

PERSONAL DETAILS

Name: **Dr Laszlo Horvath**
 Nationality: **Hungarian**
 Affiliation: **United Kingdom Atomic Energy Authority**
Culham Centre for Fusion Energy
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EDUCATION

2015 - 2019

PhD in Plasma Science & Fusion Energy

University of York, UK - Fusion Centre for Doctoral Training programme
 The research project was based at Culham Centre for Fusion Energy, UKAEA, UK

2013 - 2015

MSc in Physics

Budapest University of Technology and Economics (BME), Hungary
 Completed 7 academic courses related to fusion and plasma physics (23 ECTS)

2009 - 2013

BSc in Physics

Budapest University of Technology and Economics (BME), Hungary

2012 - 2014

Fusion and Plasma Physics related summer schools:

DPG Physics School on The Physics of ITER - Bad Honnef, Germany (2014)
 Culham Plasma Physics Summer School - CCFE, UK (2014)
 IPP Summer University - Greifswald, Germany (2013)
 Sokendai Asian Winter School - NIFS, Toki City, Japan (2013)
 SUMTRAIC - COMPASS tokamak, Prague, Czech Republic (2012)

LANGUAGES

Hungarian
 English
 French

Native language**Proficient user****Beginner****WORK EXPERIENCE**

2020 - present

Pedestal Experimentalist, Culham Centre for Fusion Energy, UKAEA, UK

My role is to understand the physics of the pedestal on JET-ILW, compare experimental observations to numerical simulations and extrapolate to future devices. I work with most of the edge related diagnostic data to interpret our experiments and support the data analysis with pedestal stability (ELITE, MISHKA), integrated pedestal prediction tools (Europed) and 2D edge transport modelling (EDGE2D-EIRENE). I am involved in the planning and execution of JET experiments, occasionally lead experimental sessions as acting Scientific Coordinator. I also contribute to the JET operations as a Diagnostic Coordinator and as a trainee Session Leader.

2015 - 2019

PhD student with a research project on the JET tokamak

During my PhD, my main area of research was on the isotope dependence of the H-mode pedestal in JET-ILW plasmas. The project focused on data analysis and running several numerical codes to compare theoretical models with experiments for better understanding of pedestal physics. These codes included HELENA (equilibrium), ELITE and MISHKA (MHD stability), JETTO (core transport), NEO (neo-classical transport) and EDGE2D-EIRENE (edge transport).

Supervisors: Costanza Maggi, Kieran Gibson

2017

1 month internship at the DIII-D tokamak, General Atomics, US

The project involved data analysis and running simulation codes (EPED, ELITE) to examine the MHD stability of DIII-D pedestals and heuristic proxies for the stability of Kinetic Ballooning Modes in the EPED predictive model.

Supervisors: Thomas Osborne, Philip Snyder

2014 - 2015

MSc project in collaboration with IPP Garching at the ASDEX-Upgrade tokamak

My MSc thesis project focused on the experimental analysis of energetic particle driven instabilities in ASDEX-Upgrade. The project involved in total more than 3 months of on-site visit at IPP Garching.

Supervisors: Philipp Lauber, Gergely Papp, Gergo Pokol

2011 - 2013

3 summer internships at ASDEX Upgrade, IPP Garching

Development, implementation and application of time-frequency transform based techniques to analyse fluctuation measurements on ASDEX-Upgrade. (2013: 1 week, 2012: 3 weeks, 2011: 2 weeks)

AREAS OF SPECIALIZATION**Transport modelling:**

Actively using EDGE2D-EIRENE for 2D edge-SOL transport simulations, the NEO neo-classical transport code and has experience with the JINTRAC integrated transport simulation framework.

Pedestal MHD modelling:

Experienced user of MHD equilibrium (HELENA) and stability codes (HELENA, MISHKA) aiming to investigate pedestal instabilities.

