Leon Kos

Personal information

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leon.kos@lecad.fs.uni-lj.si

Sex: Male
Date of birth: 9 June 1966
Nationality: Slovenian
Married
3 children

Programming Languages

♥C++, Python, C, Fortran
MPI, OpenMP, Cuda, *PU
Java, JavaScript, CSS
HTML, XML, XSL, XSLT
Bash, csh, PHP, SQL
Lisp, Prolog, Assembly
(PIC, Atmel, MCS51)
ReStrucuredText, LaTeX

Useful links

Home page
Bibligraphy
Google scholar
Orcid ID:
0000-0002-1790-7093
Personal research page
LECAD laboratory page
SMITER code
SOLPS-ITER GUI

Personal statement

Leon Kos has a 30+ year experience of using the Linux desktop on a daily basis to build digital relationships for research, teaching, and working with many programming languages and Unix flavours. He likes both embedded systems and big machines. He advocates open science and data provenance. His research areas include plasma physics, fusion, CAD kernel and 3D scientific visualisation, where he frequently receives software development requests by HPC related projects. Leon advises the national HPC centre initiative, administers the university cluster, organises HPC training courses in Slovenia and coordinates PRACE Summer of HPC and massive open online courses (MOOC).

Current position

Assistant professor, head of a research programme, group leader of plasma engineering at LECAD laboratory and a senior researcher at the University of Ljubljana, Faculty of Mechanical Engineering. For the last 15 years he has worked as a researcher at the LECAD laboratory in the areas of plasma physics, fusion, supercomputing applications and advanced visualisation interfaces.

Education

1986–1991	**B.Sc. in Mechanical Engineering** B.Sc. thesis in 3-D scientific visualisation and shading	University of Ljubljana
1991–1995	**M.Sc. in Mechanical Engineering** Thesis title: A distributed system for 3D rendering	University of Ljubljana
1996–2009	**PhD in Mechanical Engineering and Computational physics** Thesis title: Extension of Collisionless Discharge Models for Application to Fusion-Relevant and General Plasmas (Advisers: J. Duhovnik and S. Kuhn)	University of Ljubljana

Papers, Presentations

Publications	**22 refereed journal papers, 8 as first author, h-index: 10, 277 citations** 80 non-refereed conference communications, 24 as first author	
Invited lectures	**Int. Advanced Workshop on the Frontiers of Plasma Physics**	2010 ICTP, Trieste, Italy
	Advances in simulation-based decision support	2011 IIAS, Baden Baden, Germany

Award

Trimo research award 2010 €1000 Award for PhD achievements and research collaboration with industry		Trebnje, Slovenia

Academic, Educational

Teaching	**Design techniques** Engineering design techniques and CAD kernel programming for master students since 2018	Mech.Eng., University of Ljubljana
	Space modelling 3-D CAD modelling for bachelor students since 2015	Mech.Eng., University of Ljubljana
	Managmenet of Big Data with R and Hadoop MOOC occurring 3 times a year since 2017. Around 3000 joiners at each course.	Futurelearn MOOC Platform
	3D Scientific visualisation Training week coordination since 2013 and teaching of OpenGL, ParaView, VisIt and visualisation principles	PRACE Summer of HPC
Supervisory	**Master theses and PhD students in the field of plasma physics and fusion** Janez Krek, Jure Bartol, Bruno De Nys, Dejan Penko, Matic Brank, Marijo Telenta	
	Internships in supercomputing Mario González Carpintero, Marcin Paweł Konieczny, Paras Kumar, Mateusz Lango, Ben Chapman, Sam Hewitt, Ezhilmathi Krishnasamy	PRACE

Employment/Experience

1995 – present	**University of Ljubljana, Faculty of Mechanical Engineering, LECAD laboratory**	Ljubljana, Slovenia

Researcher and Teacher at the Faculty. Head of Plasma Engineering Group (PEG)
Research work and expertise developed within many international projects divided and intermixed in the following areas/**funders**:

