International summer school on Computational Quantum Materials		
Monday May 30, 2016		
08:15	C. Spino, A.-M. Tremblay	Welcome
08:30	A.-M. Tremblay	Short introduction to the School. Quantum Materials
09:00	M. Côté	Introduction to DFT and Density functionals
10:00	Break	
10:30	A.-M. Tremblay	Many-Body refresher: Density matrix, Second quantization
11:30	X. Gonze	Abinit code, part 1
12:00	Lunch	
14:00	**Poster Session**	
15:00	M. Côté, X. Gonze	Hands-on training: Abinit #1
16:00	M. Côté, X. Gonze	Hands-on training: Abinit #1
17:00	Break	
17:30	X. Gonze	Abinit code, part 2
18:15	A.-M. Tremblay	Many-Body refresher: Evolution operators, Green functions
19:00	Dinner	
Tuesday May 31, 2016		
08:30	A.-M. Tremblay	Many-Body Refresher: Spectral weight, Self-Energy
09:15	M. Côté, X. Gonze	Hands-on training: Abinit #2
10:00	Break	
10:30	M. Côté, X. Gonze	Hands-on training: Abinit #2
12:00	Lunch	
14:00	**Poster Session**	
15:30	A.-M. Tremblay	Many-Body Refresher: Anderson Impurity, Coherent state functional integrals
17:00	Break	
17:30	I. Garate	Topological Insulators
19:00	Dinner	
Wednesday June 1, 2016		
08:30	D. Sénéchal	Dynamical Mean-Field Theory (DMFT)
10:00	Break	
10:30	D. Sénéchal	Quantum Cluster Methods
12:00	Lunch	
15:30	M. Côté, X. Gonze	Hands-on training: Abinit #3
17:00	Break	
17:30	M. Côté, X. Gonze	Hands-on training: Abinit #3
19:00	Dinner	
Thursday June 2, 2016		
08:30	A.-M. Tremblay	Many-Body refresher: Source fields, functionals, general many-body problem
10:00	Break	
10:30	J. Gukelberger	Introduction to Monte Carlo methods, Ergodicity, Detailed balance, biased sampling, variance estimate. A few words about ALPS
12:00	Lunch	
14:00	O. Parcollet	Model Hamiltonians, Introduction to TRIQS
15:30	O. Parcollet, P. Seth	Hands-on training: TRIQS #1
17:00	Break	
17:30	O. Parcollet, P. Seth	Hands-on training: TRIQS #1
19:00	Dinner	
Friday June 3, 2016		
08:30	R. Melko	Quantum Monte Carlo, SSE, loop updates
10:00	Break	
10:30	A. Del Maestro	Worm Algorithms
12:00	Lunch	
15:30	O. Parcollet, P. Seth	Hands-on training: TRIQS #2
17:00	Break	
17:30	O. Parcollet, P. Seth	Hands-on training: TRIQS #2
19:00	Dinner	

Monday June 6, 2016		
08:30	Ph. Werner	Continuous-time Quantum Monte Carlo (weak coupling)
10:00	Break	
10:30	F. Bruneval	GW method
12:00	Lunch	
15:30	M. Côté, F. Bruneval	Hands-on training: Abinit #4
17:00	Break	
17:30	M. Côté, F. Bruneval	Hands-on training: Abinit #4
19:00	Dinner	
Tuesday June 7, 2016		
08:30	G. Kotliar	Introduction to ab initio methods for correlated materials.
10:00	Break	
10:30	G. Kotliar	Introduction continued
12:00	Lunch	
15:30	C.H. Yee	Wien2k tutorial
17:00	Break	
17:30	K. Haule	Introduction to the DMFT -LAPW code I
19:00	Dinner	
Wednesday June 8, 2016		
08:30	Ph. Werner	Continuous-time Quantum Monte Carlo (strong coupling)
10:00	Break	
10:30	K. Haule	Introduction and DMFT -LAPW hands-on training #1
12:00	Lunch	
14:30	D. Bergeron	Hands-on training: analytical continuation OmegaMaxEnt
15:30	K. Haule	DMFT -LAPW hands-on training #2
17:00		
17:30	K. Haule	DMFT -LAPW hands-on training #2
19:00	Dinner	
Thursday June 9, 2016		
08:30	U. Schollwöck	Density-Matrix Renormalization Group (DMRG)
10:00	Break	
10:30	U. Schollwöck	Quantum information point of view on DMRG and other methods
12:00	Lunch	
15:30	Miles Stoudenmire	DMRG software and hands-on iTensor
17:00	Break	
17:30	Miles Stoudenmire	DMRG software and hands-on iTensor
19:00	Dinner	
Friday June 10, 2016		
08:30	**Final exam**	
11:30	**Departure**	

Notes:

1. There are 30-minute breaks between lectures
2. Lunch is served at 12h00
3. Dinner is served at 19h00, except on the first nice day of the week when a BBQ will be served outside.