Curriculum Vitae: Dr.-Ing. Víctor Hugo Sánchez Espinoza

A. Personal data

Name and Surname:	Víctor Hugo, Sánchez Espinoza
Birthday and birthplace:	01.04.1960, Cajamarca, Perú
Nationality:	German
Family status:	Married, 2 sons

Current Affiliation: Karlsruhe Institute of Technology (KIT)
Hermann-vom-Helmholtz-Platz-1
76344 Eggenstein-Leopoldshafen,
Germany
KIT: www.inr.kit.edu
INR: www.inr.kit.edu/english/index.php
Victor.Sanchez@kit.edu

Since 1996 - now

B. Education

Doctoral Thesis	Nuclear Technology Chair of the Mechanical Engineering Faculty, Dresden University of Technology	04/1984-04/1987
Master Studies:	HZDR Research Centre near Dresden	11/1983-02/1984
University study:	Dresden University of Technology Energy Technology-Nuclear Energy	08/1979-02/1984
German University Entrance Qualification	Herder Institute Leipzig	09/1978-06/1979
University Studies	National Engineering University (UNI) Lima, Peru. **Major:** Mechanical Engineering	03/1978-08/1978
Secondary School:	Secondary School: Gran Unidad Escolar Sanchez Carrion, Trujillo	04/1967-12/1977

C. Professional Development

Head of Group	Karlsruhe Institute of Technology (KIT) Institute for Neutron Physics and Reactor Technology (INR) **Group** Reactor Physics and Dynamics (RPD)	April/2012- now
Project Leader „LWR Methods and Safety"	Karlsruhe Institute of Technology (KIT) Institute for Neutron Physics and Reactor Technology (INR)	10/2009- now

Deputy Group Leader	Karlsruhe Institute of Technology (KIT) Institute for Neutron Physics and Reactor Technology (INR) **Group** Reactor Physics and Dynamics (RPD)	05/2011- 03/2012
Deputy Group Leader	Karlsruhe Institute of Technology (KIT) Institute for Neutron Physics and Reactor Technology (INR) **Group** Methods Developments for Innovative Reactor (MIR)	10/2009- 04/2011
Senior Scientist	Research Centre Karlsruhe (FZK), Institute of Reactor Safety (IRS) **Division** Neutron Physics and Reactor Technology	02/1996-09/2009
Staff Member	Peruvian Research Centre (IPEN) Nuclear Regulatory Division Lima, Peru.	02/1988-02/1990

D. Lectureship

Karlsruhe Institute of Technology (KIT), Mechanical Engineering Faculty	- Course 1: Nuclear Safety I: Fundamentals (15 SWS) - Course 2: Nuclear Safety II: Assessment of Nuclear Power Plant (15 SWS) -	Since 2008- now
Lectureship at KIT AREVA Nuclear Professional School	- Course 1: Neutron Kinetic- Thermal Hydraulic Codes (15 SWS) - Course 2: Design Basis Accident and its numerical simulation tools (15 SWS) -	Since 2009 - now
Member of Doctoral Thesis Examination Committee	- In different Universities e.g. Universidad Politecnica de Valencia (UPV), Universidad Politecnica de Madrid (UPM), Delft University of Technology (TU Delft) -	
Advisor of Doctoral thesis, Bachelor and Master thesis as well as Internships	**Karlsruhe Institute of Technology (KIT), Mechanical Engineering Faculty**	Since 2000 - now

E. Additional Responsibilities

Mentor of Start-up Project (spin-off) in the frame of EXIST at KIT	PARALUTION Labs www.paralution.com	2015
IAEA Expert	Reactor Safety, Reactor Technology, Research and Power reactors, Safety Assessment of Nuclear Power Plants	Since 2012
Work Package Leader	EU GENLTE Project on "Graduate and Executive Nuclear Training and Lifelong Education	Since 2014
Project Coordinator	EU Project HPMC on "High Performance Monte Carlo Methods for Core Analysis"	Since 2011-2013
Subproject Coordinator	EU Project NURESAFE on "European Reactor Simulation Platform"	Since 2013-2015
Governing Board Member	EU Project NURESAFE on "European Reactor Simulation Platform"	Since 2013-2015
Subproject Coordinator	EU Project CESAM on "Code for European Severe Accident Management"	Since 2013
Subproject Coordinator	BMBF Project WASABOSS Part F	2013 -2016
Scientific Secretariat	German /French Frederic Joliot Otto-Hahn Summer School on Nuclear Reactor Physics, Systems and Fuels	Since 2004 - now
German Representative at international US NRC CAMP Program	International Code Assessment and Application Program (CAMP) of the US NRC	Since 2014 - now
Member of the Selection Board of the German Nuclear Society Annual Meeting	Nuclear Safety Section	Since 2003 - now

