

Department	Section/Division	Reference	Subject	Possible Supervisor	Expected dates	Duration	Category	Field/Level of Study
Science and Operations Department	SCD/DPWI	SCOD1	Establishment of sputtering physics database of Hydrogen/Deuterium/Tritium/Deuterium/Helium (H/D/T/He) on Beryllium/Tungsten (Be/W) (mixed materials)	X. Bonnin/ G. de Temmerman	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD2	Sensitivity study of SOLPS-ITER (Scrape-Off Layer Plasma Simulation code for ITER) results to choice of Atomic and Molecular database and reflection data	X. Bonnin	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD3	Benchmarking SOLPS-ITER (Scrape-Off Layer Plasma Simulation code for ITER) simulations of plasma-facing component temperature against experimental measurements on current tokamaks	R. A. Pitts/X. Bonnin	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD4	Development of surface chemistry capabilities in the Eirene Monte Carlo neutral transport code	X. Bonnin	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD5	Rate equation modeling of Edge-Localized Mode induced recrystallization of tungsten	G. De Temmerman	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD6	Thermo-mechanical modeling of crack appearance in tungsten	G. De Temmerman	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD7	Validation of ammonia chemistry database AMMONX (ammonia chemistry database) linear plasma geometry	G. De Temmerman/X. Bonnin	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD8	Generalized geometry for a fast boundary plasma model	S. W. Lisgo	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD9	Adaptation of boundary plasma engineering design support codes to Integrated Modelling and Analysis Suite (IMAS)	S. W. Lisgo	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD10	Core-edge coupling in plasma transport modelling code (TRANSP) and initial application to ITER scenario design	S. W. Lisgo	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD11	Reduced model boundary plasma simulation with an exascale Computational Fluid Dynamics (CFD) framework	S. W. Lisgo	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD12	Melt footprints on the ITER beryllium first wall during disruptions	R. A. Pitts	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD13	Tests of divertor detachment scalings using the SOLPS-ITER (Scrape-Off Layer Plasma Simulation code for ITER) simulation database	R. A. Pitts/X. Bonnin	2018	6 months	A/B/S	Not specified
	SCD/DPWI	SCOD14	Establishment of accurate penalty factors for ITER first wall panel heat loading	R. A. Pitts	2018	6 months	A/B/S	Not specified
	SCD/STCO	SCOD15	Combine burn and fusion fuel control	P. de Vries	Spring 2018	4/7 months	A/B/S	Not specified
	SCD/STCO	SCOD16	Pellet injection for Edge Localized Mode (ELM) pacing control	P. de Vries/L. Zabeo	Spring 2018	4 months	A/B/S	Not specified
	SCD/STCO	SCOD17	Statistical analysis of Plasma Control System (PCS) system engineering database	P. de Vries	Autumn 2018 2019	4/7 months	A/B/S	Not specified
	SCD/STCO	SCOD18	Plasma Control System Simulation Platform (PCSSP) interface with Interface Data Structure (IDS)	P. de Vries/H. Anand/L. Zabeo	Spring 2018	4 months or more	A/B/S	Not specified
	SCD/STCO	SCOD19	Shine-Through estimation	L. Zabeo/ C. Watts	2018	6 months	A/B/S	Not specified
	SCD/STCO	SCOD20	Electron Cyclotron Resonant Heating (ECRH) polarization control	L. Zabeo/F. Gandini	Spring 2018	7 months	A/B/S	Not specified
	SCD/STCO	SCOD21	Disruption avoidance: density limit, lock mode,...	M. Lehen	Spring 2018	4/7 months	A/B/S	Not specified
	SCD/STCO	SCOD22	Plasma Control System Simulation Platform (PCSSP) dedicated visualization Graphical User Interface / Human Machine Interface (GUI/HMI)	L. Zabeo	Spring 2018	4 months	A/B/S	Not specified
	SCD/STCO	SCOD23	Simplified edge physics	S. Lisgo	Spring 2018	4/7 months	A/B/S	Not specified
	SCD/STCO	SCOD24	Density control	L. Zabeo/P. de Vries	Spring 2018	4/7 months	A/B/S	Not specified
