



Workshop on Cryptographic Hardware and Embedded Systems

Lausanne  
OLYMPIC CAPITAL

CHES 2009  
September 6<sup>th</sup> – 9<sup>th</sup>

Switzerland



## Best Paper Award Presentations



# Best Paper Awards





# Personalized Medals



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10X LOGO

CHES 2009 Best Paper Award Nicolas Estivals	CHES 2009 Best Paper Award Werner Schindler
CHES 2009 Best Paper Award Jean-Luc Bouchat	CHES 2009 Best Paper Award Eli Okamoto
CHES 2009 Best Paper Award Thomas Finkel	CHES 2009 Best Paper Award Potor Schwabe
CHES 2009 Best Paper Award Jeremie Dotsey	CHES 2009 Best Paper Award Francisco Rodriguez-Henriquez
CHES 2009 Best Paper Award Emilia Kasper	CHES 2009 Best Paper Award Max Gebhardt

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# Selection Process



- Two papers with the highest average reviewer scores nominated by Program Chairs
- One more paper nominated by a Program Committee Member
- Vote of the Program Committee



## Vote Results & Final Decision



- Coincidentally, all candidate papers received an equal amount of  
27 points.
- Decision by the PC to exceptionally award three equivalent awards



# Topics



- efficient and secure **software implementations** of **secret key cryptography** (AES-GCM)
- efficient **hardware implementations** of **public key cryptography** (pairing)
- **side-channel attacks** and countermeasures (RSA prime number generation).



## Best Paper Award



Emilia Käsper

Katholieke Universiteit Leuven, ESAT/COSIC

Peter Schwabe

Department of Mathematics and Computer Science

Technische Universiteit Eindhoven

*Faster and Timing-Attack Resistant AES-GCM*



## Best Paper Award



Jean-Luc Beuchat<sup>1</sup>,  
J r mie Detrey<sup>2</sup>,  
Nicolas Estibals<sup>2</sup>,  
Eiji Okamoto<sup>1</sup>, and  
Francisco Rodr guez-Henr riquez<sup>3</sup>

<sup>1</sup>University of Tsukuba, Japan

<sup>2</sup>LORIA, INRIA Nancy, France

<sup>3</sup>CINVESTAV-IPN, Mexico

*Hardware Accelerator for the Tate Pairing in  
Characteristic Three Based on  
Karatsuba-Ofman Multipliers*





# Best Paper Award



Thomas Finke

Max Gebhardt

Werner Schindler

BSI, Germany

*A New Side-Channel Attack on RSA Prime  
Generation*



Congratulations to all  
winners!!!