F. Invited Lectures

Frederic Joliot Otto Hahn Summer School 2015.	Enhanced Reactor Safety -Design and Simulation of LWR Evolutionary Cores.	August 19-28, 2015

Karlsruhe Institute of Technology. Karlsruhe, Germany	Topic 3: Thermo-hydraulics and Multi-physics Subtopic 3.1: Coupled Multi-physics Simulations for DBA Assessment of Evolutionary Plants	
Joint International Conference on Mathematics and Computation, Supercomputing in Nuclear Applications and the Monte Carlo Method. Nashville, TN, USA. American Nuclear Society, LaGrange Park, IL	Towards the Development of coupled Monte Carlo / Subchannel Thermal hydraulic Codes for high fidelity Simulation of Light Water Reactor Full Cores	April 19-23, 2015
The 23rd International Conference on Nuclear Engineering (ICONE23) Chiba, Japan	European View on Severe Accidents R&D Needs after Fukushima. Panel Session 3: Beyond Design Basis Accidents: Important Severe Accident R & D Issues after Fukushima Accidents	May 17-21. 2015
European Joint Research Center Transuranium Elements (JRC-ITU) Karlsruhe, Germany	Basic Course on Nuclear Safety (3 SWS)	December 13th 2012
MATRE-I Material for Innovative Reactors Summer School. Research Center SCK CEN Belgium	Generation II PWR and BWR	2009
Annual Meeting of Nuclear Technology KTG-2008 Hamburg, Germany	Qualification of coupled Neutronic Thermal Hydraulic System Codes	May 2008
Universidad Politecnica de Madrid	Madrid, Spain Course on Thermal Hydraulic System Codes: Use and Applications of the Program TRACE for VVER Reactors	2006
Frederic Joliot/Otto Hahn Summer School	Karlsruhe, Safety-related Modeling Challenges in Reactor Fluid Dynamics. Topic Steam Line Break Transients	2003

I. Languages

Spanish (Mother language), German, English

J. Publications (2000-2016)

Miriam Knebel, Luigi Mercatali, **Victor Sanchez**, Robert Stieglitz, Rafael Macian-Juan; Validation of the Serpent 2-DYNSUB code sequence using the Special Power Excursion Reactor Test III (SPERT III). Annals of Nuclear Energy 91 (2016) 79-91.

Bruno Chanaron, Carol Ahnert, Nicolas Crouzet, **Victor Sanchez**, Nikola Kolev, Olivier Marchand, Soeren Kliem, Angel Papukchiev; Advanced multi-physics simulation for reactor safety in the framework of the NURESAFE project. Annals of Nuclear Energy 84 (2015) 166–177

L. Mercatali, A. Venturini, M. Daeubler, **V. H. Sanchez**; SCALE and SERPENT solutions of the OECD VVER-1000 LEU and MOX burnup computational benchmark. Annals of Nuclear Energy 83 (2015) 328–341

Däubler M., Ivanov A., Sjenitzer B., **Sanchez V.,** Stieglitz R., Macian-Juan R.; High-Fidelity coupled Monte Carlo Neutron transport and thermal-hydraulic simulations using Serpent 2/SUBCHANFLOW - Part I: Implementation and Solution Verification. Annals of Nuclear Energy 83 (2015) 352–375

Bart L. Sjenitzer, J. Eduard Hoogenboom, Javier Jiménez Escalante , **Victor Sanchez** Espinoza; Coupling of dynamic Monte Carlo with thermal-hydraulic feedback. ANE 76 (2015)27-39.

Miriam Daeubler, Nico Trost, Javier Jimenez, **Victor Sanchez**, Robert Stieglitz, Rafael Macian-Juan; Static and transient pin-by-pin simulations of a full PWR core with the extended coupled code system DYNSUB. Annals of Nuclear Energy 84 (2015) 31–44

Ivanov, **V. Sanchez**, R. Stieglitz, K. Ivanov; Large-scale Monte Carlo neutron transport calculations with thermal hydraulic feedback. Annals of Nuclear Energy 84 (2015) 204–219

Valentino Di Marcello, Javier Jimenez Escalante, **Victor Sanchez Espinoza**; Validation of the thermal-hydraulic system code ATHLET based on selected pressure drop and void fraction BFBT tests. Nuclear Engineering and Design 288 (2015) 183–194.

Nico Trost, Javier Jiménez, Dimitar Lukarski and **Victor Sanchez**; Accelerating COBAYA3 on multi-core CPU and GPU systems using PARALUTION. Annals of Nuclear Energy 82 (2015) 252–259

Armando Miguel Gomez-Torres, **Victor Hugo Sanchez-Espinoza**, Sören Kliem, Andre Gommlich; Implementation of a fast running full core pin power reconstruction method in DYN3D. Nuclear Engineering and Design 274 (2014)44-55.