	SCD/CMS	SCOD25	Design and develop capability to provide Integrated Modelling and Analysis Suite (IMAS) infrastructure in MAC Operative System (MAC OS) environment	S. Pinches/M. Hosokawa	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD26	Design a user-friendly, interactive representation of the data dictionary and develop an automatic process to create it	S. Pinches/M. Schneider	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD27	Develop Integrated Modelling and Analysis Suite (IMAS) data visualization tools	M. Schneider/S. Pinches	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD28	Adaptation of Electron Cyclotron Resonant Heating (ECRH) modelling codes to Integrated Modelling and Analysis Suite (IMAS) and application to modelling of ECRH in ITER scenarios	M. Schneider	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD29	Development of capability to store and retrieve Integrated Modelling and Analysis Suite (IMAS) data structures in Hierarchical Data Format version 5 (HDF5) and to add and retrieve arbitrary sub-structure from them	S. Pinches	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD30	Improvement of plasma edge/Scrape Off Layer (SOL) models in JOREK (Non-linear extended Magneto-Hydro-Dynamic code) for advanced Edge Localized Mode (ELM) control simulations	A. Loarte	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD31	Development and application of neural networks for efficient integrated simulations of ITER plasmas	A. Polevo/A. Loarte	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD32	Development of synthetic diagnostics for modelling of ITER plasmas with the integrated Modelling and Analysis Suite	A. Polevo/S. Pinches/M. Schneider	2018	4/6 months	A/B/S	Not specified
	SCD/CMS	SCOD33	Development of synthetic actuators to model behaviour of heating and current drive systems by application of the Integrated Modelling and Analysis Suite Heating and Current Drive workflow	M. Schneider/S. Pinches	2018	4/6 months	A/B/S	Not specified
	SCD/STCO	SCOD34	Maximum entropy plasma facing component topology reconstruction from multiple wide angle viewing system images	S. W. Lisgo	2018	4/6 months	A/B/S	Not specified
Finance and Procurement Department	FCO	FPD1	Assistant (in) Financial verification	A. Fiorentino	March 2018	6 months	A/B/S	University Degree in Economics, Accounting, Business management, Law
	PCD	FPD2	Supply Chain management – business intelligence	F. Flament	March 2018	6 months	A/S	Master Degree in Supply Chain Management
Project Control Office	DIR	PCO1	Risk and Opportunity Management Support	M. Chouchana	June 2018	12 months	A/S	Not specified
	CDPC	PCO2	Support to Baseline Change Proposal (BCP) management and implementation Project Control Office	S. Konig	January 2018	6 months	A/S	Not specified
	PCCD	PCO3	Development of Scope and Basis of Estimate for construction works	C. Ricketts	2018	6/12 months	B	Not specified
Central Integration Office	DO/CAD	CIO1	Management of 2D data in construction / assembly phase - Drawings	F. Lassueur	ASAP	6 months	A	Not specified
	AS	CIO2	Computational Fluid Dynamics (CFD) modelling for fire evaluations: participation to methodology finalization and its application to IO	J. Champigny	March - August 2018 OR June - December 2018	6 months	A	Not specified
	IT/ITSO	CIO3	Project support for the "Windows 10 migration"	M. Spizzi	April - May 2018	6 months	A	Not specified
	IT/ITAD	CIO4	Research Project – Confluence Blueprint Development	R. Jober	January 2018	6/12 months	A	Not specified
	IT/ITAD	CIO5	Research Project – Confluence/Jira Add-on Development	R. Jober	January 2018	6/12 months	A	Not specified
	IT/ITAD	CIO6	Research Project – Jira Mobile App Development	R. Jober	January 2018	6/12 months	A	Not specified
	DCIN/DINS	CIO7	Virtual Room (VR) headset operation and Assembly analysis	E. Carlier	February 2018	6 months	A	Not specified
	DCIN/SIS	CIO8	Generation of Functional Block Diagram based on the Integrated Functional Analysis and engineering diagrams.	B. Blanpain	February 2018	6 months	A	Not specified
Quality Assurance & Assessment Division	QAA	QAA1	Quality Assurance Assistant of International Standardization Organization (ISO) 9001 Certification	Z. Zhanwei	March 2018	8 months	A/B/S	College Student in Quality Management
Plant Engineering Department	EED/EPD	PED1	Electro-Magnetic Compatibility, including static magnetic field, of electrical and electronic components for the ITER plant systems.	I. Benfatto / J. Hourtoule	ASAP	6/12 months	A/S	Master 2 or PhD student
	EED/CMT	PED2	Earthing and lightning protection systems for the ITER buildings, site and electrical installations	I. Benfatto / N. Peyrus	ASAP	6/12 months	A/S	Master 2
	EED/EPD	PED3	Execution of computer simulations for fault analysis and system stability of electrical systems	I. Benfatto / J. Hourtoule	ASAP	6/12 months	A/S	Master 2 or PhD student
	EED	PED4	Verification of the Stability of Coil Power Supply Control system	I. Benfatto	ASAP	6/12 months	A/S	Master 2 or PhD student
	CSED/CWS	PED5	Structural analyses of Cooling Water System (CWS) piping inside the Tokamak Complex	G. Dell Orco	ASAP	12 months	A/B/S	Bachelor or Master student
Communication	CAB/COM	COM1	Visual Tools Optimization	L. Coblenz	2018	6 months	A/B/S	Master in Communication, photojournalism, science, political science, international relations, etc.