Tokamak Experiments:

Participated and occasionally led experiments as acting Scientific Coordinator on JET. Supporting JET experiments as Diagnostic Coordinator and trainee Session Leader.

Data analysis:

Expertise on the analysis and interpretation of a wide range of tokamak edge diagnostic data (Thomson scattering, reflectometry, Li-BES, magnetics, Langmuir probes, IR camera, spectroscopy) and comparison with simulation results.

Communication:

Given several talks in international conferences (EPS, EU-US TTF, IAEA-TM) and internal meetings. Participated in international collaborations through EUROfusion JET and MST1 experiments.

Awards

2015

EPS/PPCF/IUPAP Poster Prize - 42nd EPS Conference on Plasma Physics, Lisbon

awarded to the 4 best PhD student for outstanding presentation of work

2014

Scholarship of the Republic, Hungary

granted by the Minister of Human Capacities

2013 and 2015

"Excellent student of the Faculty of Natural Sciences" - BME, Budapest, Hungary

granted to the best physics student of the Faculty of Natural Sciences each year

2013 and 2014

Scholarship of the Budapest University of Technology and Economics, Hungary

granted for the 10-20 best students of the university

2013

1st prize - Award of the Best Thesis by Foundation for Nuclear Engineers (BSc)

2011 - 2015

3 times awarded at the National Scientific Student Conference, Hungary

(2015: 3rd, 2013: 2nd, 2011: 3rd)

2010 - 2013

3 times awarded at the Scientific Student Conference, BME, Hungary

(2013: 2nd, 2011: 2nd, 2010: 1st)

SKILLS

Programming skills: C, C++, Python, Matlab and IDL

Experience in MCNP (Monte Carlo N-Particle code)

Advanced knowledge of Unix/Linux systems, Latex and MS Office software, SVN and GIT revision control tools, Adobe Photoshop, Illustrator and InDesign

Driving licence (A, B)

TEACHING ACTIVITY

2015 spring

2014 autumn

2014 spring

2013 - 2015

2013 autumn

2012 - 2015

Guest lecturer - Fusion devices (BME, Budapest)**Guest lecturer - Introduction to fusion plasma physics (BME, Budapest)****Guest lecturer - Large fusion devices (BME, Budapest)****Co-supervisor of 1 Scientific Student Conference research paper (BME, Budapest)****Exercise leader - Laboratory course for Physics BSc students (BME, Budapest)****Exercise leader of remote student measurements on GOLEM tokamak (BME, Budapest)****MEMBERSHIP**

2018 - 2019

2011 - present

2009 - 2015

St Edmund Hall, University of Oxford - associate member**Hungarian Nuclear Society****BME NTI Fusion Group****ACTIVITIES**

