Program INSPYRE first summer school
13-17 May 2019

		Topic	Courses and tutorials	Speaker
Monday 13/05	10.00-10.15	Introduction	Introduction INSPYRE	M. Bertolus, *CEA DEN*
	10.15-11.00		General introduction on Gen IV and ESNII concepts and associated fuels	A. Alemberti, *Ansaldo Nucleare*
	11.00-11.45		Closed fuel cycle and transition from LWRs to fast reactors	S. Bourg, *CEA.DEN*
	11.45-12.00		Coffee break	
	12.00-12.45		Structural materials challenges for ESNII reactors	L. Malerba, *CIEMAT*
	12.45-14.00		Lunch	
	14.00-14.45	Innovative (oxide) fuels containing minor actinides	Gen IV advanced fuel fabrication routes (Part I)	K. Popa, *JRC Karlsruhe*
	14.45-15.30		Gen IV advanced fuel fabrication routes (Part II)	R. Vauchy, *CEA DEN*
	15.30-16.00		Coffee break	
	16.00-16.45		Thermodynamic aspects of nuclear fuels (experiments)	R. Konings, *JRC Karlsruhe*
	16.45-17.45		Student presentations (3 min each)	
Tuesday 14/05	9.00-9.45		Thermodynamic aspects of nuclear fuels (modelling)	C. Guéneau, *CEA DEN*
	9.45-10.30	Fuel behaviour under irradiation (Part I)	Fuel chemistry and thermodynamic aspects under irradiation	R. Konings, *JRC Karlsruhe*
	10.30-10.45		Coffee break	
	10.45-11.30		Fuel microstructural evolution and thermal properties under irradiation	J. Noirot, *CEA DEN*
	11.30-12.15		Transmutation: irradiation and post-irradiation examination	E. D'Agata, *JRC Petten*
	12.15-13.30			
	13.30-14.30	Fuel behaviour under irradiation (Part II)	Student presentations (3 min each)	
	14.30-15.15		Simulation methods and multiscale modelling	P. Olsson, *KTH*
	15.15-15.45		Coffee break	
	15.45-16.30		Fuel performance codes	L. Luzzi, *Politecnico di Milano*
	16.30-17.15		Tutorial on multiscale modelling (1h30 - half of the group)	P. Olsson, *KTH* M. Bertolus, *CEA DEN*
	17.15-18.00		Tutorial on thermodynamic modelling (1h30 - half of the group)	C. Guéneau, *CEA DEN* E. Epifano, *ONERA*
	18.30-21.00		School banquet	
Wednesday 15/05	9.00-9.45	Irradiation tests in research reactors and experimental facilities	Behavior of fast reactor fuel during transient and accident conditions	A. Rineiski, *KIT*
	9.45-10.30		Irradiation tests in research reactors	R. Hania, *NRG*
	10.30-10.45		Coffee break	
	10.45-11.30		Hot labs and post irradiation examination	J. Noirot, *CEA DEN*
	11.30-12.15		Separate effect studies	M.F. Barthe, *CNRS-CEMHTI*
	12.15-13.30		Lunch	
	13.30-14.15	Fuel reprocessing, recycling and radioactive waste (Part I)	Spent fuel reprocessing strategies & proliferation issues	A. Geist, *KIT*
	14.15-15.00		Safety/criticality issues during reprocessing	L. Flint, NNL
	15.00-15.30		Coffee break	
	15.30-16.15		Modelling and simulation of processes	B. Dinh, *CEA DEN*
	16.15-17.00		Tutorial on modelling of processes (1h30)	B. Dinh, *CEA DEN*
	17.00-17.45			
Thursday 16/05	9.00-9.45	Visit + Tutorials	RID research reactor tour	Visit RID (1h30)
	9.45-10.30			
	10.30-10.45		Coffee break	
	10.45-11.30		Tutorial on Fuel Performance Codes (1h30 - half of the group)	L. Luzzi, *Politecnico di Milano* D. Pizzocri, *Politecnico di Milano*
	11.30-12.15			
	12.15-13.30		Lunch	
	13.30-14.00		QUIZZ	30 min
	14.00-14.45	Fuel cycle in MSRs	MSR concept and fuel cycle	J.L. Kloosterman, *TU Delft*
	14.45-15.30		Fuel fabrication, fuel chemistry and in-reactor behaviour	E. Capelli, *ENEA*
	15.30-16.00		Coffee break	
	16.00-16.30	Case studies	Case study: MOX in fast reactors	R. Vauchy, *CEA DEN*
	16.30-17.00		Case study: $(U,Am)O_2$ and JOG chemistry in fast reactors	E. Epifano, *Onera*
	17.00-17.30		Case study: Fuel performance codes in fast reactors	D. Pizzocri, *Politecnico di Milano*
	17.30-20.00		School BBQ	
Friday 17/05	9.00-9.55	Fuel reprocessing, recycling and radioactive waste (Part II)	Reprocessing of metallic fuels and pyrochemistry	J. Serp, *CEA*
	9.55-10.50		Radiolytic effects/radiological issues on the performance of reprocessing	H. Galan, *CIEMAT*
	10.50-11.05		Coffee break	
	11.05-12.00		Dissolution issues	N. Dacheux, *ICSM*