Supercomputing
- **HPCFS** In 2009 he established and administered university HPC cluster and TIER-1 to PRACE net.
- **PRACE** Partnership for advanced computing – Implementation Projects (PRACE-IP3,4,5,6) (2013-present) - Work Package leader activities (Massive Open Online Courses, Summer of HPC. Co-PI with FZJuelich (2019−present) for "Particle kinetic codes (BIT1) for Exascale plasma simulation" and collaborator within "Modernisation of Plasma Physics Simulation Codes for Heterogeneous Exascale Architectures" (MOPHA). Both (WP8) projects are exascale and fusion relevant.
- **EXDCI** (2015−present) National coordination for EuroHPC activities.
- **InnoHPC** (2017−2019) Coordinating activities for outreach and HPC support for SMEs.

Plasma physics
- **ARRS** (Slovenian research agency) MiniGDT (2010−2013) − Development of physical−mathematical models for miniature gas discharge tubes for industry (Iskra). Development of S. Lee model - "Radiative Plasma Focus Computation Code" in C language.
- **FWF** Theoretical work on plasma−sheath transition and development of kinetic simulations in collaboration with Innsbruck University. A number of journal papers have resulted.

Fusion
- **ITER** Principal investigator for SOLPS-ITER GUI (2016−2017) and SMITER (2017-2018) projects for ITER organisation. Both projects included interfacing massive fusion codes into HPC and stand-alone environments with complex GUI frameworks. Ported IMAS UAL to Python 3.
- **EUROfusion** Within EUROfusion he is involved in Work Package on Code Development (WPCD) as well as WPISA, WPTRA, WPEDU, WPIT (2014−present). Task leader of WIMAS-7 and developer for EWE-5 documentation activity. GGD and IMAS integration.
- **EFDA** In the past he contributed to EFDA-project, "Integrated Tokamak Modelling" - member of ISIP task force (2010−2014) responsible for Kepler and VisIt integration.
- **FP7** EUFORIA, "EU Fusion for ITER applications" (2007−2010). Comprehensive framework and infrastructure for core and edge transport and turbulence simulation, linking grid and High Performance Computing (HPC), to the fusion modelling community. Programming MDSPLUS plugins for VisIt and integrating visualization tools into the Kepler environment.
- **COST** Integrated Tokamak Modelling and Simulation (ITMS), SOLPS-ASTRA coupling (2006-2008), Analysis of Narrow Support Element of The W7-X Magnet System under Design Loads (2004−2006).

CAD and Visualisation Development of CAD interfaces for modelling and simulations for SMES and ARRS funding.

May – Jun 2019	**Aalto University, Fusion department and CSC supercomputing centre**	Espoo, Finland

Visiting researcher
Elmfire gyrokinetic code refactoring with structure preserving methods. Heterogenous programming library StarPU application for PIC code.

Jan – Mar 2018	**KTH Royal Institute of Technology and PDC Supercomputing centre**	Stockholm, Sweden

Visiting researcher
MPI refactoring of SMARDDA field-line tracing and power deposition code.

Oct 2015 – Jan 2016	**ITER Organization**	St. Paul-lez-Durance, France

External contractor
Development of SOLPS-ITER GUI and tailoring of job submission interfaces for ITER cluster with PBS, SLURM and local batch queues. Refactoring of visualisation routines to support B2.5 in-situ debugging and client-server job monitoring.

Sept – Oct 1999	**John Hopkins University, Engineering, Visualization laboratory**	Baltimore USA

Secondee
Development of Multigrid solver for "Generalized Gradient Vector Field" and "snake" algorithm. The method accelerates convergence of the classical iterative solution of differential equations up to several times.

Aug 1991 – Dec 1995	**University of Ljubljana, Faculty of Mechanical Engineering**	Ljubljana, Slovenia

Young researcher
Research in CAD modelling and software development on Silicon graphics workstations. A distributed system for rendering three-dimensional objects included heterogeneous architectures using Parallel Virtual Machines (PVM) for communication.