Football and music

PEER REVIEWED JOURNAL ARTICLES

1. L. Horvath, C.F. Maggi, A. Chankin, S. Saarelma, A.R. Field, S. Aleiferis, E. Belonohy, A. Boboc, G. Corrigan, E.G. Delabie, J. Flanagan, L. Frassinetti, C. Giroud, D. Harting, D. Keeling, D. King, M. Maslov, G.F. Matthews, S. Menmuir, S.A. Silburn, J. Simpson, A.C.C. Sips, H. Weisen, K.J. Gibson and JET Contributors, Isotope dependence of the type I ELMY H-mode pedestal in JET-ILW Hydrogen and Deuterium plasmas. *Nuclear Fusion*, 61 [046015](#), 2021
2. A.R. Field, S. Aleiferis, E. Belonohy, P. Carvalho, I. Coffey, D. Frigione, and L. Garzotti, L. Horvath, Hyun-Tae Kim, M. Lennholm, E. Lerche, P. Lomas, C.G. Lowry, J. Mailloux, F. Rimini, C.M. Roach, M. Sertoli, Z. Stancar, G. Szepesi, D. van Eester and JET Contributors, The impact of fuelling and W radiation on the performance of high-power, ITER-baseline scenario plasmas in JET-ILW. *Plasma Physics and Controlled Fusion*, 63 [095013](#), 2021
3. J. Simpson, D. Moulton, C. Giroud, F. Casson, M. Groth, A. Chankin, L. Horvath, D.S. Gahle, L. Garzotti, G. Corrigan, F. Kochl and JET Contributors, An examination of the Neutral Penetration Model 1/ne,ped scaling for its validity of spatially varying neutral sources, *Nuclear Materials and Energy*, 28 [101037](#), 2021
4. H. Weisen, C. F. Maggi, M. Oberparleiter, F. J. Casson, Y. Camenen, S. Menmuir, L. Horvath, F. Auriemma, T. W. Bache, N. Bonanomi, A. Chankin, E. Delabie, L. Frassinetti, J. Garcia, C. Giroud, D. King, R. Lorenzini, M. Marin, P. A. Schneider, P. Siren, J. Varje and E. Viezzer, Isotope dependence of energy, momentum and particle confinement in tokamaks. *Journal of Plasma Physics*, 86(5) [905860501](#), 2020.
5. D.B. King, E. Viezzer, I. Balboa, M. Baruzzo, E. Belonohy, J. Buchanan, I.S. Carvalho, K. Cave-Ayland, C.D. Challis, I. Coffey, E.G. Delabie, L. Garzotti, S. Hall, J.C. Hillesheim, L. Horvath, E. Joffrin, D. Keeling, K. Kirov, C.F. Maggi, M. Maslov, S. Saarelma, S. Silburn, E.R. Solano, D. Valcarcel and JET contributors, Mixed hydrogen-deuterium plasmas on JET-ILW. *Nuclear Fusion*, 60 [096030](#), 2020.
6. A.R. Field, C.D. Challis, J. M. Fontdecaba, L. Frassinetti, L. Horvath, Hyun-Tae Kim, C.F. Maggi, C.M. Roach, S. Saarelma, M. Sertoli, G. Szepesi and JET contributors, The dependence of exhaust power components on edge gradients in JET-C and JET-ILW H-mode plasmas. *Plasma Physics and Controlled Fusion*, 62 [055010](#), 2020.
7. S. Saarelma, L. Frassinetti, P. Bilkova, C. D. Challis, A. Chankin, R. Fridström, L. Garzotti, L. Horvath, C. F. Maggi and JET Contributors, Self-consistent pedestal prediction for JET-ILW in preparation of the DT campaign. *Physics of Plasmas*, 26 [072501](#), 2019.
8. C.F. Maggi, H. Weisen, F.J. Casson, F. Auriemma, R. Lorenzini, H. Nordman, E. Delabie, F. Eriksson, J. Flanagan, D. Keeling, D. King, L. Horvath, S. Menmuir, A. Salmi, G. Sips, T. Tala, I. Voitsekhovich and JET Contributors, Isotope identity experiments in JET-ILW with H and D L-mode plasmas. *Nuclear Fusion*, 59 [076028](#), 2019.
9. L. Frassinetti, M.G. Dunne, U. Sheikh, S. Saarelma, C.M. Roach, E. Stefanikova, C. Maggi, L. Horvath, S. Pamela, E. de la Luna, E. Wolfrum, M. Bernert, P. Blanchard, B. Labit, A. Merle, L. Guimarais, S. Coda, H. Meyer, J.C. Hillesheim, the ASDEX Upgrade Team, JET Contributors, the TCV Team and the EUROfusion MST1 Team, Role of the pedestal position on the pedestal performance in AUG, JET-ILW and TCV and implications for ITER. *Nuclear Fusion*, 59 [076038](#), 2019.
10. C. Perez von Thun, L. Frassinetti, L. Horvath, S. Saarelma, L. Meneses, E. de la Luna, M. Beurskens, J. Boom, J. Flanagan, J.C. Hillesheim, C.F. Maggi, S.J.P. Pamela, E.R. Solano and JET Contributors, Long-lived coupled peeling ballooning modes preceding ELMs on JET. *Nuclear Fusion*, 59 [056004](#), 2019.
11. L. Horvath, C.F. Maggi, F.J. Casson, V. Parail, L. Frassinetti, F. Koechl, S. Saarelma, M.G. Dunne, K.J. Gibson and JET Contributors, Inter-ELM evolution of the edge current density in JET-ILW type I ELMY H-mode plasmas. *Plasma Physics and Controlled Fusion*, 60 [085003](#), 2018.

