

# CURRICULUM VITAE

**MD SHAHINUL ISLAM**

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## **Professional Experiences as of 11/21/2023: 6 years 11 months**

| Institution/Organization                                                              | Start Date | End Date   | Designation                           | Type of work           |
|---------------------------------------------------------------------------------------|------------|------------|---------------------------------------|------------------------|
| Oak Ridge National Laboratory,<br>Oak Ridge, TN 37830,<br>USA                         | 08/02/2021 | Continue   | Postdoctoral<br>Research<br>Associate | Research               |
| Plasma Research Center, University<br>of Tsukuba, Tsukuba, Ibaraki<br>305-8577, Japan | 04/01/2021 | 07/31/2021 | Researcher                            | Research               |
| National Institute for Fusion Science<br>(NIFS), Toki, Gifu 509-5292, Japan           | 04/01/2019 | 03/31/2021 | Center of<br>Excellence<br>Researcher | Research               |
| Plasma Research Center, University<br>of Tsukuba, Tsukuba, Ibaraki<br>305-8577, Japan | 04/01/2018 | 03/31/2019 | Researcher                            | Research               |
| Atish Dipankar University of<br>Science & Technology, Dhaka,<br>Bangladesh            | 06/12/2013 | 09/22/2014 | Lecturer                              | Teaching &<br>Research |

## **Education Qualification:**

| Degree                                | Awarding Year | University                            | Subject                                        | Grade                                     |
|---------------------------------------|---------------|---------------------------------------|------------------------------------------------|-------------------------------------------|
| Doctor of<br>Philosophy in<br>Science | 2018          | University of Tsukuba,<br>Japan       | Physics<br>(Plasma Physics)                    | Awarded<br>(Awarded with<br>Dean's award) |
| Master of Science                     | 2013          | University of Rajshahi,<br>Bangladesh | Applied Physics &<br>Electronic<br>Engineering | CGPA 4.00<br>out of 4.00                  |
| Bachelor of<br>Science                | 2011          | University of Rajshahi,<br>Bangladesh | Applied Physics &<br>Electronic<br>Engineering | CGPA 3.82<br>out of 4.00                  |