1994 – present	**Fincy d.o.o.**	Ljubljana, Slovenia

Scientific adviser, developer, and maintainer
Autocad, Powerbuilder GUI and Sybase SQL integration with OCX, ObjectARX, DBX for hot hater.

Sep 1987 – Mar 1989	**Jožef Stefan Institute, Department of Solid State Physics**	Ljubljana, SLovenia

Intern student
Part-time internship included development of electronic measurement equipment.

Skills

Languages	**English (fluent written and spoken), Italian and Serbo-Croation (spoken), Slovene (mother tongue)**

Digital competence

Scientific Software Development and Modelling

- Extensive experience developing, validating and applying scientific software under scientific workflow engines.
- Familiar with majority of programming and scripting languages. Developed and maintained both serial and parallel software (MPI, OpenMP, StarPU, Cuda).
- Debugging of serial, parallel, in-situ and post-mortem codes.
- Administration, configuration and use of Git version control, continuous integration, content management systems and SQL database interfaces.

Graphical User Interfaces (GUI) and CAD kernel coding

- Expertise in development of Graphical User Interfaces including client-server principles.
- CAD kernel and computer graphics programming.
- *3D scientific visualisation:* Many research project require 3-D visualisations with in-situ debugging on compute clusters (HPC). ParaView and VisIt are main tools used within the project developments. WebGL CAD interfaces of ITER tokamak complex (`http://lecad.si/icomplex`).
- The development of algorithms for processing geometry at the CAD core level and a general description of meshes for visualisation. Based on this research area, Marijo Telenta under his supervision acquired the EUROFusion Engineering Research Grant for a unified interface between CAD and fusion codes (see `http://www.lecad.fs.uni-lj.si/project/fusion/cad2code/`).

Supercomputing and Big Data (Hadoop) resources

- Administering HPC from Development of parallel simulation codes in MPI and MP program model in different domains. Infrastructure support of the HPC system on FS covers system administration of parallel file systems, provisioning, scheduling and preparing of UL cluster execution environments. Hadoop "big-data" nodes of the UL cluster http://hpc.fs.uni-lj.si on many infrastructure projects.
- Administration of Linux HPC environments. Cluster, parallel file systems, "big data" (Hadoop) filesystems, and network switches configuration. Administration of FreeBSD and Linux (Debian, CentOS) flavours.

General computing

- Good command of standard and cloud Office suite and Inkscape. LATEXand ReST formatting.

Scientific

Fusion and plasma physics

- The methods for the grid description for scrape-off layer plasmas (SOL) in generalised form (General Grid Description) have been implemented in different modules for the SOLPS-ITER code.
- Expertise is development of analytic kinetic codes for plasma simulations in plasma−wall transition. The numerical simulations of the collisionless codes were implemented in a parallel code.
- Field-line tracing and power deposition simulations and equilibrium processing.

Behavioral competence

Leadership and Management

- Proven track record through roles including: Acting as Plasma Engineering Group leader (5 students and 2 postdocs) and the Lab's Engineering design programme head (**20 staff members**).
- Coordinator of PRACE Summer of HPC and MOOC programmes where dozen of HPC sites collaborate in mentoring and development of interactive courses.
- Organiser of international schools and conferences. EUROfusion ITM and WPCD code camps in Ljubljana.

Communication and complexity management

- In coordinating mentors in EU HPC centres he demonstrates ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment.
- Ability to analyse multiple and diverse sources of information to define problems accurately before moving to solutions.
- Proficient in all communication, teleconferencing and scheduling tools.
- In leading and coordinating many projects he is able to meet deadlines.

Quick Learning Capability

- Quick learning all the fundamental of thee software technology.

Presentation skills

- Excellent communication skills at numerous international schools, conferences and teaching classes at the university.
- Author of MOOC online course. Video recording and editing.
- Documentation of code development.

Organization of International Conferences and Workshops

Organisational and coordination skills are demonstrated by organising small and large international events in Ljubljana that required communication with many people to meet high expectations at the events listed below.