12. C.F. Maggi, H. Weisen, J.C. Hillesheim, A. Chankin, E. Delabie, **L. Horvath**, F. Auriemma, I.S. Carvalho, G. Corrigan, J. Flanagan, L. Garzotti, D. Keeling, D. King, E. Lerche, R. Lorenzini, M. Maslov, S. Menmuir, S. Saarelma, A.C.C. Sips, E.R. Solano, E. Belonohy, F.J. Casson, C. Challis, C. Giroud, V. Parail, C. Silva, M. Valisa, JET Contributors, Isotope effects on L-H threshold and confinement in tokamak plasmas. *Plasma Physics and Controlled Fusion*, 60 [014045](#), 2018.
13. C. Bowman, D. Dickinson, **L. Horvath**, A.E. Lunniss, H.R. Wilson, I. Cziegler, L. Frassinetti, K. Gibson, A. Kirk, B. Lipschultz, C.F. Maggi, C.M. Roach, S. Saarelma, P.B. Snyder, A. Thornton, A. Wynn and JET Contributors, Pedestal evolution physics in low triangularity JET tokamak discharges with ITER-like wall. *Nuclear Fusion*, 58 [016021](#), 2018.
14. C.F. Maggi, L. Frassinetti, **L. Horvath**, A. Lunniss, S. Saarelma, H. Wilson, J. Flanagan, M. Leyland, I. Lupelli, S. Pamela, H. Urano, L. Garzotti, E. Lerche, I. Nunes, F. Rimini and JET Contributors, Studies of the pedestal structure and inter-ELM pedestal evolution in JET with the ITER-like wall. *Nuclear Fusion*, 57 [116012](#), 2017.
15. F. Mink, E. Wolfrum, M. Maraschek, H. Zohm, **L. Horvath**, F.M. Laggner, P. Manz, E. Viezzer, U. Stroth and the ASDEX Upgrade Team, Experimental investigation of toroidal mode number determination of ELM associated phenomena on ASDEX Upgrade. *Plasma Physics and Controlled Fusion*, 58 [125013](#), 2016.
16. **L. Horvath**, G. Papp, Ph. Lauber, G. Por, A. Gude, V. Igochine, B. Geiger, M. Maraschek, L. Guimarais, V. Nikolaeva, G. I. Pokol and the ASDEX Upgrade Team, Experimental investigation of the radial structure of energetic particle driven modes. *Nuclear Fusion*, 56 [112003](#), 2016.
17. **L. Horvath**, P. Zs. Poloskei, G. Papp, M. Maraschek, K.H. Schuhbeck, G. I. Pokol, the EUROfusion MST1 Team and the ASDEX Upgrade Team, Reducing systematic errors in time-frequency resolved mode number analysis. *Plasma Physics and Controlled Fusion*, 57 [125005](#), 2015.
18. M. Sertoli, **L. Horvath**, G. I. Pokol, V. Igochine, L. Barrera and the ASDEX Upgrade Team. Characterization of saturated MHD instabilities through 2D electron temperature profile reconstruction from 1D ECE measurements. *Nuclear Fusion*, 53 [053015](#), 2013.
19. G. Papp, G. I. Pokol, G. Por, A. Magyarkuti, N. Lazányi, **L. Horvath**, V. Igochine, M. Maraschek and ASDEX Upgrade Team. Low frequency sawtooth precursor activity in ASDEX Upgrade. *Plasma Physics and Controlled Fusion*, 53 [065007](#), 2011.