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| <b>Awards</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ol style="list-style-type: none"> <li>1. Received the <b>Dean's award</b>, Graduate School of Pure and Applied Sciences, University of Tsukuba, Tsukuba, Japan, March 23, 2018.</li> <li>2. Received the <b>best poster award</b> at the 8<sup>th</sup> Korea-Japan seminar on advance diagnostic for the steady-state fusion plasma, 24-27 August 2016, Busan, Korea.</li> <li>3. Received the <b>Japan government MEXT Scholarship</b> for Ph.D. study in the University of Tsukuba, Japan (October 2014 to March 2018).</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Microsoft software applications, including Windows, Excel, Word, and PowerPoint.</li> <li>• Numerical simulations, MATLAB, Python, and Computer programming (C, Fortran).</li> <li>• I know how to do research; summarize and present research outputs clearly in meetings/conferences and write scientific papers.</li> <li>• Ability to recognize, analyze, and solve a variety of problems.</li> <li>• I have experience working on multiple projects simultaneously and collaborating with a broad and diverse team, including experimentalists and computational colleagues, on domestic and international facilities.</li> <li>• Ability to function well in a fast-paced environment, set priorities to accomplish multiple tasks within deadlines, move rapidly from one task area to another, understanding new concepts quickly, organizing, scheduling, and coordinating work phases.</li> <li>• Strong interpersonal skills and ability to communicate effectively with a diverse team at various career stages in a range of scientific and engineering disciplines.</li> <li>• For eight years, I have been involved in performing numerical simulations in magnetic confinement plasma fusion devices to simulate heat and particle transport using 2D multi-fluid codes. I have modified these codes to include new physics model for the interpretation of experimental results.</li> <li>• I have experience with plasma simulations (multi-fluid code, Monte-Carlo code, and Particle-In-Cell code) and plasma diagnostics (Langmuir probe, Calorimeter).</li> <li>• I continually update my knowledge and am willing to learn new techniques to model and solve physics and engineering problems using computer simulations.</li> </ul> |
| <b>Oral presentations at the Conferences, Workshops: 7</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <ol style="list-style-type: none"> <li>1. <b><u>M.S. Islam</u></b>, et al., "Towards an MPEX Digital Twin: Validation studies using Proto MPEX and SOLPS ITER", 11<sup>th</sup> Annual Oak Ridge Postdoctoral Association Research Symposium, Oak Ridge National Laboratory, May 18-19, 2023, Oak Ridge, TN, US.</li> <li>2. <b><u>M.S. Islam</u></b>, et al., "Modelling of Fast Flow Liquid Lithium Divertor for a Fusion Nuclear Science Facility (FNSF) using SOLPS-ITER", the 7<sup>th</sup> International symposium on liquid metals application for fusion, 12-16 December 2022, Kasugai, Japan</li> <li>3. <b><u>M.S. Islam et al.</u></b>, "Plasma response modeling with SOLPS-ITER for liquid metal PFCs in Fusion Nuclear Science Facility (FNSF)", The 2<sup>nd</sup> US-Japan Workshop on "Power and particle control in a steady state magnetic fusion DEMO reactor by liquid metal PFCs", March 8-12, 2022, Kasugai, Japan</li> <li>4. <b><u>M.S. Islam</u></b>, et al., "Study of the Transient Behaviour of Detached Plasma during Xe Gas Injection into the D-module of GAMMA 10/PDX", The 28<sup>th</sup> International Toki Conference on Plasma and Fusion Research (<b>ITC28</b>), 5-8 NOV 2019, Toki, Japan.</li> <li>5. <b><u>M.S. Islam, et al.</u></b>, "Study of the plasma parameters in the D-module of GAMMA 10/PDX during impurity gases injection", 12<sup>th</sup> International Conference on Open Magnetic Systems for Plasma Confinement (<b>OS2018</b>), 27-31 August 2018, Tsukuba, Japan.</li> <li>6. <b><u>M.S. Islam</u></b>, et al., "Numerical Simulation Study of Plasma Behavior in the End-cell of GAMMA 10/PDX by Using a Multi-Fluid Code LINDA", the 6<sup>th</sup> International workshop on Plasma Material Interaction Facilities for Fusion Research (<b>PMIF</b>), 1-3 Nov 2017, Tsukuba, Japan.</li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

7. **M.S. Islam**, et al., “Numerical Simulation of Detached Plasma in the End-Cell of GAMMA 10/PDX for Divertor Simulation Study”, the 1<sup>st</sup> International Symposium All-about-Divertor (IADiS-1), 14- 15 October, 2016, Kyoto, Japan.

## Peer-reviewed journal papers as of 11/21/2023: 31 total, 14 first author

- **h index: 8** (<https://www.scopus.com/authid/detail.uri?authorId=57189367962> )