Coordinator	**PRACE Summer of HPC (2013-2020)**	`https://summerofhpc.prace-ri.eu`
	PRACE Massive Online Open Courses (MOOC)	`https://www.futurelearn.com/partners/prace`
Programme chair	**PRACE autumn school 2019 - Big data and HPC**	`https://events.prace-ri.eu/event/as19`
	PRACE autumn school 2018 - HPC for Engineering and Chemistry	`https://events.prace-ri.eu/event/as18`
	PRACE autumn school 2013 - Industry oriented HPC applications	`https://events.prace-ri.eu/event/as13`
Local organiser and	**European HPC summit week 2018**	`https://exdci.eu/events/european-hpc-summit-week-2018`
programme member	**International HPC school 2016**	`http://ihpcss2016.hpc.fs.uni-lj.si`
Code Camps	**EFDA ITM and EUROfusion WPCD 2013, 2016, 2017, 2018**	Ljubljana, Slovenia

References

1. Siegbert Kuhn, retired, Plasma & Energy Physics, Institute for Theoretical Physics, University of Innsbruck (Austria), `Siegbert.Kuhn@uibk.ac.at`, Phone: +43 59912904374

2. Richard Pitts, Section Leader, Experiments & Plasma Operation Section ITER organization, Saint Paul lez Durance (France) `Richard.Pitts@iter.org`, Phone: +33 4 42 17 65 12

3. David Tskhakaya, Theory and simulation group leader, Institute of Plasma Physics, Prague (Czech republic) `tskhakaya@ipp.cas.cz`, Phone: +43 699 11609766

4. Thomas Jonsson, researcher, KTH Royal Institute of Technology (Sweden), `johnso@kth.se`, Phone: +46 70 726 36 45

5. Rob Akers, Head of Scientific Computing Group and Advanced Computing Programmer Leader, CCFE, Culham Science Centre (UK), `Rob.Akers@ukaea.uk`

6. Davy. D. Tskhakaya, retired head of Institute of Physics, Georgian Academy of Sciences, 0177, Tbilis (Georgian Republic), `dtskhak@yahoo.com`

7. Jože Duhovnik, former head of LECAD laboratory, Mech.Eng. University of Ljubljana, (Slovenia), `jozef.duhovnik@lecad.fs.uni-lj.si`, Phone: +386 41 649 303

List of scientific publications

Peer-reviewed publications in the last 5 years

[1] H. Anand, R. Pitts, P. D. Vries, J. Snipes, L. Kos, Y. Gribov, L. Zabeo, I. Nunes, and M. Brank. "A framework for the assessment and control of ITER main chamber heat loads". In: Nuclear Fusion 60.3 (Feb. 2020), p. 036011. DOI: `10.1088/1741-4326/a` URL: `https://doi.org/10.1088%2F1741-4326%2Fab6150`.

[2] D. D Tskhakaya, I. Vasileska, L. Kos, N. Jelić, and S. Kuhn. "Time-dependent kinetic theory of the plasma-wall transition layer in a weakly ionized plasma". In: 27.1 (2020). DOI: `10.1063/1.5123911`.

[3] H. Anand, R. A. Pitts, P. C. De Vries, J. A. Snipes, F. Nespoli, B. Labit, C. Galperti, S. Coda, M. Brank, and L. Kos. "Experimental implementation of a real-time power flux estimator for the ITER first wall on the TCV tokamak". In: Fusion Engineering and Design 147 (2019), p. 111242. ISSN: 0920-3796. DOI: `10.1016/j.fusengdes.2019.111242`. URL: `http://www.sciencedirect.com/science/article/pii/S0920379619307203`.

[4] L. Kos, R. A. Pitts, G. Simič, M. Brank, H. Anand, and W. Arter. "SMITER: A field-line tracing environment for ITER". In: Fusion Engineering and Design 146 (Sept. 2019), pp. 1796–1800. DOI: `10.1016/j.fusengdes.2019.03.037`.