PAPERS IN PROGRESS

1. **L. Horvath**, M. Maslov, P.A. Schneider, L. Frassinetti, B. Lomanowski, C.F. Maggi, R.B. Morales, D. Nina, S. Saarelma, J. Simpson, D.I. Refy, M. Brix, T. Pereira, M. Vecsei, JET Contributors, Experimental analysis of ELM and inter-ELM particle transport in JET-ILW pedestals, in preparation
2. P. A. Schneider, C. Angioni, L. Frassinetti, **L. Horvath**, M. Maslov, F. Auriemma, N. Bonanomi, V. Bobkov, M. Cavedon, C.D. Challis, P. David, E. Delabie, M.G. Dunne, R. Fisher, J.M. Fontdeaba Climent, C. Giroud, P. Hennequin, J. Hobirk, C. Hopf, A. Kappatou, J. Kazakov, D. L. Keeling, B. Kurzan, M. Lennholm, B. Lomanovski, C.F. Maggi, R. M. McDermott, U. Plank, T. Pütterich, A. Thorman, A.C.C. Sips, M. Weiland, M. Willensdorfer, the ASDEX Upgrade Team, the EUROfusion MST1 Team and JET Contributors, The dependence of confinement on the isotope mass in the core and the edge of AUG and JET H-Mode plasmas, submitted to Nuclear Fusion, 2021
3. L. Frassinetti, C. Perez von Thun, B. Chapman, A. Fil, J.C. Hillesheim, **L. Horvath**, G.T.A. Huijsmans, H. Nystrom, V. Parail, S. Saarelma, B. Viola, R. Bianchetti Morales, M. Dunne, A.R. Field, J. Flanagan, J.M. Fontdecaba, D. Hatch, B. Lomanowski, C.F. Maggi, S. Menmuir, S. Pamela, C. Roach, E. Rachlew, E.R. Solano and JET contributors, Role of the separatrix density in the pedestal performance in JET-ILW and JET-C, submitted to Nuclear Fusion, 2021
4. T. Tala, A. Salmi, E.R. Solano, I.S. Carvalho, J. Citrin, A. Chomiczewska, E. Delabie, F. Eriksson, J. Ferreira, E. Fransson, **L. Horvath**, P. Jacquet, D. King, A. Kirjasuo, S. Leerink, E. Lerche, C.F. Maggi, P. Mantica, A. Mariani, M. Marin, M. Maslov, S. Menmuir, R.B. Morales, V. Naulin, M.F.F. Nave, H. Nordman, C. Perez von Thun, P.A. Scheider, M. Sertoli, K. Tanaka and JET contributors, Comparison of particle transport and confinement properties between the ICRH and NBI heated dimensionless identity plasmas on JET, submitted to Nuclear Fusion, 2021