1. **M.S. Islam**, J.D. Lore, C. Lau, J. Rapp, “Analysing the effects of heating and gas puffing in Proto-MPEX helicon and auxiliary heated plasmas”, **Plasma Physics and Controlled Fusion**, **65** 095020 (2023).
2. **M.S. Islam**, J.D. Lore, S. Smolentsev, C.E. Kessel, “Divertor geometry modeling with the SOLPS-ITER code for reactor concepts with liquid metal divertors”, **Nuclear Materials and Energy**, **33** 101292 (2022).
3. J.D. Lore, **M.S. Islam**, C.E. Kessel, D. Curreli, R. Maingi, M. Rezazadeh, S. Smolentsev, “Simulation of Liquid Lithium Divertor Geometry using SOLPS-ITER”, **IEEE Transactions on Plasma Science**, **50** (11), 4199 (2022).
4. **M.S. Islam**, Y. Nakashima, A. Hatayama, K. Hoshino, and M. Sakamoto, “Impact of Neutral Gas Puffing on the Divertor Power Exhaust and Particle Control in GAMMA 10/PDX by the LINDA-KNMC Code”, **Contributions to Plasma Physics**, **62**, e202100141 (2022).
5. M. Yoshikawa, J. Kohagura, N. Ezumi, T. Iijima, K. Nojiri, A. Terakado, Y. Nakashima, T. Kariya, T. Numakura, M. Hirata, R. Minami, M. Sakamoto, M. Ichimura, **M.S. Islam**, Y. Shima, R. Yasuhara, I. Yamada, H. Funaba, T. Minami, N. Kenmochi, D. Kuwahara, and H.J. van der Meiden "Study of detached plasma profile in the divertor simulation experimental module of tandem mirror GAMMA 10/PDX", **AIP Advances** **11**, 125231 (2021) **(Selected as a featured article)**
6. **Md Shahinul Islam**, Yousuke Nakashima, Seiji Ishiguro, Kazuo Hoshino, Akiyoshi Hatayama, Hiroki Hasegawa, Mizuki Sakamoto, “Numerical Simulation Study of the Magnetic Flux Tube Expansion on the Divertor Plasma Parameters by the LINDA Code”, **Plasma and Fusion Research**, Vol. **16**, 2403049 (2021).
7. **M.S. Islam**, S Ishiguro, H. Hasegawa, T. Pianpanit “Study of energy loss processes during H gas puffing by the PIC simulation”, **Nuclear Materials and Energy**, Vol. **27**, 100995 (2021).
8. **Md Shahinul Islam**, Yousuke Nakashima, Takaaki Iijima, Kunpei Nojiri, Naomichi Ezumi, Masayuki Yoshikawa, Tsuyoshi Kariya, Ryutaro Minami, Mafumi Hirata, Kazuo Hoshino, Akiyoshi Hatayama, Hiroki Hasegawa, Seiji Ishiguro, Hiroto Matsuura, Mizuki Sakamoto, “Study of the transient behavior of detached plasma during Xe gas injection into the D-module of GAMMA 10/PDX”, **Plasma and Fusion Research**, Vol. **15**, 1402074 (2020). **(Selected as a featured article)**
9. **M.S. Islam**, Y. Nakashima, A. Hatayama, S Ishiguro, K Hoshino, N Ezumi, M Sakamoto, “Study of end-cell plasma parameters of GAMMA 10/PDX by the LINDA code”, **Plasma Physics and Controlled Fusion**, Vol. **61**, pp- 125005 (2019).
10. Takaaki Iijima, Toshiki Hara, Kunpei Nojiri, Akihiro Terakado, **Md Shahinul Islam**, Tsubasa Yoshimoto, Sotaro Yamashita, Naomichi Ezumi, Mizuki Sakamoto, Yousuke Nakashima, “Characteristics of Upstream and Downstream Plasma Parameters from Langmuir Probes and Visible Spectrometers in the D-Module of GAMMA 10/PDX”, **Plasma and Fusion Research**, Vol. **14**, pp- 2401156 (2019).
11. Kazuya Ichimura, Sotaro Yamashita, Yousuke Nakashima, Masakatsu Fukumoto, Mamoru Shoji, Mizuki Sakamoto, Naomichi Ezumi, **Md Shahinul ISLAM**, Akihiro Terakado, Kunpei Nojiri, Tsubasa Yoshimoto, Hiromasa Takeno, “Study on the Sensitivity of Fast Ionization Gauge in Mixture Gas of Hydrogen and Helium”, **Plasma and Fusion Research**, Vol. **14**, pp- 3405124 (2019).
12. N. Ezumi, T. Iijima, M. Sakamoto, Y. Nakashima, M. Hirata, M. Ichimura, R. Ikezoe, T. Imai, T. Kariya, I. Katanuma, J. Kohagura, R. Minami, T. Numakura, M. Yoshikawa, S. Togo, **M.S. Islam**, M. M. Islam, K. Nojiri, A. Terakado, S. Jang, Y. Kinoshita, T. Mikami1, S. Yamashita, T. Yoshimoto, T. Hara, A. Hatayama, K. Ichimura, S. Kado, S. Masuzaki, T. Nakano, N. Ohno, S. Sawada, H. Tanaka, A. Tonegawa and R. Perillo, “Synergistic effect of nitrogen and hydrogen seeding gases on