A. Ivanov, **V. Sanchez**, R. Stieglitz, K. Ivanov; Internal multi-scale multi-physics coupled system for high fidelity simulation of light water reactors, Annals of Nuclear Energy, 66C (2014) p.104 - 112.

M. Calleja, J. Jimenez, U. Imke, **V. Sanchez**, R. Stieglitz, José J. Herrero, R. Macián; Implementation of hybrid simulation schemes in COBAYA3/SUBCHANFLOW coupled codes for the efficient direct prediction of local safety parameters Annals of Nuclear Energy, Volume 70, August 2014, Pages 216-229.

M. Calleja, **V. Sanchez**, J. Jimenez, U. Imke, R. Stieglitz, R. Macián ; Coupling of COBAYA3/SUBCHANFLOW inside the NURESIM platform and validation using selected benchmarks. Annals of Nuclear Energy, Volume 71, September 2014, Pages 145-158.

M. Calleja, J. Jimenez, **V. Sanchez**, U. Imke, R. Stieglitz, R. Macián; Investigations of boron transport in a PWR core with COBAYA3/SUBCHANFLOW inside the NURESIM platform. Annals of Nuclear Energy, Volume 66, April 2014, Pages 74-84

Jorge Pérez Mañes, **Victor Hugo Sánchez Espinoza**, Sergio Chiva, Boettcher Michael, and

Robert Stieglitz; Validation of NEPTUNE-CFD Two-Phase Flow Models Using Experimental Data. Volume 2014, Science and Technology of Nuclear Installations Article ID 185950, 19 pages http://dx.doi.org/10.1155/2014/185950

Jorge Pérez Mañes, **Victor Hugo Sánchez Espinoza**, Sergio Chiva, and Robert Stieglitz; A New Coupled CFD/Neutron Kinetics System for High Fidelity Simulations of LWR Core Phenomena: Proof of Concept. Volume 2014 (2014), Science and Technology of Nuclear Installations Article ID 294648, 13 pages, http://dx.doi.org/10.1155/2014/294648.

Jaeger, W. & **Sánchez Espinoza, V. H.,** "Uncertainty and Sensitivity Study in the Frame of Thermo-Hydraulic Code Validation for Reflood Experiments. Nuclear Technology Vol.184 (2013) p333-350.

A. Ivanov, **V. Sanchez** and R. Stieglitz, K. Ivanov; High Fidelity Simulation of Conventional and Innovative LWR with the Coupled MONTE-CARLO Thermal Hydraulic System MCNP-SUBCHANFLOW. Nuclear Engineering and Design 262 (2013) 264-275.

Jaeger, W., **Sánchez Espinoza, V. H**., Montero Mayorga, F.J. & Queral, C.; Uncertainty and Sensitivity Studies with TRACE-SUSA and TRACE-DAKOTA by means of steady state BFBT Data. Science and Technology of Nuclear Installations. Article ID 610598. 2013.

Jaeger, W., **Sánchez Espinoza, V. H.,** Montero Mayorga, F.J. & Queral, C.; Uncertainty and Sensitivity Studies with TRACE-SUSA and TRACE-DAKOTA by means of transient BFBT Data. Science and Technology of Nuclear Installations. Article ID 565246, 2013.

L. Mercatali, K. Ivanov and **V. Sanchez**; SCALE Modeling of Selected Neutronics Test Problems within the OECD UAM LWR's Benchmark. Science and Technology of Nuclear Installations. Vol. 2013. Article ID 573697.

Jaeger, W., Perez Manes, J., Imke, U., Jimenez Escalante, J. & **Sánchez Espinoza, V. H.**, "Validation and Comparison of Two Phase Flow Modeling Capabilities of CFD, Sub Channel and System Codes by means of Post-Test Calculations of BFBT Transient Tests." Nuclear Engineering and Design 263 (2013) 313– 326.

Jaeger, W., **Sánchez Espinoza, V. H.;** On the Evaluation of a Fuel Assembly Design by Means of Uncertainty and Sensitivity Measures. Kerntechnik, Vol. 77, No. 5: pp. 324–332, 2012.

A. M. Gomez Torres, **V. Sánchez**, K. Ivanov, R. Macián; DYNSUB: A high fidelity coupled code system for the evaluation of local safety parameters. Part II: Comparison of the different temporal schemes implemented. Annals of Nuclear Energy 48 (2012) 123-129.

A. M. Gomez Torres, **V. Sánchez**, K. Ivanov, R. Macián Juan; DYNSUB: A high fidelity coupled code system for the evaluation of local safety parameters. Part I: Development, implementation and verification. Annals of Nuclear Energy 48 (2012) 108-122.

