## Osmanbey Uzunkol


**Contact Information**

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**Personal information**

- Born in: 9. May 1980, Kayseri/ Turkey
- Family status: Married
- Nationality: Turkish
- Languages: English (fluent), German (fluent), Turkish (mother tongue)
- Visa Status: EC long-term residence permit

**Research Interests**

Algorithmic number theory, algorithmic arithmetic geometry, their applications to cryptography and elsewhere

**Education**

**Phd: Technische Universität Berlin**, Germany (expected graduation date: April-May 2010)

- Thesis Topic: *Über die Konstruktion algebraischer Kurven mittels komplexer Multiplikation* ("On the construction of algebraic curves with complex multiplication")
- Advisor: Prof. Dr. Dr. hc. Michael Pohst

**MSc in Mathematics: Technische Universität Kaiserslautern**, Germany, March 2005

- *Specialization:* Cryptography and Coding Theory, GPA:1.6
- Minor subject: Computer science
- Thesis: *Atkin's ECPP (elliptic curve primality proving) Algorithm*, Oct. 2004, Grade: 1.0
- Advisor: Prof. Dr. Gerhard Pfister

**BSc in Mathematics: Middle East Technical University**, Ankara, Turkey, June 2002

- with *honour*, GPA:3.04/4.0

**English Preparatory School, Middle East Technical University**, August 1998

**Academic Positions**

**Technische Universität Berlin**

- since June 2005: Wissenschaflicher Mitarbeiter (Research Assistant)

**Technische Universität Kaiserslautern**

- October 2002-July 2004: Wissenschaflicher Hilfskraft (Teaching Assistant)

**Publications**

1. (with F. Leprévost and M. Pohst) *On the computation of class polynomials with "Thetanullwerte" and its applications to the unit group computation*, submitted,

2. *On the generalized class invariants with "Thetanullwerte"*, in preparation

3. *Über die Konstruktion algebraischer Kurven mittels komplexer Multiplikation*, Phd in progress, TU-Berlin

4. *Atkin's ECPP (elliptic curve primality proving) Algorithm*, TU-Kaiserslautern, 2004

## Scholarships

**Technische Universität Kaiserslautern**

- October 2002-September 2004: Full scholarship for studying by Graduate School of "Mathematics as a Key Technology" and DAAD
- August 2002-September 2004: Scholarship for German language course by Graduate School of "Mathematics as a Key Technology"

**Middle East Technical University**

- September 1997-June 2002: Full scholarship for English preparatory year and studying by Middle East Technical University

## Acedemical Activities

1. Research stay within a DFG-project at University of Debrecen, Hungary, September 2009,
Talk: **Theta functions, class units and class polynomials**

2. Seminar *Algorithms and Number Theory*, Leibniz-Zentrum für Informatik, Schloss Dagstuhl, Germany, May 2009
Talks: **Theta functions, class units and applications**, available at
http://www.dagstuhl.de/Materials/Files/09/09221/09221.UzunkolOsmanbey.Slides.pdf
**The SCIEnce Project**, available at
http://www.dagstuhl.de/Materials/Files/09/09221/09221.UzunkolOsmanbey1.Slides.pdf

3. *Camputeralgebra-Tagung*, Kassel, Germany, May 2009
Talk: **Über die Berechnung der Klassenpolynome mittels Thetanullwerten und Einheiteneigenschaften der Klasseninvarianten**

4. *Eleventh IMA International Conference on Cryptography and Coding*, Cirencester, UK, December 2007

5. Research stay within the project PROCOPE in École Polytechnique, Paris, France, November 2006

6. *MAGMA Conference*, TU-Berlin, Germany, August 2006,
Talk: **Recent developments in KASH**

8. *ECRYPT Workshop*, Berlin, Germany, July 2006

9. *7th Algorithmic Number Theory Symposium*, Berlin, Germany, July 2006

10. Research stay within the project PROCOPE in École Polytechnique, Paris, France, December 2005

11. Summer school and the conference *the 9th Workshop on elliptic curve Cryptography (ECC 2005)*, Copenhagen, Denmark, September 2005

## Teaching Experience

**Technische Universität Berlin**

- Winter term 2009/2010: Problem classes **Analysis I für Ingenieure** and **Algebra II**
- Summer term 2009: Problem classes **Lineare Algebra für Ingenieure** and **Codierungstheorie**
- Winter term 2008/2009: Problem classes **Analysis I für Ingenieure** and **Algebra II**
- Summer term 2008: Problem classes **Analysis I für Ingenieure** and **Algebra I**
- Winter term 2007-2008: Problem classes **Analysis II für Ingenieure** and **Kryptographie**

- Summer term 2007: Problem classes **Analysis I für Ingenieure** and **Codierungstheorie**
- Winter term 2006-2007: Problem classes **Analysis I für Ingenieure** and **Algebra II**
- Summer term 2006: Problem classes **Analysis II für Ingenieure** and **Algebra I**
- Winter term 2005-2006: Problem classes **Analysis I für Ingenieure** and **Kryptographie**
- Summer term 2005: Problem classes **Analysis I für Ingenieure** and organization of homeworks

**Technische Universität Kaiserslautern**

- Problem classes **Analysis und Lineare Algebra für Physiker** in sommer terms 2003, 2004 and winter term 2003/2004

COMPUTER SKILLS

**Programming languages:** C, C++, Magma, Kash, Maple, SINGULAR

**Operating systems:** Linux, Unix, Windows 95/98/NT4/2000/XP/Vista

**Others:** LaTex, MS Office, DB2, SQL, html

REFERENCES

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DATE, PLACE

21.11.2009, Berlin, Germany