- plasma detachment in the GAMMA 10/PDX tandem mirror”, **Nuclear Fusion**, Vol. **59**, pp-066030 (2019).
13. H. Matsuura, M. Ochuchi, **M.S. Islam**, T. Iijima, T. Minami, Y. Nakashima, “Comparison of two invers heat conduction models for heat flux measurement in the GAMMA 10/PDX”, **IEEE Transactions on Plasma Science**, Vol. **47**, pp-3026-3030 (2019).
  14. **M.S. Islam**, Y. Nakashima, S. Takechi, R. Tatsumi, A. Hatayama, T. Iijima, S. Yamashita, T. Yoshimoto, T. Hara, N. Ezumi, M. Sakamoto, “Effects of the gas puffing neutral on the plasma parameters in the end-cell of GAMMA 10/PDX by using the multi-fluid code “LINDA”, **Nuclear Materials and Energy**, Vol. **18**, pp-182-187 (2019).
  15. Y. Nakashima, **M.S. Islam**, T. Iijima, M. Sakamoto, N. Ezumi, M. Yoshikawa, N. Asakuraa, M. Fukumotoa, A. Hatayamab, M. Hirata, M. Ichimura, R. Ikezoe, T. Imai, M.M. Islam, T. Kariya, J. Kohagura, S. Masuzakic, R. Minami, T. Nakanoa, K. Nojiri, T. Numakura, K. Sawadad, M. Shoji, A. Terakado, S. Togo, S. Yamashita, T. Yoshimoto, “Impact of additional plasma heating on detached plasma formation in divertor simulation experiments using the GAMMA 10/PDX tandem mirror”, **Nuclear Materials and Energy**, Vol. **18**, pp-216-221 (2019).
  16. **Md Shahinul ISLAM**, Yousuke NAKASHIMA, Akiyoshi HATAYAMA, Hiroto MATSUURA, Kazuya ICHIMURA, Takaaki IIJIMA, Takayuki YOKODO, Kunpei NOJIRI, “Measurements of the Plasma Parameters in the D-Module of GAMMA 10/PDX during Impurity Gas Kr Injection”, **Plasma and Fusion Research**, Vol. **14**, pp-2402016 (2019).
  17. Md. Maidul ISLAM, Shinji KOBAYASHI, Nobuhiro NISHINO, **Md. Shahinul ISLAM**, Takaaki IIJIMA, Masayuki YOSHIKAWA, Junko KOHAGURA, Mamoru SHOJI and Yousuke NAKASHIMA, “Sensitivity check of background plasma parameter during SMBI in the GAMMA 10 central-cell by 3-D Monte-Carlo simulations”, **Plasma and Fusion Research**, Vol. **14**, pp-2403017 (2019).
  18. Sayuri Takechi, Ryoko Tatsumi, **Md Shahinul Islam**, Kazuo Hoshino, Akiyoshi Hatayama, Yousuke Nakashima, “Analysis of Ar Impurity Transport in the Large Tandem Mirror Device GAMMA 10/PDX Plasmas”, **Plasma and Fusion Research**, Vol. **14**, pp-2403045 (2019).