V. H. Sánchez, M. Thieme and W. Tietsch; Validation and Application of the Thermal Hydraulic System Code TRACE for Analysis of BWR Transients. Science and Technology of Nuclear Installations Volume 2012, Article ID 247482, 9 pages

U. Imke and **V. Sanchez;** Validation of the Subchannel Code SUBCHANFLOW Using the NUPEC PWR Tests (PSBT). Science and Technology of Nuclear Installations. Volume 2012, Article ID 465059, 12 pp.

Jaeger, W., **Sánchez Espinoza, V.H.,** "Uncertainty and Sensitivity Analysis for the HELIOS Loop within the LACANES Benchmark". Journal of Energy and Power Engineering Vol.5:pp 515-524, 2011.

Jaeger, W., **Sánchez Espinoza, V. H.,** & Hurtado, A., "Review and proposal for heat transfer predictions at supercritical water conditions using existing correlations and experiments", Nuclear Engineering and Design. Nuclear Engineering and Design, Vol. 241, No. 6: pp. 2184–2203, 2011.

V. Sanchez, W. Jäger, M. Böttcher, B. Truong; Investigation of a Coolant Mixing Phenomena

within the Reactor Pressure Vessel of a VVER-1000 Reactor with different Simulation Tools. Journal Science and Technology of Nuclear Installations Vol. 2010, Article ID 470794, 14 pages.

W. Jäger, **V. Sánchez**, W. Lischke; Safety Related Investigations of the VVER-1000 Reactor Type by the Coupled Code System TRACE/PARCS. Journal of Power and Energy Systems. Vol2. No.2, 2008. Japan Society of Mechanical Engineers

V. Sánchez, M. Böttcher; Investigations of the V1CT Benchmark Phase 1 with the Coupled Code System RELAP5/PARCS. Progress of Nuclear Energy 48 (2006)865-879.

Jaeger, W., Perez Manes, J., Imke, U., Jimenez Escalante, J. & **Sánchez Espinoza, V.H.**, "Validation and Comparison of Two Phase Flow Modeling Capabilities of CFD, Sub Channel and System Codes by means of Post-Test Calculations of BFBT Transient Tests.", Nuclear Engineering and Design.

Jaeger, W. & **Sánchez Espinoza, V.H.**; Uncertainty and Sensitivity Study in the Frame of Thermo-Hydraulic Code Validation for Reflood Experiments. Nuclear Technology.

Armando Miguel Gomez-Torres, **Victor Hugo Sanchez-Espinoza**; Implementation of a fast running full core pin power reconstruction method in DYN3D. Nuclear Engineering and Design 2013

International Conferences with Peer Review (till 2015)

J. Basualdo, **V. Sanchez**; PARCS/SUBCHANFLOW: Nodal Internal coupling. International CAMP Spring Meeting. Prague, May 22-27, 2015.

J.P. Van Dorsselaere, P. Chatelard, K. Chevalier-Jabet, H. Nowack, L.E. Herranz, G. pasal, **V. H. Sanchez-Espinoza**; ASTEC code development, validation and applications for severe accident management within the CESAM European project. ICAPP-2015, P15392. May 03-06., 2015. Nice, France.

J. L. Kloosterman, R.J.M. Konings, D. Manara, **V. H. Sanchez**, M. Ricotti &, R. Tamboer, A.H. Tkaczyk; Professional Education in the framework of THE EURATOM FP7 GENTLE PROJECT. . ICAPP-2015, P15453. May 03-06., 2015. Nice, France.

Alexander Ponomarev, Anton Travleev, Werner Pfrang, **Victor Sanchez**; Coupled MCNP – SAS-SFR Calculations for Sodium Fast Reactor Core at Steady-State. ICAPP-2015, P15460. May 03-06., 2015.

Valentino Di Marcello, **Victor Sanchez**, Uwe Imke; ATHLET-CD Analysis of Water Injection into a partly-damaged BWR Core for Accident Management improvement. ICONE-23 P1244. May 17-21. 2015. Chiba,m Japan.

V. Sanchez (KIT), J.-P. Van Dorseleare (IRSN), W. Klein-Heßling (GRS) and A. Miassoedov (KIT); European View on Severe Accidents R&D Needs after Fukushima. Panel Session 3: Beyond Design Basis Accidents: Important Severe Accident R & D Issues after Fukushima Accidents. ICONE-23 P1244. May 17-21. 2015. Chiba,m Japan (invited).

V. Di Marcello, U. Imke, **V. H. Sanchez Espinoza**; WASA-BOSS: Investigation of the coolability of partly-damaged BWR core by water injection into the RPV. Annual Meeting on Nuclear Technology. Berlin, Germany, May 5-7 2015.