PROCEEDINGS

1. C.F. Maggi, F. Auriemma, **L. Horvath**, F. Casson, H. Nordman, H. Weisen, E. Delabie, F. Eriksson, J. Flanagan, D. Keeling, D. King, R. Lorenzini, M. Maslov, S. Menmuir, A. Salmi, P.A. Schneider, M. Sertoli, A.C.C. Sips, G. Szepesi, T. Tala and JET Contributors, Isotope identity experiments in JET with ITER-like wall. In Proceedings of the 28th IAEA Fusion Energy Conference, [EX/6-1](#), 2021
2. P. A. Schneider, C. Angioni, L. Frassinetti, **L. Horvath**, M. Maslov, F. Auriemma, N. Bonanomi, V. Bobkov, M. Cavedon, C.D. Challis, P. David, E. Delabie, M.G. Dunne, R. Fisher, J.M. Fontdeaba Climent, C. Giroud, P. Hennequin, J. Hobirk, C. Hopf, A. Kappatou, J. Kazakov, D. L. Keeling, B. Kurzan, M. Lennholm, B. Lomanovski, C.F. Maggi, R. M. McDermott, U. Plank, T. Pütterich, A. Thorman, A.C.C. Sips, M. Weiland, M. Willensdorfer, the ASDEX Upgrade Team, the EUROfusion MST1 Team and JET Contributors, The dependence of confinement on the isotope mass in the core and the edge of AUG and JET H-Mode plasmas. In Proceedings of the 28th IAEA Fusion Energy Conference, [EX/P4-6](#), 2021
3. L. Frassinetti, C. Perez von Thun, B. Chapman, A. Fil, J.C. Hillesheim, **L. Horvath**, G.T.A. Huijsmans, H. Nystrom, V. Parail, S. Saarelma, B. Viola, R. Bianchetti Morales, M. Dunne, A.R. Field, J. Flanagan, J.M. Fontdecaba, D. Hatch, B. Lomanowski, C.F. Maggi, S. Menmuir, S. Pamela, C. Roach, E. Rachlew, E.R. Solano and JET contributors, Role of the separatrix density in the pedestal performance in JET-ILW and JET-C. In Proceedings of the 28th IAEA Fusion Energy Conference, [EX/2-2](#), 2021
4. T. Tala, A. Salmi, E.R. Solano, I.S. Carvalho, J. Citrin, A. Chomiczewska, E. Delabie, F. Eriksson, J. Ferreira, E. Fransson, **L. Horvath**, P. Jacquet, D. King, A. Kirjasuo, S. Leerink, E. Lerche, C.F. Maggi, P. Mantica, A. Mariani, M. Marin, M. Maslov, S. Menmuir, R.B. Morales, V. Naulin, M.F.F. Nave, H. Nordman, C. Perez von Thun, P.A. Schneider, M. Sertoli, K. Tanaka and JET contributors, Comparison of particle transport and confinement properties between the ICRH and NBI heated dimensionless identity plasmas on JET. In Proceedings of the 28th IAEA Fusion Energy Conference, [EX/P3-2](#), 2021