  19. Kazuya ICHIMURA, Sotaro YAMASHITA, Yousuke NAKASHIMA, Masakatsu FUKUMOTO, Mamoru SHOJI, Mizuki SAKAMOTO, Naomichi EZUMI, **Md. Shahinul ISLAM**, Akihiro TERAKADO, Kunpei NOJIRI, Tsubasa YOSHIMOTO, Toshiki HARA and Hiromasa TAKENO, “Analysis on the Sensitivity of the ASDEX Type Ionization Gauge in Mixed Radiator Gases of Divertor Simulators”, **Plasma and Fusion Research**, Vol. **14**, pp- 2405029 (2019).
  20. **Md Shahinul Islam**, Yousuke Nakashima, Akiyoshi Hatayama, Kazuya Ichimura, Takaaki Iijima, Md Maidul Islam, Takayuki Yokodo, Guanyi Lee, Tsubasa Yoshimoto, Sotaro Yamashita, Naomichi Ezumi, Mizuki Sakamoto, “Investigation of E-Divertor Plasma during Simultaneous Injection of Hydrogen and Impurity Gases into GAMMA 10/PDX by Using the LINDA Code”, **Plasma and Fusion Research**, Vol. **13**, pp-3403080 (2018).
  21. Takayuki Yokodo, Yousuke Nakashima, Akiyoshi Hatayama, Takaaki Iijima, **Md Shahinul Islam**, Tsubasa Yoshimoto, Kazuya Ichimura, Md Maidul Islam, Guanyi Lee, Sotaro Yamashita, Akihiro Terakado, Kunpei Nojiri, Masayuki Yoshikawa, Junko Kohagura, Naomichi Ezumi, Mizuki Sakamoto, Tsuyoshi Imai, “Impact of the Upstream Plasma Parameters on Spectroscopic Measurement in the GAMMA 10/PDX Diveror Simulation Experiments”, **Plasma and Fusion Research**, Vol. **13**, pp-3402032 (2018).
  22. Kazuya Ichimura, Sotaro Yamashita, Yousuke Nakashima, Masakatsu Fukumoto, Mamoru Shoji, Mizuki Sakamoto, Naomichi Ezumi, Md Maidul Islam, **Md Shahinul Islam**, Takayuki Yokodo, Guanyi Lee, Akihiro Terakado, Kunpei Nojiri, Tsubasa Yoshimoto, Hiromasa Takeno, “Gas Pressure Measurements in Pure and Mixed Gases at Around 1.0 Pa by Using ASDEX Type Fast Ionization Gauge”, **Plasma and Fusion Research**, Vol. **13**, pp-3405029 (2018).
  23. **M.S. Islam**, Y. Nakashima, R. Tatsumi, A. Hatayama, M. M. Islam and T. Iijima, “Numerical simulation study towards plasma detachment in the end cell of GAMMA 10/PDX by a coupled fluid-neutral code”, **Contributions to Plasma Physics**, Vol. **58**, pp-805 (2018).
  24. **M.S. Islam**, Y. Nakashima and A. Hatayama, “Investigation of plasmas behavior during noble gas injection in the end-cell of GAMMA 10/PDX by using the multi-fluid code LINDA”, **Plasma Physics and Controlled Fusion**, Vol. **59**, pp-125010 (2017).

