryosuke Kodama (JP), Professor&Director, ILE, Graduate School of Engineering, Osaka University, Hitoki Yoneda (JP): Professor & Director, Institute of Laser Science, University of Electric Comm., Tetsuya Kawachi (JP): Director General, KPRI, QST, Chang Hee Nam (KO), I-HAC, Laser PC co-chair, Professor & Director, GIST, Xian-Tu He (CN), I-HAC, Academician, Peking University, Heinrich Hora (AU), I-HAC, Professor, University of New South Wales, Toshiki Tajima (US), I-HAC, Professor, UCI, Sylvie Jacquemot (EU), Professor, Ecole Polytechnique, E. Michael Campbell (US): Professor, LLE, University of Rochester, Hideaki Takabe (DE), Professor/Dr., HZDR, Kazuo Tanaka (RO), Professor/Scientific Director, ELI-NP, Youichi Sakawa (JP), Professor, Osaka University

#### Space and Geomagnetism:

Xiaohua Deng (CN), DPP Vice Chair, Vice President, Nanchang University, Ryouichi Fujii (JP), I-HAC, President, Research Organization of Information Sciences, Zuyin Pu (CN), I-HAC, Professor, Peking University, Lou-Chuang Lee (TW), I-HAC, Chandrasekhar Laureate, Academician, Academia Sinica, Lin Ni Hau (TW), Professor, National Central University, Bimla Buti (IN), I-HAC, Founder & President, Buti Foundation, Don Melrose (AU), I-HAC, Chandrasekhar Laureate, Em. Professor, University of Sydney, Iver Cairns (AU), Professor, University of Sydney, Dong-Hun Lee (KR), I-HAC, RMPP-AE, Professor, Kyung Hee University, Yu Lin (US), RMPP-CE, Professor, Auburn University, Masahiro Hoshino (JP), Professor, University of Tokyo Toru Hada (JP), Professor, Kyushu University, Bruce Tsurutani (US), Jet Propulsion Laboratory, California Institute of Technology, Daniel Baker (US), Professor, University of Colorado LASP, Boulder

#### Solar/Astro:

Ryoji Matsumoto (JP), SA PC Chair, DPP Vice chair, RMPP AE, Professor, Chiba University, Peng-Fei Chen (CN), SA PC co-Chair, RMPP-AE, Professor, Nanjing University, Jungyeon Cho (KR), SA PC co-Chair, Chungnam National University, Hantao Ji (US), SA PC co-Chair, Professor, Princeton University, Arnab Rai Chaudhuri (IN), I-HAC, Professor, Department of Physics, Indian Institute of Science, Dipankar Banerjee (IN), Professor, Indian Institute of Astrophysics, Kanya Kusano (JP), Professor&Director, Nagoya University, Dongsu Ryu (KO), Professor, Department of Physics, UNIST, Jingxiu Wang (CN), I-HAC, Professor, UCAS, Kazuo Makishima (JP), Em. Professor, the University of Tokyo, Rony Keppens (DE), Professor, KU Leuven, Joerg Buechner (DE), Professor, Max-Planck-Institute for Sonnensystemforschung

### Magnetic Fusion:

Yasuaki Kishimoto (JP), MF PC-co-chair, Professor& director of IAE, Kyoto University, Min Xu (CN), MF PC-co-chair, Professor, SWIP, Akio Komori (JP), I-HAC, President, National Institutes of Natural Science, Tomohiro Morisaki (JP), Executive director, Large Helical Device (LHD), NIFS, NINS, Sibylle Guenter (EU), Scientific director, Max Planck Institute for plasma physics, Anthony Donne (EU), Programme Manager for the consortium EUROfusion., Alain Becoulet (EU), Head of Institute, Institute for Research on Magnetic Fusion, CEA/ Cadarache, Tony Taylor (US), Vice president, GA, USA, Francois Waelbloeck (US), Director, Institute for Fusion Study, University of Texas, Ian Chapman (UK), Director, CCFE, Takaaki Fujita (JP), Professor, Nagoya University, Won Namkung(KR), Em. Professor, POSTECH, Yutaka Kamada (JP), Deputy director General, Naka, QST, Joaquin Sanchez (ES), Director, CIEMAT, Piero Martin (IT), Professor, University of Padova and Consorzio RFX, Ambrogio Fasoli (CH), Professor/Director, SPC, EPFL, Dennis Whyte (US), Professor, MIT, Richard Hawryluk (US), Associate Director for Fusion, PPPL, Hiroshi Yamada (JP), Fellow Professor, NIFS, Kenichi Kurihara (JP), Director General, Naka, QST, Takeo Muroga (JP), Deputy Director General, NIFS, Yong Liu (CN), I-HAC, President, SWIP, Kun Lu (CN), ASIPP, Keeman Kim (KR), NFRI, Aparajita Mukharjee (IN), IPR, Yican Wu (CN), Director, INEST, Hartmut Zohm (DE), Member of Board of Director, Max Planck Institute for Plasma Physics, Shashank Chaturvedi (IN), Director, Institute for Plasma Research

### [20] Scientific Program Committee

General PC chair: M. Kikuchi (AAPS-DPP Chair), Co-chair: Xuru Duan (AAPS-DPP Vice-Chair)

There will be plenary session and parallel sessions from 8 sub-disciplines; CD and F sessions have focused topics.