[5] L. Kos, N. Jelić, T. Gyergyek, S. Kuhn, and D. Tskhakaya. "Modeling and simulations of plasma and sheath edges in warm-ion collision-free discharges". In: AIP advances (2018), pp. 1–23. DOI: `10.1063/1.5044664`. URL: `https://aip.scitation.org/doi/pdf/10.1063/1.5044664?class=pdf`.

[6] L. Kos, N. Jelić, S. Kuhn, and D. Tskhakaya. "Introduction to the theory and application of a unified Bohm criterion for arbitrary-ion-temperature collision-free plasmas with finite Debye lengths". In: Physics of plasmas (2018), pp. 1–16. DOI: `10.1063/1.5030121`. URL: `https://aip.scitation.org/doi/10.1063/1.5030121`.

[7] L. Kos and D. D. Tskhakaya. "Theory of ion-matrix-sheath dynamics". In: AIP advances (2018), f015202–1–015202–13. DOI: `10.1063/1.5017654`.

[8] D. D. Tskhakaya, L. Kos, and D. D. Tskhakaya. "Stability of the Tonks-Langmuir discharge pre-sheath". In: Physics of plasmas (2016), pp. 1–10. DOI: `10.1063/1.4944916`. URL: `http://scitation.aip.org/content/aip/journal/pop/23/3/10.1063/1.4944916`.

[9] L. Kos, D. D. Tskhakaya, and N. Jelić. "Unified Bohm criterion". In: Physics of plasmas (2015), pp. 1–5. DOI: `10.1063/1.4930207`. URL: `http://scitation.aip.org/content/aip/journal/pop/22/9/10.1063/1.4930207`.

[10] G. L. Falchetto, D. Coster, R. J. Coelho, L. Kos, S. Kulovec, I. Lengar, and L. Snoj. "The European Integrated Tokamak Modelling (ITM) effort : achievements and first physics results". In: Nuclear fusion (2014), p. 043018. DOI: `10.1088/0029-5515/54/4/`
[11] D. D. Tskhakaya and L. Kos. "Comprehensive kinetic analysis of the plasma-wall transition layer in a strongly tilted magnetic field". In: Physics of plasmas (2014), pp. 1–13. DOI: `10.1063/1.4900765`.
[12] D. D. Tskhakaya, L. Kos, and N. Jelić. "A unified analysis of plasma-sheath transition in the Tonks-Langmuir model with warm ion source". In: Physics of plasmas (2014), pp. 1–12. DOI: `10.1063/1.4885638`. URL: `http://lecad.fs.uni-lj.si/~leon/research/ppgplasma/PHPAEN21144885638.pdf`.
[13] N. Jelić and L. Kos. "Ion-sound velocity at the plasma edge in fusion-relevant plasmas". In: Nuclear Engineering and Design (2013), pp. 269–274. DOI: `10.1016/j.nucengdes.2012.12.004`.
[14] L. Kos, D. D. Tskhakaya, S. Kuhn, and N. Jelić. "Debye-sheath properties in the Tonks-Langmuir discharge with warm neutrals". In: Journal of plasma physics (2013), pp. 1021–1024. DOI: `10.1017/S0022377813000949`.

