

CHRISTIAN RATHGEB

Address Elisabethstraße 47, 5020 Salzburg, Austria
Birth Date June 26, 1984
Birth Place Salzburg, Austria
Citizenship Austrian
Marital Status unmarried

☎ +43 664 8658404
✉ crathgeb@gmail.at

Current Employment

University of Salzburg

Project Assistant (persuing PhD degree), Department of Computer Science
ADVISOR: Andreas Uhl

Education

2009-2012 *Dr. techn. (equiv. to PhD)*, Computer Science, University of Salzburg (ADVISOR: Andreas Uhl)
2003-2009 *Dipl.-Ing. (equiv. MSc)*, Computer Science, University of Salzburg (ADVISOR: Andreas Uhl)

Awards

2011 **Best Poster Paper Award**, International Joint Conference on Biometrics (IJCB '11)
2010 **Second Best Student Paper Award**, Second European Workshop on Visual Information Processing (EUVIP '10)

Skills

Languages: German (native), English (fluent)
Programming: C/C++, JAVA
Operating Systems: Linux, Windows, MacOS X

Publications (in reverse-chronological order)

Journal Articles

C. Rathgeb, A. Uhl. Context-based Biometric Key-Generation for Iris, *IET Computer Vision (Special Issue on Future Trends in Biometric Processing)*, IET, 2011, to appear

C. Rathgeb, A. Uhl. A Survey on Biometric Cryptosystems and Cancelable Biometrics, *EURASIP Journal on Information Security*, 2011:3, Springer Verlag, 2011

Book Chapters

C. Rathgeb, A. Uhl. The State-of-the-Art in Iris Biometric Cryptosystems, *State of the art in Biometrics*, InTech, 2011

Conference Articles

H. Hofbauer, C. Rathgeb, A. Uhl, P. Wild. Iris Recognition in Image Domain: Quality-metric based Comparators *8th International Symposium on Visual Computing (ISVC '12)*, 2012

C. Rathgeb, A. Uhl. Iris-Biometric Fuzzy Commitment Schemes under Signal Degradation *5th International Conference on Image and Signal Processing (ICISP '12)*, 2012

- C. Rathgeb, A. Uhl, P. Wild. Iris-Biometric Comparators: Exploiting Comparison Scores towards an Optimal Alignment under Gaussian Assumption, *5th IAPR/IEEE International Conference on Biometrics (ICB '12)*, 2012
- C. Rathgeb, A. Uhl, P. Wild. Iris-Biometric Comparators: Minimizing Trade-Offs Costs between Computational Performance and Recognition Accuracy, *4th International Conference on Imaging for Crime Detection and Prevention (ICDP '11)*, 2011
- C. Rathgeb, A. Uhl, P. Wild. Reliability-balanced Feature Level Fusion for Fuzzy Commitment Scheme, *International Joint Conference on Biometrics (IJCB '11)*, 2011
- C. Rathgeb, A. Uhl. Statistical Attack against Iris-Biometric Fuzzy Commitment Schemes, *IEEE Computer Society and IEEE Biometrics Council Workshop on Biometrics (CVPRW '11)*, 2011
- C. Rathgeb, A. Uhl, P. Wild. On Combining Selective Best Bits of Iris-Codes, *Biometrics and ID Management Workshop (BioID '11)*, 2011
- C. Rathgeb, A. Uhl, P. Wild. Shifting Score Fusion: On Exploiting Shifting Variation in Iris Recognition, *26th ACM Symposium on Applied Computing (SAC '11)*, 2011
- C. Rathgeb, A. Uhl. Bit Reliability-driven Template Matching in Iris Recognition, *4th Pacific-Rim Symposium on Image and Video Technology (PSIVT '10)*, 2010
- C. Rathgeb, A. Uhl, P. Wild. Incremental Iris Recognition: A Single-algorithm Serial Fusion Strategy to Optimize Time Complexity, *4th IEEE International Conference on Biometrics: Theory, Application, and Systems 2010 (IEEE BTAS '10)*, 2010
- C. Rathgeb, A. Uhl. Iris-Biometric Hash Generation for Biometric Database Indexing, *20th International Conference on Pattern Recognition (ICPR '10)*, 2010
- C. Rathgeb, A. Uhl. Attacking Iris Recognition: An Efficient Hill-Climbing Technique, *20th International Conference on Pattern Recognition (ICPR '10)*, 2010
- C. Rathgeb, A. Uhl. Adaptive Fuzzy Commitment Scheme based on Iris-Code Error Analysis, *2nd European Workshop on Visual Information Processing (EUVIP '10)*, 2010
- C. Rathgeb, A. Uhl. Two-Factor Authentication or How to Potentially Counterfeit Experimental Results in Biometric Systems, *International Conference on Image Analysis and Recognition (ICIAR '10)*, 2010
- C. Rathgeb, A. Uhl. Secure Iris Recognition based on Local Intensity Variations, *International Conference on Image Analysis and Recognition (ICIAR '10)*, 2010
- C. Rathgeb, A. Uhl. Privacy Preserving Key Generation for Iris Biometrics, *11th Joint IFIP TC6 and TC11 Conference on Communications and Multimedia Security (CMS '10)*, 2010
- C. Rathgeb, A. Uhl. Context-based Template Matching in Iris Recognition, *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP '10)*, 2010
- C. Rathgeb, A. Uhl. Context-based Texture Analysis for Secure Revocable Iris-Biometric Key Generation, *3rd International Conference on Imaging for Crime Detection and Prevention (ICDP '09)*, 2009
- C. Rathgeb, A. Uhl. An Iris-Based Interval-Mapping Scheme for Biometric Key Generation, *6th International Symposium on Image and Signal Processing and Analysis (ISPA '09)*, 2009
- C. Rathgeb, A. Uhl. Systematic construction of iris-based fuzzy commitment schemes, *3rd International Conference on Biometrics 2009 (ICB '09)*, 2009