1. **Cross-disciplinary** (Focused Topics):  
Chair; Patrik Diamond (UCSD),  
Co-chairs: Lu Wang (HUST), Yusuke Kosuga (Kyushu U), Xavier Garbet CEA), David Hughes (Leeds U), Shigeo Yoden(Kyoto U)
2. **Fundamental plasma physics** (Focused Topics):  
Chair; Zensho Yoshida (U Tokyo)  
Co-chairs Robert Dewar (ANU), T.S. Hahm (SNU), Hong Qin (USTC), Phillip Morrison (U Texas)
3. **Basic plasma:**  
Chair; Tomohiko Watanabe (Nagoya U)  
Co-chairs; Lin I (NCU), S. Shinohara (TUAT), Prabal Chattopadhyay (IPR), Ding Li (IOP-CAS)  
Members: Feng Yan (Soochow University), JinLin Xie (USTC), A.A. Mamun (GK), Kenichi Nagaoka (NIFS), Atsushi Okamoto (Nagoya University), Yasushi Ono (U. Tokyo), Frank Jenko (IPP-MPI)
4. **Applied plasma:**  
Chair; Yikang Pu (Tsinghua U)  
Co-chairs; Wonho Choe (KAIST), Masaharu Shiratani (Kyushu U), Rod. Boswell (ANU)  
Members: Tony Murphy (CSIRO), Kazunori Takahashi (Tohoku U), Kch-Chyang Leou (National Tsinghua U), Tsanko Vaskov Tsankov (Ruhr-University Bochum), Svetlana Starikovskaia (Ecole Polytechnique), Mikhail Shneider (Princeton University)
5. **Laser plasma:**  
Chair; Jie Zhang (SJTU)  
Co-chairs; K. Mima (GPI), ZM Sheng (SJTU), Hyyong Suk (GIST), Ravindra Kumar (TIFR)  
Members: Jian Zheng (USTC), Yongtao Zhao (XJTU), Ke Lan (IAPCM), Yuji Fukuda (QST), Youichi Sakawa (Osaka U), Chang Hee Nam (GIST), Kitae Lee (KAERI), Sudip Sengupta (IPR), M. Krishnamurthy (TIFR), Michel Koenig (LULI), Chikang Li (MIT), Stefan Weber (ELI), Frederico Fiuza (SLAC)
6. **Space & Geomag plasma:**  
Chair; Xiaohua Deng (Nanchang U)  
Co-Chairs; Tohru Hada (Kyushu U), Lakhina Gurbax(Indian Institute for Geomagnetism) ,Bruce Tsurutani (Caltech), Quanming Lu (USTC), Zhou Meng (Nanchang U), Dong-He Lee (Kyung Hee U)
7. **Solar & Astro plasma:**  
Chair; Ryoji Matsumoto (Chiba U)  
Co-chairs; Pengfei Chen(Nanjing U), Hantao Ji(Princeton U), Jungyeon Cho(Chungnam National U), Shu-ichiro Inutsuka(Nagoya U)  
Members; Kazunari Shibata (Kyoto U), Dongsu Ryu (UNIST), Feng Yuan (Shanghai Astronomical Observatory), Dipankar Banerjee (Indian Institute of Astrophysics), Pin-Gao Gu (ASIAA), Siming Liu (Purple Mountain Observatory), Hui Li (Los Alamos National Laboratory), Kyungsuk Cho (Korea Astronomy and Space Science Institute)
8. **Magnetic Fusion plasma:**  
Chair; Hyeon Park (UNIST)  
Co-chairs; Min Xu (SWIP), Y. Kishimoto (Kyoto U)  
Members; Yong-Seok Hwang (SNU), Guosheng Xu (ASIPP), Shaojie Wang (USTC), Katsumi Ida (NIFS), Takaaki Fujita (Nagoya U), Wulyu Zhong (SWIP), Abhijit Sen (IPR), Gunsu Yun (POSTECH), Siwoo Yoon (NFRI), Matthew J. Hole (ANU), Tuong Hoang(CEA), George McKee (Wisconsin/ GA), Steven A. Sabbagh (Columbia/PPPL)

### [21] Local Organizing Committee (LOC)

LOC Chair: [Ge Zhuang \(USTC\)](#)

LOC Secretary : Jinlin Xie (USTC), Zhengwei Wu (USTC)

LOC Member: Yuntao Song (ASIPP), Shaohua Dong(ASIPP), Min Xu (SWIP), Wulv Zhong (SWIP), Yuming Wang (USTC), Quanming Lu (USTC), Wandong Liu (USTC), Jinxiu Ma (USTC), Shaojie Wang (USTC), Hong Qin (USTC), Jian Zheng (USTC), Xiaodong Zhu (USTC), Xuan Sun (USTC), Xiaofang Wang (USTC), Minyou Ye (USTC), Weihong Yang (USTC), Huishan Cai (USTC), Tao Lan (USTC), Haijun Ren (USTC), Jian Liu (USTC), Adi Liu (USTC), Hong Li (USTC), Pengfei Zhang (USTC), Guangyue Hu (USTC)