Ignacio Gómez García-Toraño, V. Sanchez, R. Stieglitz; Simulation of Large Break LOCA sequence in a German PWR Konvoi with ASTEC. Annual Meeting on Nuclear Technology. Berlin, Germany, May 5-7 2015

J. Basualdo, **V. Sánchez**, R. Stieglitz, R. Macián-Juan; Neutronic modeling of a PWR Konvoi type reactor using PARCS with few group cross section generated with SCALE and SERPENT. Annual Meeting on Nuclear Technology. Berlin, Germany, May 5-7 2015

L. Mercatali, A. Venturini, **V. H. Sanchez**; Monte Carlo neutronics investigations of VVER-

1000 fuel assemblies. Annual Meeting on Nuclear Technology. Berlin, Germany, May 5-7 2015 Ivanov and **V. Sanchez**; Variance reduction in high resolution coupled Monte Carlo - Thermal-hydraulics calculations. MC2015 – P304. Joint International Conference on Mathematics and Computation (M&C), Supercomputing in Nuclear Applications (SNA) and the Monte Carlo (MC) Method, Nashville, Tennessee. April 19–23, 2015, (invited).

V. Sanchez and A. Ivanov, J. E. Hoogenboom; Towards the development of coupled Monte Carlo/Subchannel thermal hydraulic codes for high-fidelity simulation of LWR full cores. MC2015 – P134. Joint International Conference on Mathematics and Computation (M&C), Supercomputing in Nuclear Applications (SNA) and the Monte Carlo (MC) Method, Nashville, Tennessee. April 19–23, 2015, (invited).

J. Eduard Hoogenboom, Aleksandar Ivanov and **Victor Sanchez**; Maximum efficiency in massively parallel execution of Monte Carlo calculations; MC2015 – P139. Joint International Conference on Mathematics and Computation (M&C), Supercomputing in Nuclear Applications (SNA) and the Monte Carlo (MC) Method, Nashville, Tennessee. April 19–23, 2015.

2014

Francisco Javier Chaparro Vega, Edmundo del Valle Gallegos, Andrés Rodríguez Hernández, Armando Miguel Gómez Torres, **Víctor Hugo Sánchez Espinoza**, Wadim Jäger. Investigaciones Relacionadas con Seguridad Termohidráulica con el Código TRACE. XXV Congreso Anual de la Sociedad Nuclear Mexicana XIII Congreso Nacional de la Sociedad Mexicana de Seguridad Radiológica Boca del Río, Veracruz, México, del 31de Agosto al 4 de Septiembre de 2014.

Markus T. Schlenker, **Victor H. Sanchez Espinoza**; Increasing the Fuel Utilization in Gen-II BWR with Reduced-Moderation Square Lattice Fuel Assemblies. ICAPP-2014 P14145. April 6-9.2014. Charlotte, USA.

Miriam Daeubler, Javier Jimenez and **Victor Sanchez**; Generation and Application of Interface Discontinuity Factors in the Reactor Simulator DYN3D. ICAPP-2014 P14025. April 6-9.2014. Charlotte, USA.

Alexander Ponomarev, **Victor Sanchez**; Modeling of Reactivity Effects and Non-Uniform Axial Expansion of SFR Core on Basis of Neutronics Model with Constant Calculation Mesh. ICAPP-2014 P14146. April 6-9.2014. Charlotte, USA.

Wadim Jaeger, **Victor Hugo Sánchez Espinoza**, Florentin Llombart Monfort; Application of Fast Fourier Transformation Methods in the Frame of Uncertainty and Sensitivity Studies for Reflood Experiments. ICAPP-2014 P14130. April 6-9.2014. Charlotte, USA.

Mehtap GÜNAY, **Victor Hugo Sanchez Espinoza** and Anton TRAVLEEV; The Effect on Neutronic Calculations of Certain Alternative Fuels in a Boiling Water Reactor By Using MCNPX Monte Carlo

B. chanaron, S. Kliem, D. Lakehal, D. Bestion, **V.H. Sanchez**, N. Crouzet; The European NURESAFE simulation project for reactor safety. ICONE22, P30321. July 11-17, 2014, Prague, Czech Republic.