Non-peer-reviewed publications in the last 5 years

[15] N. Jelić, L. Kos, and S. Kuhn. "A new analytic solution to the collision-free plasma equation with warm ions". In: 46th EPS Conference on Plasma Physics. Milan, Italy: European Physical Society, July 2019. URL: `http://ocs.ciemat.es/EPS2019PAP/pdf/P1.3002.pdf`.
[16] N. Jelić, L. Kos, and S. Kuhn. "Towards a universal collision-free sheath solution with warm ions". In: 46th EPS Conference on Plasma Physics. Milan, Italy: European Physical Society, July 2019. URL: `http://ocs.ciemat.es/EPS2019PAP/pdf/P5.3013.pdf`.
[17] I. Vasileska, D. Tskhakaya, and L. Kos. "ITER plasma sheath characteristics during ELMs". In: 46th EPS Conference on Plasma Physics. Milan, Italy: European Physical Society, July 2019. URL: `http://ocs.ciemat.es/EPS2019PAP/pdf/P1.3002.pdf`.
[18] L. Kos, N. Jelić, S. Kuhn, D. D. Tskhakaya, and T. Gyergyek. "On universal properties of the plasma-sheath transition and large-size sheath structures". In: 45th EPS Conference on Plasma Physics : 2-6 July 2018, Prague, Czech Republic. 2018, pp. 1–4. URL: `http://ocs.ciemat.es/EPS2018PAP/pdf/P1.4014.pdf`.
[19] L. Kos, N. Jelić, S. Kuhn, D. D. Tskhakaya, and T. Gyergyek. "On universal properties of the plasma-sheath transition and large-size sheath structures". In: 45th EPS Conference on Plasma Physics, 2-6 July 2018, Prague, Czech Republic. 2018, p. 1. URL: `http://ocs.ciemat.es/EPS2018ABS/pdf/P1.4014.pdf`.
[20] L. Kos, D. Penko, X. Bonnin, and S. Pinches. "IMAS for SOLPS-ITER". In: Conference proceedings : Nuclear energy for new Europe NENE 2017. Ed. by L. Cizelj and T. Holler. 2017, f7121–7128. URL: `http://www.djs.si/proc/nene2017/html/pdf/NENE2017_712.pdf`.
[21] S. Pinches and L. Kos. "Progress in the ITER integrated modelling programme and the use and validation of IMAS with in the ITER members". In: Programme & book of abstracts & conference materials : 26th IAEA Fusion Energy Conference, Kyoto, 17 - 22 October 2016. 2017. URL: `https://nucleus.iaea.org/sites/fusionportal/Shared20Documents/FEC202016/FEC2016_ConfMat_Online.pdf`.
[22] M. Telenta, L. Kos, R. Akers, and R. Pitts. "CAD model preparation in SMITER 3D field line tracing code". In: Conference proceedings : Nuclear energy for new Europe NENE 2017. Ed. by L. Cizelj and T. Holler. 2017, f7141–7146. URL: `http://www.djs.si/proc/nene2017/html/pdf/NENE2017_714.pdf`.
[23] I. Vasileska, X. Bonnin, L. Kos, and R. Pitts. "SOLPS coupled fluid-kinetic modelling of hydrogen low power plasma in ITER Divertor". In: Conference proceedings : Nuclear energy for new Europe NENE 2017. Ed. by L. Cizelj and T. Holler. 2017, f7131–7138. URL: `http://www.djs.si/proc/nene2017/html/pdf/NENE2017_713.pdf`.
[24] I. Vasileska, L. Kos, D. Tskhakaya, R. Pitts, and T. Gyergyek. "PIC kinetic modelling for ELM transport in the scrape-off layer". In: Conference proceedings : Nuclear energy for new Europe NENE 2017. Ed. by L. Cizelj and T. Holler. 2017, f7081–7088. URL: `http://www.djs.si/proc/nene2017/html/pdf/NENE2017_708.pdf`.
[25] I. Vasileska, L. Kos, D. Tskhakaya, R. Pitts, and T. Gyergyek. "PIC kinetic modelling for ELM transport in the scrape-off layer". In: Book of abstracts. 2017, p. 115.
[26] L. Kos, I. Lupelli, and X. Bonnin. "SOLPS-ITER dashboard". In: Proceedings. Ed. by L. Snoj and I. Lengar. 2016, f1–10. URL: `http://www.djs.si/proc/nene2016/html/pdf/NENE2016_901.pdf`.
[27] M. Telenta and L. Kos. "A CAD service for fusion physics codes". In: Mipro proceedings. Ed. by P. Biljanović. 2016, f303–307. URL: `http://docs.mipro-proceedings.com/dcvis/dcvis_23_3922.pdf`.
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[29] M. Telenta, L. Kos, R. Akers, and I. Lupelli. "A link between CAD models and physics codes". In: 43rd EPS Conference on Plasma Physics : 4-8 July 2016, Leuven, Belgium. 2016, f1. URL: `http://ocs.ciemat.es/EPS2016ABS/pdf/P2.044.pdf`.
[30] L. Kos, J. Krek, and M. Telenta. "Visualisation of fusion related models stored in general grid description". In: Proceedings. Ed. by I. Jenčič. 2015, pp. 704.1–704.8.
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[32] N. Jelić and L. Kos. "Towards a theory of collisionless-discharges with imbalanced global charge-outfluxes". In: Book of abstracts. 2014, pp. 77–78.
[33] L. Kos. "Visualization support for code development in EUROfusion Integrated modelling". In: MIPRO 2014 : proceedings. Ed. by P. Biljanović. 2014, pp. 392–397. DOI: `10.1109/MIPRO.2014.6859597`.