5. C. Giroud, S. Brezinsek, R.A. Pitts, I.S. Carvalho, A. Huber, E. Kaveeva, D. Keeling, J. Mailloux, V. Rozhansky, S. Aleiferis, B. Chapman, S. Henderson, L. Garzotti, E. Lerche, M. Marin, M. Maslov, M. Brix, P. Carvalho, I. Coffey, J.M. Fontdecaba, **L. Horvath**, I. Jepu, J. Karhunen, E. Litherland-Smith, A. Meigs, R.B. Morales, T. Pereira, D. Refy, Z. Stancar, M. Sertoli, S. Silburn, G. Szepesi, A. Thorman, M. Tomes, I. Veselova, B. Viola, S. Wiesen and JET Contributors, High performance ITER-baseline discharges in deuterium with nitrogen and neon-seeding in the JET-ILW. In Proceedings of the 28th IAEA Fusion Energy Conference, [EX/P3-9](#), 2021
6. E.R. Solano, E. Delabie, G. Birkenmeier, C. Silva, J. Hillesheim, P. Vincenzi, A.H. Nielsen, J.J. Rasmussen, A. Baciero, S. Aleiferis, I. Balboa, A. Boboc, C. Bourdelle, I.S. Carvalho, P. Carvalho, M. Chernyshova, R. Coelho, T. Craciunescu, R. Dumont, E. de la Luna, J. Flanagan, M. Fontana, J.M. Fontdecaba, L. Frassinetti, D. Gallart, J. Garcia, E. Giovannozzi, C. Giroud, W. Gromelski, R. Henriques, **L. Horvath**, I. Jepu, A. Kappatou, D.L. Keeling, D. King, E. Kowalska-Strzeciwiłk, M. Lennholm, E. Lerche, E. Litherland-Smith, V. Kiptily, K. Kirov, A. Loarte, B. Lomanowski, C.F. Maggi, M.J. Mantsinen, A. Manzanares, M. Maslov, A.G. Meigs, R.B. Morales, D. Nina, C. Noble, V. Parail, F. Parra Diaz, E. Pawelec, G. Pucella, D. Refy, E. Righi-Steele, F.G. Rimini, T. Robinson, S. Saarelma, M. Sertoli, A. Shaw, S. Silburn, P. Siren, Z. Stancar, H. Sun, G. Szepesi, D. Taylor, E. Tholerus, S. Vartanian, G. Verdoollaeghe, B. Viola, H. Weisen, T. Wilson and JET Contributors, L-H transition studies at JET: tritium, helium and deuterium. In Proceedings of the 28th IAEA Fusion Energy Conference, [EX/2-3](#), 2021
7. T. Tala, A. Mariani, A. Salmi, E.R. Solano, I.S. Carvalho, A. Chomiczewska, E. Delabie, F. Eriksson, J. Ferreira, E. Fransson, **L. Horvath**, P. Jacquet, D. King, A. Kirjasuo, S. Leerink, E. Lerche, C.F. Maggi, P. Mantica, M. Marin, M. Maslov, S. Menmuir, R.B. Morales, V. Naulin, M.F.F. Nave, H. Nordman, C. Perez von Thun, P.A. Schneider, M. Sertoli, K. Tanaka, JET contributors, Comparison of particle transport and confinement properties between the ICRH and NBI heated dimensionless identity plasmas on JET, In Proceedings of the 47th EPS Conference on Plasma Physics, [P1.1077](#), 2021
8. H. Weisen, C.F. Maggi, **L. Horvath**, F. Auriemma, T.W. Bache, F.J. Casson, A. Chankin, E. Delabie, C. Giroud, D. King, R. Lorenzini, S. Menmuir, E. Viezzzer and JET Contributors, Isotope Dependence of Confinement in JET Deuterium and Hydrogen Plasmas. In Proceedings of the 27th IAEA Fusion Energy Conference, [EX/P1-4](#), Ahmedabad, India, 2018.