25. **M.S. Islam**, Y. Nakashima, A. Hatayama, K. Ichimura, M. M. Islam, K. Fukui, M. Ohuchi, T. Yokodo, G. Lee, S. Togo, N. Ezumi, M. Sakamoto and T. Imai, “Numerical simulation of detached plasma in the end-cell of GAMMA 10/PDX for divertor simulation study”, **Fusion Engineering and Design**, Vol. **125**, pp-216-221 (2017).
26. Y. Nakashima, K. Ichimura, **M.S. Islam**, M. Sakamoto, N. Ezumi, M. Hirata, M. Ichimura, R. Ikezoe, T. Imai, T. Kariya, I. Katanuma, J. Kohagura, R. Minami, T. Numakura, M. Yoshikawa, T. Iijima, M. M. Islam, K. Nojiri, K. Shimizu, A. Terakado, S. Togo, N. Asakura, M. Fukumoto, A. Hatayama, Y. Hirooka, S. Kado, H. Kubo, S. Masuzaki, H. Matsuura, T. Nakano, S. Nagata, N. Nishino, N. Ohno, A. Sagara, S. Sawada, M. Shoji, A. Tonegawa and Y. Ueda, “Recent progress of divertor simulation research using the GAMMA 10/PDX tandem Mirror”, **Nuclear Fusion**, Vol. **57**, pp-116033 (2017).
27. K. Ichimura, M. Fukumoto, M. M. Islam, **M.S. Islam**, K. Shimizu, K. Fukui, M. Ohuchi, K. Nojiri, A. Terakado, M. Yoshikawa, N. Ezumi, M. Sakamoto, and Y. Nakashima, “Measurement of neutral gas pressure in the D-module of GAMMA 10/PDX by using ASDEX type fast ionization gauge”, **Review of Scientific Instruments**, Vol. **87**, pp-11D424 (2016).
28. H. Takeda, Y. Nakashima, A. Hatayama, **M.S. Islam**, K. Ichimura, M. M. Islam, K. Shimizu, K. Fukui, M. Sakamoto and T. Imai, “Numerical Simulation Study of Plasma Flow in the GAMMA10/PDX End-cell Using a Fluid Code”, **Contributions to Plasma Physics**, Vol. **56**, pp-784-789 (2016).
29. **Md Shahinul Islam**, Yousuke Nakashima, Hiroto Matsuura, Kazuya Ichimura, Md Maidul Islam, Keita Shimizu, Kazuma Fukui, Masato Ohuchi, Kunpei Nojiri, Akihiro Terakado, Naomichi Ezumi, Mizuki Sakamoto, Tsuyoshi Imai, “Study of Heat and Particle Flux in the Case of Gas Injection in the D-Module of GAMMA10/PDX”, **Plasma and Fusion Research**, Vol. **11**, pp-2402042 (2016).
30. Kazuya Ichimura, Yousuke Nakashima, Md. Maidul Islam, **Md. Shahinul Islam**, Keita Shimizu, Kazuma Fukui, Masato Ohuchi, Mafumi Hirata, Ryuya Ikezoe, Shuhei Sumida, Masayuki YOoshikawa, Naomichi Ezumi, Mizuki Sakamoto, Makoto Ichimura and Tsuyoshi Imai, “Study of the Axial Ion Confinement Time for High Particle Flux Operations of GAMMA 10/PDX”, **Plasma and Fusion Research**, Vol. **11**, 2405045 (2016).
31. Md Maidul Islam, Yousuke Nakashima, Shinji Kobayashi, Nobuhiro Nishino, Yuichiro Nakano, Katsuhiro Hosoi, Kazuya Ichimura, **Md Shahinul Islam**, Keita Shimizu, Kazuma Fukui, Masato Ohuchi, Akihiro Terakado, Masayuki Yoshikawa, Junko Kohagura, Mafumi Hirata, Ryuya Ikezoe, Xiaolong Wang, Makoto Ichimura, Mizuki Sakamoto, Tsuyoshi Imai, “Effect of Laval Nozzle in the GAMMA 10 SMBI Experiments”, **Plasma and Fusion Research**, Vol. **11**, pp-2402053 (2016).