Theses

C. Rathgeb. Iris-Biometrics: Template Protection and Advanced Comparators, *PhD thesis*, University of Salzburg, Salzburg, Austria, January 2012 (Referees: Andreas Uhl, Claus Vielhauer)

C. Rathgeb. Iris-Based Biometric Cryptosystems, *Master thesis*, University of Salzburg, Salzburg, Austria, November 2008 (Referees: Andreas Uhl)

Talks & Presentations

- 03/2012 *Iris-Biometric Comparators: Exploiting Comparison Scores towards an Optimal Alignment under Gaussian Assumption*, ICB '12, New Delhi, India
- 10/2011 *Reliability-balanced Feature Level Fusion for Fuzzy Commitment Scheme*, IJCB '11, Washington DC, DC, USA
- 06/2011 *Statistical Attack against Iris-Biometric Fuzzy Commitment Schemes*, CVPRW '11, Colorado Springs, CO, USA
- 03/2011 *Shifting Score Fusion: On Exploiting Shifting Variation in Iris Recognition*, SAC '11, TaiChung, Taiwan
- 11/2010 *Bit Reliability-driven Template Matching in Iris Recognition*, PSIVT '10, Singapore
- 08/2010 *Iris-Biometric Hash Generation for Biometric Database Indexing*, ICPR '10, Istanbul, Turkey
- 08/2010 *Attacking Iris Recognition: An Efficient Hill-Climbing Technique*, ICPR '10, Istanbul, Turkey
- 07/2010 *Adaptive Fuzzy Commitment Scheme based on Iris-Code Error Analysis*, EUVIP '10, Paris, France
- 06/2010 *Two-Factor Authentication or How to Potentially Counterfeit Experimental Results in Biometric Systems*, ICIAR '10, Povia de Varzim, Portugal
- 06/2010 *Secure Iris Recognition based on Local Intensity Variations*, ICIAR '10, Povia de Varzim, Portugal
- 05/2010 *Privacy Preserving Key Generation for Iris Biometrics*, CMS '10, Linz, Austria
- 03/2010 *Context-based Template Matching in Iris Recognition*, ICASSP '10, Dallas, TX, USA
- 12/2009 *Context-based Texture Analysis for Secure Revocable Iris-Biometric Key Generation*, ICDP '09, London, UK
- 09/2009 *An Iris-Based Interval-Mapping Scheme for Biometric Key Generation*, ISPA '09, Salzburg, Austria
- 06/2009 *Systematic construction of iris-based fuzzy commitment schemes*, ICB '09, Alghero, Italy

Professional Service

- Reviewer for *IEEE Systems Journal (IEEE SYST)*
- Reviewer for *Elsevier Image and Vision Computing (IMAVIS)*
- Reviewer for *Elsevier Journal of Network and Computer Applications (JNCA)*
- Reviewer for *Journal of Computing and Information Technology (CIT)*
- Reviewer for *European Signal Processing Conference (EUSIPCO)*
- Reviewer for *Biometrics and ID Management Workshop (BioID)*
- Reviewer for *International Symposium on Image and Signal Processing and Analysis (ISPA)*
- Reviewer for *Conference on Communications and Multimedia Security (CMS)*

References

Available upon request.

Last updated: April 27, 2012