

Discrete and Algorithmic Geometry 2013(Part 2)

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This is the preliminary version of the lecture notes for the second part of *Discrete and Algorithmic Geometry* (Universitat Politècnica de Catalunya), held in the fall semester of 2013 by Ferran Hurtado and Julian Pfeifle.

These notes are fruit of the collaborative effort of all participating students, who have taken turns in assembling this text. The name of each scribe figures in each corresponding section.

Suggestions for improvements will always be gladly received by `julian.pfeifle@upc.edu`.

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LECTURE 1

Title of the lecture

Scribe: Your name here

Scribes 2013

1. Alex Alvarez

I have done a double degree in Informatics Engineering and Mathematics at the UPC and during these years I have participated in programming contests both individually and representing the UPC. I am mainly interested in Algorithms and Data Structures and I would like to start a PhD in those topics next year, but I also enjoy learning about Discrete Mathematics, in particular Combinatorics and Graph Theory.

2. Cecilia Girón Albert

I've got my Degree in Mathematics at the Universidad Autónoma de Madrid, which I completed my fifth and sixth semesters at the University of Jyväskylä (Finland) as an Erasmus student. My degree has been mainly focused on subjects like analysis, statistics and numerical methods, although I am more interested in algebra and graph theory.

I decided to study the Master in Advanced Mathematics and Mathematical Engineering to keep developing my mathematics skills in some theoretical subjects that can be applied in real life problems. Therefore, I believe that this course is a great opportunity to learn more about algorithmic and computing science and even more importantly, it may help me to find out what field I would like to focus on in the future.

3. Anna Somoza

I have recently finished a degree in Mathematics at the Universitat Politècnica de Catalunya. During this degree I developed a great interest in Algebra fields. In particular, I took the optional subjects *Algebraic Geometry*, *Algebraic Topology* and *Galois Theory* and I wrote my Final Degree Thesis on a topic of Number Theory.

Now I'm taking the Master in Advanced Mathematics and Mathematical Engineering to develop my knowledge in these and other fields, and my aim is to start a PhD in Number Theory next year. I enrolled this subject because I have always liked both computer science and geometry, and it seemed to be interesting. Therefore, I would be interested in the topic related to algebraic geometry.

4. Daniel Torres

My name is Daniel Torres and I am graduate in mathematics in UPC. Along the degree I have developed much interest in fields of topology, algebra and geometry, and some loathing to study (not to programming) numerical methods and modelling. I decided study this master, and particularly this subject, for expand my knowledge about my interests.

More concretely, I am doing this course with the hope it shows me about geometry.