

# Alexandros Grosdos Koutsoumpelias

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## Research interests

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Algebraic Statistics; I mostly use Algebra to solve problems coming from Statistics. More broadly I am interested in Commutative Algebra and Algebraic Geometry, in particular Computational and Combinatorial aspects (Gröbner and Markov Bases, Free Resolutions, Syzygies) and applications.

## Education

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<b>Osnabrück University</b> <i>PhD studies in Mathematics</i> Doctoral Researcher under the supervision of Tim Römer	<b>Osnabrück</b> 2016–2020 ( <i>expected</i> )
<b>Aristotle University of Thessaloniki</b> <i>Master of Mathematics, 9.0/10</i> As a part of the programme, I spent a year on exchange at the University of Osnabrück where I worked on Algebraic Statistics and wrote my Master's Thesis Thesis title: Gaussian Conditional Independence Ideals and Primary Decompositions	<b>Thessaloniki</b> 2014–2016
<b>Aristotle University of Thessaloniki</b> <i>Diploma of Mathematics (4-year Bachelor's Degree), 9.04/10</i>	<b>Thessaloniki</b> 2007–2011

## Papers

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Preprints.....

1. with Markus Wageringel. **Moment ideals of local Dirac mixtures.**

## Talks

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Invited.....

**The 0-1-2 of local Dirac mixture moments**  
*Optimality in Algebraic Statistics, FH/TU Dortmund* 14.02.19

**Moment ideals of mixture distributions**  
*Algebra Evening, Aristotle University of Thessaloniki* 18.12.18

Contributed (selection).....

**Moment ideals of local Dirac mixtures**  
*Graduate Meeting on Applied Algebra and Combinatorics, MPI Leipzig* 20.02.19

## Computer skills

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**Computer Algebra:** Macaulay2, Singular, Mathematica

**Statistical Software:** R, SPSS

**Other Software:** L<sup>A</sup>T<sub>E</sub>X

## Workshops Organised

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**Graduate Student Meeting on Applied Algebra and Combinatorics**

*Osnabrück University*

22-24.03.18

## Teaching Experience and Seminars

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As a teaching assistant.....

**Coding Theory and Cryptography**

*Osnabrück University*

*Winter Term 2017/18*

**Discrete Mathematics**

*Osnabrück University*

*Summer Term 2017*

**Algebraic Structures II**

*Aristotle University of Thessaloniki*

*Summer Term 2015*

Seminar organisation.....

**Graduate Student Seminar**

*Osnabrück University*

*since 2016*

I have been coorganising the Graduate Student Seminar where we focus on a different topic every semester (Numerical Algebraic Geometry, Tropical Geometry, Commutative Algebra)

**Informal "Cake on Friday" Seminar**

*Osnabrück University*

*since 2016*

I have been the organiser of our department's informal graduate student seminar