9. C.F. Maggi, H. Weisen, F. Auriemma, F.J. Casson, E. Delabie, **L. Horvath**, R. Lorenzini, H. Nordman, J. Flanagan, D. Keeling, H-T Kim, D. King, S. Menmuir, G. Sips and JET Contributors. Pedestal structure and stability in H and D isotope experiments on JET-ILW. In *Proceedings of the 45th EPS Plasma Physics Conference*, [O2.101](#), Prague, Czech Republic, 2018.
10. **L. Horvath**, C.F. Maggi, E. Belonohy, E.G. Delabie, J. Flanagan, L. Frassinetti, C. Giroud, D. Keeling, D. King, M. Maslov, G.F. Matthews, S. Menmuir, S. Saarelma, S.A. Silburn, A.C.C Sips, H. Weisen, K.J. Gibson and JET Contributors. Pedestal structure and stability in H and D isotope experiments on JET-ILW. In *Proceedings of the 44th EPS Plasma Physics Conference*, [P5.123](#), Belfast, UK, 2017.
11. D.B. King, E. Viezz, M. Baruzzo, E. Belonohy, J Buchanan, I Carvalho, K. Cave-Ayland, I. Coffey, C.D. Challis, E.G. Delabie, A. Drenik, L. Garzotti, J.Hillesheim, **L. Horvath**, E.Joffrin, D. Keeling, K. Kirov, C.F. Maggi, M. Maslov, S. Saarelma, E.R. Solano, M. Stamp, D. Valcarcel, H. Weisen and JET contributors. Mixed Hydrogen-Deuterium plasmas on JET ILW: H-mode confinement and isotope mixture control. In *Proceedings of the 44th EPS Plasma Physics Conference*, [O3.112](#), Belfast, UK, 2017.
12. H.R. Wilson, C. Bowman, S.C. Cowley, I. Cziegler, D. Dickinson, L. Frassinetti, K. Gibson, C. Ham, **L. Horvath**, A. Kirk, B. Lipschultz, A.E. Lunniss, C.F. Maggi, C.M. Roach, S. Saarelma, P.B. Snyder, A. Thornton, A. Wynn and JET Contributors. Inter-ELM pedestal evolution in low triangularity JET-ILW discharges. In *Proceedings of the 44th EPS Plasma Physics Conference*, [P2.112](#), Belfast, UK, 2017.
13. P.Zs. Poloskei, G. Papp, G.I. Pokol, Ph.W. Lauber, X. Wang, **L. Horvath** and the ASDEX Upgrade team. Bicoherence analysis of fast ion driven transient plasma waves. In *Proceedings of the 44th EPS Plasma Physics Conference*, [P5.179](#), Belfast, UK, 2017.
14. **L. Horvath**, C.F. Maggi, F.J. Casson, L. Frassinetti, M.G. Dunne, J. Hobirk, I. Lupelli, K.J. Gibson and JET Contributors. Evolution of the bootstrap current profile during the type I ELM cycle of JET-ILW H-mode plasmas. In *Proceedings of the 43rd EPS Plasma Physics Conference*, [P2.015](#), Leuven, Belgium, 2016.
15. F. Mink, E. Wolfrum, M. Maraschek, H. Zohm, **L. Horvath**, E. Viezz, F.M. Laggner, M. Dunne, P. Manz, U. Stroth and the ASDEX Upgrade Team. Characterization of inter-ELM magnetic oscillations on ASDEX Upgrade. In *Proceedings of the 43rd EPS Plasma Physics Conference*, [P1.022](#), Leuven, Belgium, 2016.
16. **L. Horvath**, G. Papp, G. I. Pokol, Ph. W. Lauber, G. Por, A. Gude, V. Igochine, ASDEX Upgrade Team. Fast changes in the mode structure of chirping energetic particle driven modes. In *Proceedings of the 42nd EPS Plasma Physics Conference*, [P1.148](#), Lisbon, Portugal, 2015.
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1. **L. Horvath**, et al. Experimental analysis of ELM and inter-ELM particle transport in JET-ILW pedestals, 25th Joint EU-US Transport Task Force Meeting, 09-09-2021. - *Oral*
2. **L. Horvath** et al. Isotope effect of the edge transport barrier in JET-ILW type I ELMy H-modes. 17th International Workshop on H-mode Physics and Transport Barriers, Shanghai, China, 2019-10-11. - *Poster*
3. **L. Horvath** et al. Isotope dependence of the pedestal in JET-ILW type I ELMy H-modes. 46th EPS Plasma Physics Conference, Milan, Italy, 2019-07-11. - *Oral*
4. **L. Horvath** et al. Isotope effect of the H-mode pedestal in JET-ILW hydrogen and deuterium plasmas. 23rd Joint EU-US Transport Task Force Meeting, Seville, Spain, 2018-09-11. - *Oral*
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14. **L. Horvath** et al. NTI Wavelet Tools: A data processing toolbox to analyse fusion plasma transients. KSTAR Workshop, Wigner RCP RMKI, Budapest, Hungary, 2014-01-16. - *Oral*
15. **L. Horvath** et al. Optimization of time-frequency analysis for the characterization of electron temperature measurements at ASDEX Upgrade. Sokendai Asian Winter School, Toki City, Gifu Prefecture, Japan, 2013-01-30. - *Poster*
16. **L. Horvath** et al. Data processing tool based on time-frequency analysis to investigate transient processes, Hungarian Plasma Physics and Fusion Technology Workshop, Tata, Hungary, 2012-04-03. - *Oral*

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1. **L. Horvath**, G. I. Pokol and G. Papp. Short Time Fourier Transform in NTI Wavelet Tools. [BME-NTI-593/2012](#)

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1. **L. Horvath**. Isotope dependence of the H-mode pedestal in JET-ILW plasmas. PhD Thesis, University of York, 2019 [<http://etheses.whiterose.ac.uk/27103/>]
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