Aleksandar Ivanov, **Victor Sanchez**, Robert Stieglitz; Large-Scale Multiphysics Monte Carlo/Thermal-Hydraulics Calculations. Annual Meeting on Nuclear Technology. Frankfurt, Germany, May 6-8 2014

V. Di Marcello, A. Belousov, U. Imke, **V. H. Sanchez Espinoza**; ATHLET-CD post-test calculations of CORA-17 bundle experiment. Annual Meeting on Nuclear Technology. Frankfurt, Germany, May 6-8 2014

Ignacio Gomez García-Toraño, **V. Sanchez**, R. Stieglitz; ASTEC Validation based on the KIT Re-flooding Experiment QUENCH-08. Annual Meeting on Nuclear Technology. Frankfurt, Germany, May 6-8 2014

J. Jiménez, N. Trost, U. Imke, **V. Sánchez**; Recent developments in TWOPORFLOW, a Two-phase Porous Media Code for Transient Thermo-hydraulic Simulations. Annual Meeting on Nuclear Technology. Frankfurt, Germany, May 6-8 2014

Javier Jiménez, Nico Trost, Wadim Jaeger, **Victor Sanchez**; Sensitivity Analysis of the Oskarshamn-2 Stability Event Using the URANIE Software. The 10th International Topical Meeting on Nuclear Thermal-Hydraulics, Operation and Safety NUTHOS10. P1319. Okinawa, Japan, December 14-18, 2014

R. C. Lopez-Solis, J. L. Francois, M. Becker and **V. H. Sánchez-Espinoza**, Comparison of KANEXT and SERPENT for fuel depletion calculations of a Sodium Fast Reactor. The 19th Pacific Basin Nuclear Conference (PBNC 2014). Vancouver, British Columbia, Canada, August 24-28, 2014.

Ivanov, **V. Sanchez** and R. Stieglitz, K. Ivanov; Large-Scale Monte Carlo calculations with thermal-hydraulic feedback. PHYSOR 2014 – The Role of Reactor Physics Toward a Sustainable Future The Westin Miyako, Kyoto, Japan, September 28 – October 3, 2014, on CD-ROM (2014).

M. Däubler, J. Jimenez and **V. Sanchez**; Development of a high-fidelity Monte Carlo thermal-hydraulics coupled code system. PHYSOR 2014 – The Role of Reactor Physics Toward a Sustainable Future The Westin Miyako, Kyoto, Japan, September 28 – October 3, 2014, on CD-ROM (2014).

2013

A. Ivanov, **V. Sanchez**, K. Ivanov; High fidelity Monte-Carlo-Thermal-Hydraulics calculations. Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2013 (SNA + MC 2013). La Cité des Sciences et de l'Industrie, Paris, France, October 27-31, 2013.

Nico Trost, Javier Jiménez, **Victor Sanchez**, Uwe Imke; Parallelization of TWOPORFLOW, a Cartesian grid based two-phase porous media code for transient thermo-hydraulic simulations. Joint International Conference on Supercomputing in Nuclear Applications and Monte Carlo 2013 (SNA + MC 2013). La Cité des Sciences et de l'Industrie, Paris, France, October 27-31, 2013.

M. Däubler, J. Jiménez, **V. Sánchez;** DYNSUB: A high-fidelity coupled code system for reactor core safety assessment. Annual Meeting of German Nuclear Society. May 2013, Berlin.

Miriam Daeubler, Nico Trost and **Victor Sanchez**; Performance optimization of the high – fidelity coupled code system DYNSUB. International Conference on Mathematics and Computational Methods Applied to Nuclear Science & Engineering (M&C 2013), Sun Valley, Idaho, USA, May 5-9, 2013, on CD-ROM, American Nuclear Society, LaGrange Park, IL (2013).

Jaeger, W., **Sánchez Espinoza, V. H.** & Petzhold, A.; On the influence of spacer grid models during post-test calculation of reflood experiments. International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-15). Pisa, Italy, 2013.

Jaeger, W. & **Sánchez Espinoza, V. H**.; On the Applicability of Pool Boiling Models in TRACE for the Evaluation of a Counter-Current LBE-Water Heat Exchanger. International Conference on Nuclear Engineering (ICONE21). Chengdu, China, 2013.

Jaeger, W., Boettcher, M. & **Sánchez Espinoza**, V.H.; Thermal-Hydraulic Evaluation of an LBE Cooled 19 Pin Bundle in the Frame of TRACE Validation. International

Conference on Nuclear Engineering (ICONE21). Chengdu, China, 2013.

2012

Jaeger, W., **Sánchez Espinoza, V.H.**, Castelliti, D. & Fernandez, R.; Fuel Assembly and Sub-Channel Analysis of a Critical LBE Cooled Core. 9th International Topical Meeting on Nuclear Thermal-Hydraulics, Operation and Safety (NUTHOS-9). Kaohsiung, Taiwan, September 2012.

Jaeger, W., **Sánchez Espinoza, V.H**. & Castelliti, D.; Parametric and Uncertainty Study of a Counter Current LBE-Water Heat Exchanger with TRACE and SUSA. 20th International Conference on Nuclear Engineering (ICONE 20). Anaheim, U.S.A., July-August2012.