[34] L. Kos, S. Kulovec, and J. Duhovnik. "Post-optimization of free-form support structures". In: Tools and methods of competitive engineering : proceedings of the tenth International Symposium on Tools and Methods of Competitive Engineering - TMCE 2014, May 19-23, Budapest, Hungary. Ed. by I. Horváth and Z. Rusák. 2014, pp. 1323–1333.

[35] L. Kos and G. Ramesh. "Visualization schema for fusion data structures". In: Proceedings. Ed. by I. Jenčič. 2014, f1–10.

[36] D. D. Tskhakaya, L. Kos, and S. Kuhn. "Stability of the pre-sheath in the Tonks-Langmuir discharge". In: 41st EPS Conference on Plasma Physics : 23-27 June 2014, Berlin, Germany. Ed. by S. Ratynskaia. 2014, f1–4. URL: http://ocs.ciemat.es/EPS2014PAP/pdf/P4.137.pdf.

[37] T. Gyergyek, J. Kovačič, N. Jelić, and L. Kos. "Sheath formation in front of a negative electrode close to plasma potential studied by PIC simulations". In: Proceedings. Ed. by A. Žemva, P. Šorli, and I. Šorli. 2013, pp. 115–120.

[38] N. Jelić and L. Kos. "Towards possible control of plasma outflow in fusion-relevant devices via employing virtual terminating surfaces". In: Proceedings. Ed. by L. Cizelj, M. Leskovar, and M. Uršič. 2013, daoeka1403(8f). URL: http://lecad.si/~leon/research/NENE2013-plasma-outflow.pdf.

[39] N. Jelić, L. Kos, J. Krek, and J. Duhovnik. "Kinetic theory and simulations of moderately strong stationary double layers with warm ions". In: Plasma Science (ICOPS), 2013 Abstracts IEEE International Conference on Date 16-21 June 2013, San Francisco,California, USA. 2013, f1. DOI: 10.1109/PLASMA.2013.6633373.

[40] N. Jelić, L. Kos, J. Krek, J. Kovačič, T. Gyergyek, A. J. Christlieb, and J. P. Verboncoeur. "Ionization front in a gas-filled diode during electrical breakdown". In: Proceedings. Ed. by A. Žemva, P. Šorli, and I. Šorli. 2013, pp. 109–114.

[41] L. Kos, H.-J. Klingshirn, P. L. G. Müller, and F. Imbeaux. "Unified approach to visualizations within the european integrated tokamak modelling framework". In: Proceedings. Ed. by L. Cizelj, M. Leskovar, and M. Uršič. 2013, daoeka1402(8f). URL: http://lecad.si/~leon/research/itm-visualization.pdf.

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Most important scholarly publications

[1] L. Kos, R. A. Pitts, G. Simič, M. Brank, H. Anand, and W. Arter. "SMITER: A field-line tracing environment for ITER". In: Fusion Engineering and Design 146 (Sept. 2019), pp. 1796–1800. DOI: 10.1016/j.fusengdes.2019.03.037.

[2] L. Kos, N. Jelić, T. Gyergyek, S. Kuhn, and D. Tskhakaya. "Modeling and simulations of plasma and sheath edges in warm-ion collision-free discharges". In: AIP advances (2018), pp. 1–23. DOI: 10.1063/1.5044664. URL: https://aip.scitation.org/doi/pdf/10.1063/1.5044664?class=pdf.

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