## Conference proceedings: 9 (as of 11/21/2023)

1. **M.S. Islam**, J.D. Lore, S. Smolentsev, C.E Kessel, and R. Maingi, “ANALYSIS AND DESIGN OF FAST FLOW LIQUID LI DIVERTOR FOR FUSION NUCLEAR SCIENCE FACILITY (FNSF) USING SOLPS-ITER”, Proceedings of the 29<sup>th</sup> IAEA-Fusion Energy Conference (**FEC2023**).
2. R. Maingi, D. Andruczyk, D. Curreli, E. Emdee, R.J. Goldston, **M.S. Islam**, C.E. Kessel, A. Khodak, E. Kolemen, J.D. Lore, D. O’Dea, B.A. Pint, R. Rizkallah, M. Romedenne, F. Saenz, S. Smolentsev, Z. Sun, B. Wynne, “Progress in a US-based Liquid Metal Plasma-Facing Component Design Activity for a Fusion Nuclear Science Facility”, Proceedings of the 29<sup>th</sup> IAEA-Fusion Energy Conference (**FEC2023**).
3. **M.S. Islam**, Y. Nakashima, S. Ishiguro, A. Hatayama, K. Hoshino, N. Ezumi, and M. Sakamoto, “Simulation of plasma and neutral particles during H gas puffing in the divertor region of GAMMA 10/PDX using the fluid and kinetic neutral code”, Proceedings of the 28<sup>th</sup> IAEA-Fusion Energy Conference (**FEC2020**), 2020.
4. **M.S. Islam**, Y. Nakashima, R. Tatsumi, A. Hatayama, K. Ichimura, M. M. Islam, K. Shimizu, K. Fukui, M. Ohuchi, T. Yokodo, G. Lee, N. Ezumi, M. Sakamoto, and T. Imai, “Study of Plasma Behavior During Impurity Injection in the End-cell of GAMMA10/PDX by Fluid Code”, **AIP Conf. Proceedings**, **1771**, 060015 (2016).
5. M. Ohuchi, Y. Nakashima, H. Matsuura, K. Ichimura, **M.S. Islam**, M. M. Islam, K. Fukui, T. Yokodo, G. Lee, N. Ezumi, M. Sakamoto, K. Tsumura, R. Minami, T. Kariya, and T. Imai, “Evaluation of heat flux from the plasma flow by using calorimeter in the GAMMA 10/PDX end-cell”, **AIP Conf. Proceedings**, **1771**, 050011 (2016).
6. M. M. Islam, Y. Nakashima, S. Kobayashi, N. Nishino, K. Hosoi, K. Ichimura, **M.S. Islam**, K. Fukui, K. Shimizu, M. Ohuchi, M. Arai, T. Yokodo, G. Lee, M. Yoshikawa, J. Kohagura, M. Hirata, R. Ikezoe, M. Ichimura, M. Sakamoto, and T. Imai, “Characteristics of SMBI Fueling with Laval Nozzle in GAMMA 10 Based on Experimental and Simulation Results”, **AIP Conf. Proceedings**, Vol. **1771**, pp-030018 (2016).
7. K. Fukui, Y. Nakashima, S. Nagata, K. Ichimura, M. M. Islam, **M.S. Islam**, K. Shimizu, M. Ohuchi, et al. “Study of beam-material interaction by using hydrogen ion beam”, **AIP Conf. Proceedings**, Vol. **1771**, pp-060011 (2016).
8. T. Yokodo, Y. Nakashima, K. Shimizu, K. Ichimura, M. M. Islam, **M.S. Islam**, K. Fukui, M. Ohuchi, A. Terakado, K. Nojiri, M. Yoshikawa, N. Ezumi, M. Sakamoto, T. Imai., “Study of the impurity transport by injecting the gas to D-module in GAMMA 10/PDX”, **AIP Conf. Proceedings**, Vol. **1771**, pp- 040007 (2016).
9. M. M. Islam, Y. Nakashima, S. Kobayashi, N. Nishino, K. Ichimura, T. Iijima, **M.S. Islam**, T. Yokodo, G. Lee, T. Yoshimoto, S. Yamashita, M. Yoshikawa, J. Kohagura, M. Hirata, R. Minami, T. Kariya, R. Ikezoe, M. Ichimura, M. Sakamoto, T. Imai, “Study of Plasma Behavior during ECRH Injection in the GAMMA 10 SMBI Experiments”, **Journal of Physics: Conference Series**, **959**, 012007 (2018).

## Presentations at the International Conferences, Workshops: 21

1. **M.S. Islam**, J.D. Lore, S. Smolentsev, C.E Kessel, and R. Maingi, “ANALYSIS AND DESIGN OF FAST FLOW LIQUID LI DIVERTOR FOR FUSION NUCLEAR SCIENCE FACILITY (FNSF) USING SOLPS-ITER”, Proceedings of the 29<sup>th</sup> IAEA-Fusion Energy Conference (**FEC2023**), October 16-21, 2023, London, UK (**Poster**: IAEA-CN-TH/P5-1592)
2. **M.S. Islam**, et al., “Evaluation of scenarios for Proto-MPEX target fluxes using auxiliary heating and gas puffing actuators”, The 30<sup>th</sup> IEEE Symposium on Fusion Engineering (**SOFE2023**), July 9-13, 2023, Oxford, UK (**Poster**: BP369)
3. **M.S. Islam**, et al., “Modelling of Fast Flow Liquid Lithium Divertor for a Fusion Nuclear Science Facility (FNSF) using SOLPS-ITER”, the 7<sup>th</sup> INTERNATIONAL SYMPOSIUM ON LIQUID METALS APPLICATIONS FOR FUSION, 12-16 December 2022, Kasugai, Japan (**Oral**: 6-2)
4. **M.S. Islam**, et al., “SOLPS-ITER modelling of Liquid Lithium Divertor for a Fusion Nuclear

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