Jaeger, W. & **Sánchez Espinoza, V.H**.; Uncertainty and sensitivity study for a LBE Cooled fuel assembly. Annual Meeting on Nuclear Technology. Stuttgart, Germany, May 2012.

Montero Mayorga, J., Jaeger, W. & **Sánchez Espinoza, V.H**.; Análisis de Incertidumbre y Sensibilidad con TRACE-SUSA y TRACE-DAKOTA - Aplicación a NUPEC BFBT. Annual Meeting of the Spanish Nuclear Society. Cáceres, Spain, October 2012.

Gomez Torres, A.M., Jaeger, W. & **Sánchez Espinoza, V.H.,** "On the Influence of Shape Factors for CHF Predictions with SUBCHANFLOW During a Rod Ejection Transient. 9th International Topical Meeting on Nuclear Thermal-Hydraulics, Operation and Safety (NUTHOS-9). Kaohsiung, Taiwan, September 2012.

Gomez Torres, A.M., Lenci, G., **Sánchez Espinoza, V.H.,** Jaeger, W. & Ivanov, K.; Light Water Reactor local Safety Parameter Analysis using the Reactor Dynamics Code DYN3D and SUBCHANFLOW. 18th Pacific Basin Nuclear Conference (PBNC 2012). Busan, Korea, March 2012.

2011

E. Hoogenboom, Ch. Diop, A. Ivanov, **V. Sanchez**, "A flexible coupling scheme for Monte Carlo and Thermal hydraulic Codes.". The 2011 International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2011), Rio de Janeiro, RJ, Brazil, May 8-12, 2011.

A. Gomez-Torres, **V. Sanchez-Espinoza**, U. Imke and R. Macian Juan; Pin Level Neutronic – Thermal Hydraulic Two-way Coupling using DYN3D-SP3 and SUBCHANFLOW. The 2011 International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2011), Rio de Janeiro, RJ, Brazil, May 8-12, 2011.

A. Ivanov, U. Imke, **V. Sanchez**; Development of a Coupling Scheme between MCNP5 and SUBCHANFLOW for the Pin- and Fuel Assembly-wise Simulation of LWR and Innovative Reactors. The 2011 International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2011), Rio de Janeiro, RJ, Brazil, May 8-12, 2011.

2010

V. Sánchez, U. Imke, R. Gomez; SUBCHANFLOW: A Thermal-Hydraulic Sub-Channel Program to Analyse Fuel Rod Bundles and Reactor Cores. 17th Pacific Basin Nuclear Conference. Cancún, Q.R., México, October 24-30, 2010.

A. Gomez, **V. Sanchez**, S. Kliem, A. Gommlich; Integration of DYN3D inside the NURESIM Platform. 17th Pacific Basin Nuclear Conference. Cancún, Q.R., México, October 24-30, 2010

W. Jaeger, **V. H. Sánchez**, L. Monti, A. Hurtado; Uncertainty and Sensitivity Analysis for the High Performance Light Water Reactor with TRACE and SUSA. The 8th International Topical Meeting on Nuclear Thermal-Hydraulics, Operation and Safety (NUTHOS-8) N8P0016 Shanghai, China, October 10-14, 2010.

W. Jaeger, V. **H. Sánchez-Espinoza**; Uncertainty and Sensitivity Analysis for the HELIOS Loop within the LAcanes benchmark. Proceedings of ICAPP '10

San Diego, CA, USA, June 13-17, 2010. Paper 10005.

W. Jäger, **V. Sánchez** and R. Macián-Juan; On the Uncertainty and Sensitivity Analysis of Experiments with Supercritical Water with TRACE and SUSA18th International Conference on Nuclear Engineering (ICONE-18). May 17 – 21, 2010. Xi'an Intern. Conference Center. Xi'an, China

U. Imke, **V. Sanchez**, R. Gomez; SUBCHANFLOW: An empirical knowledge based subchannel code. Annual Meeting on Nuclear Technology. 4-6 may 2010. Berlin Germany.

2009

Jaeger, W., **Sánchez Espinoza, V. H.**, Hurtado, A.; Safety Related Investigations of a LFR Core with the Coupled TRACE/ERANOS System. International Conference on Fast Reactors and Related Fuel Cycles (FR09), Kyoto, Japan, December 7-11, 2009.

V.H. Sanchez-Espinoza, R. Dörn, W. Jäger, A. Travleev, L. Monti; Neutronics and Thermal Hydraulic Coupling Schemes for Design Improvement of Liquid Metal Fast systems.. The 13th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-13)   N13P1xxx. Kanazawa City, Ishikawa Prefecture, Japan, September 27-October 2, 2009.

