Tentative plan for the alternating reading groups

Data	Time	Speaker	Reading	Topic
20-Jan	15.00-16.00	Abdul	RP	**Chapter 1:** Introduction to RP, classical ODE with forcing, fail of continuity of solution map when forcing is less regular
27-Jan	13.00-14.00	Billy	SML	**Section 1.1.1-1.2.2:** Paths in Euclidean spaces, definition of signatures and examples
3-Feb	15.00-16.00	Enoch	RP	**Section 2.1-3.1:** Holder spaces, mostly definitions and basic properties and "Holder spaces" of 2-parameter functions, Space of Rough Paths, i.e. level-2 enahncement of Holder spaces
10-Feb	13.00-14.00	Tim	SML	**Section 1.2.3-1.3.3:** Motivation for signature (through Picard iteration), geometric intuition and invariance under time paramterisation
17-Feb	15.00-16.00	Jacob	RP	**Section 3.1-4.3:** Geometric Rough Paths and Brownian motion as a rough path through Kolmogorov continuity criterion
24-Feb				**CANCELLED DUE TO PROBABILITY NORTH EAST MEETING**
3-Mar	15.00-16.00	Miles	RP	**Section 5.1-5.2:** Sewing Lemma (the major tool in integration, shows existence of integral bases on local approximations) and Young integration
10-Mar	13.00-14.00	Abdul	SML	**Section 1.3.2-2.1.2:** Shuffle product, Chen's identity, Time-reversal and log-signature; Paths from discrete data and the lead-lag transformation
17-Mar	15.00-16.00	Billy	RP	**Section 5.3-5.4:** Rough integration, existence of integral through Sewing Lemma (and continuity properties)
24-Mar	13.00-14.00	Miles	SML	**Section 2.1.3-2.1.5:** signatures of path, more elementary operations with signatures and computing statistical moments from signatures
31-Mar	15.00-16.00	Tim	RP	**Chapter 6:** Rough integrals, properties as associativity and Ito-formula
7-Apr	15.00-16.00	Jacob	SML	**Section 2.2-2-4:** The signature in machine learning and overview of recent progress of the signature method in machine learning
14-Apr	15.00-16.00	Jacob	RP	**Chapter 7:** Differential equations (Young and Rough DEs)
21-Apr	15.00-16.00		SML	**More stuff if there is interest?**
28-Apr	15.00-16.00	Deven	RP	**Chapter 8:** Consistency with Ito integration, i.e. showing that classical Ito calculus gives the same solutions to SDE as Rough DEs
5-May	15.00-16.00	Deven	RP	**Chapter 10:** Pathwise filtering and optimal control