Marc Thieme, Wolfgang Tietsch, Rafael Macian, **Victor Sanchez**; Post-test Investigations of BFBT Critical Power Tests with TRACE. 17th International Conference on Nuclear Engineering, ICONE17. July 12-16, 2009, Brussels, Belgium

M. Thieme, W. Tietsch, R. Macian, **V. Sanchez**; Validation of TRACE using the void Fraction tests of the NUPEC BFBT Facility. International Congress on Advances in Nuclear Power Plants (ICAPP 2009), Tokio, Japan, May 10-14, 2009. Paper 9134.

Wadim Jaeger, **Victor H. Sánchez Espinoza**, Niko Schneider, Antonio Hurtado; Assessment of Heat Transfer Correlations for Supercritical Water in the Frame of Best-Estimate Code Validation. International Congress on Advances in Nuclear Power Plants (ICAPP 2008), Tokio, Japan, May 10-14, 2009. Paper 9134.

V. Sanchez and A. Al-hamry; Development of a coupling scheme between MCNP and COBTA-TF for the prediction of the Pin-Power of a PWR Fuel Assemblies. International Conference on Mathematics, Computational Methods & Reactor Physics (M&C 2009) Saratoga Springs, New York, May 3-7, 2009, on CD-ROM, American Nuclear Society, LaGrange Park, IL (2009).

2008

W. Jaeger, **V. Sánchez-Espinoza**, A. Hurtado; Investigations of Experiments and Applications with supercritical H2O with the System Code TRACE.- NUTHOS-7: The 7th International Topical Meeting on Nuclear Reactor Thermal Hydraulics, Operation and Safety. Seoul, Korea, October 5-9, 2008

L. Monti, Th. Schulenberg, W. Jäger, **V. Sanchez-Espinoza**; Application and Improvements of the System Code TRACE for HPLWR Core Analysis. NUTHOS-7: The 7th International Topical Meeting on Nuclear Reactor Thermal Hydraulics, Operation and Safety. Seoul, Korea, October 5-9, 2008

W. Jaeger, **V. Sánchez**; Influence of oxide layers on the cladding in a liquid lead environment: a comparison between MATRA and TRACE. International Conference on Reactor Physics, Nuclear Power: A Sustainable Resource Casino-Kursaal Conference Center, Interlaken, Switzerland, September 14-19, 2008

W. Jaeger, **V. H. Sánchez Espinoza**, Bo Feng; Analysis of an XADS Target with the System Code TRACE. . IYNC 2008. Interlaken, Switzerland, 20 – 26 September 2008 Paper No. 185

V. Sánchez, A. Al-Hamry, C.H. M. Broeders; Development and Qualification of the Coupled

Code System COBRA-TF/THREEDANT for the Pin-by-Pin Power Calculation. Proceedings of ICAPP '08.Anaheim, CA USA, June 8-12, 2008. Paper 8269

V. Sanchez et al; Qualification and Validation of coupled Neutron kinetics /Thermal Hydraulic System Codes. Invited lecture on Coupled Neutron kinetcs/thermal hydraulic Analysis. Annual Meeting on Nuclear Technology KTG-2008.27-29 May 2008. Hamburg. Germany

Thieme, M., W. Tietsch, **V. Sanchez**; Validation of Heat Transfer of the CHAN-Component in TRACE using BWR Full-size Fine Mesh Bundle Tests. Annual Meeting on Nuclear Technology KTG-2008.27-29 May 2008. Hamburg. Germany

<div align="center">

2007

</div>

V. Sánchez, M. Böttcher, and W. Jäger; Investigations of the VVER-1000 Coolant Transient Benchmark Phase 2 with Coupled Code Systems. The 12th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-12). Sheraton Station Square, Pittsburgh, Pennsylvania, U.S.A. September 30-October 4, 2007.

W. Jäger, **V. Sánchez**; Development of a 3D-VVER-1000-RPV-Model for the Investigations of a Coolant Mixing Experiment with the Best-Estimate Code TRACE. Annual Meeting on Nuclear Technology. Karlsruhe, Germany, May 22-24, 2007

V. Sánchez, W. Jäger, T. Kozlowski; Qualification of the 3D Thermal-Hydraulics Model of the Code System TRACE Based on plant data. ICAPP 2007: 2007 International Congress on Advances in Nuclear Power Plants, Nice Acropolis, France, May 13-18, 2007

W. Jäger, W. Lischke, **V. Sánchez**; Safety Related Investigations of the VVER-1000 Reactor Type by the Coupled Code System TRACE/PARCS. International Conference on Nuclear Engineering: Nagoya, Japan, April 22-26, 2007.

<div align="center">

2006

</div>

V. Sánchez, B. Becker, C.H.M. Broeders, P. Vinson a procedure for coupled neutron physics/thermal hydraulic calculation of the Pinwise Power distribution within a fuel assembly. German Annual Meeting on Nuclear Technology, May 16-18 2006. Aachen.