



Workshop on Cryptographic Hardware and Embedded Systems

Lausanne
OLYMPIC CAPITAL

CHES 2009
September 6th – 9th

Switzerland

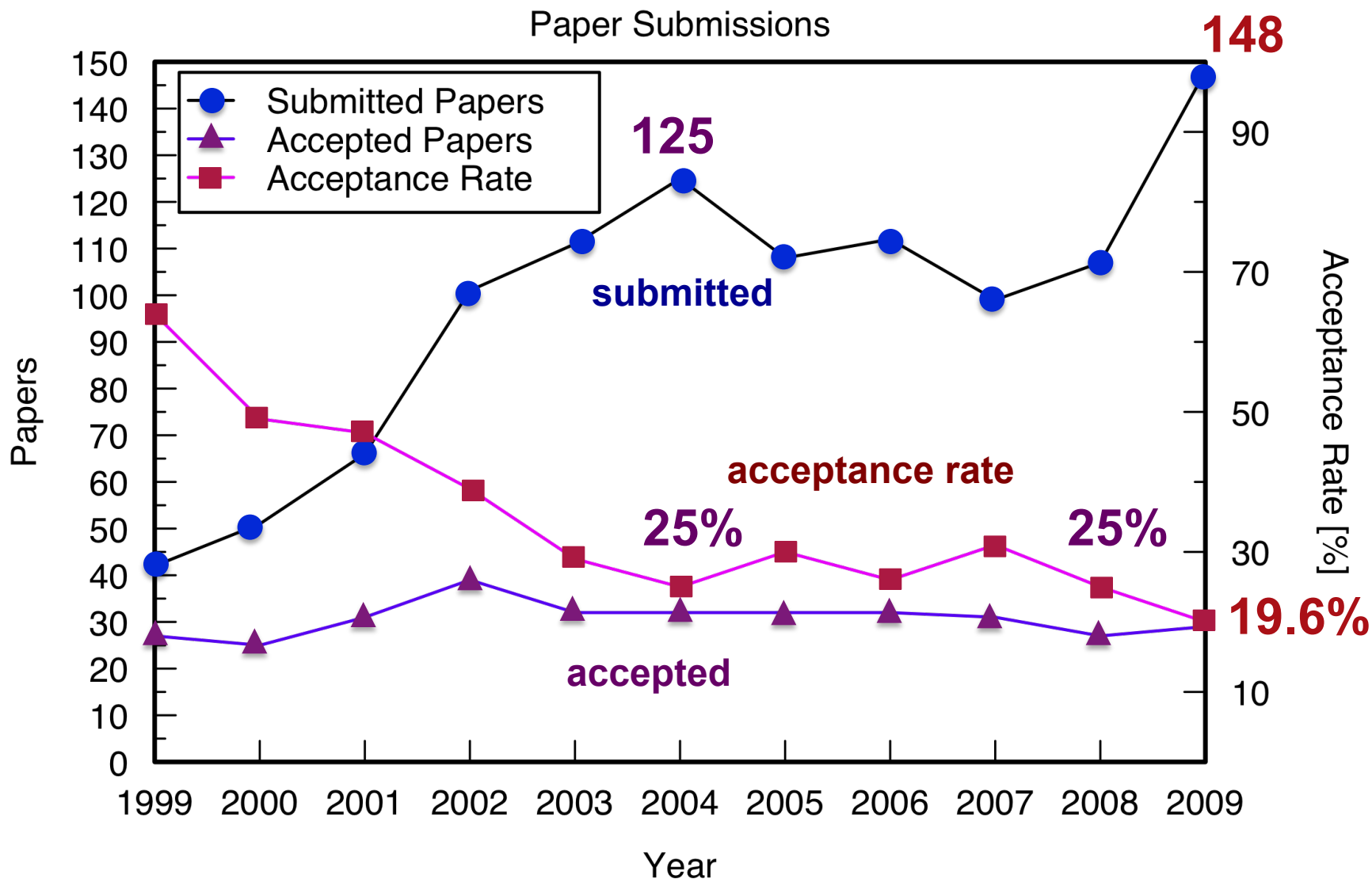


Christophe Clavier
Kris Gaj
CHES 2009 Program Co-chairs



Evolution of CHES

record number of submissions
smallest acceptance rate





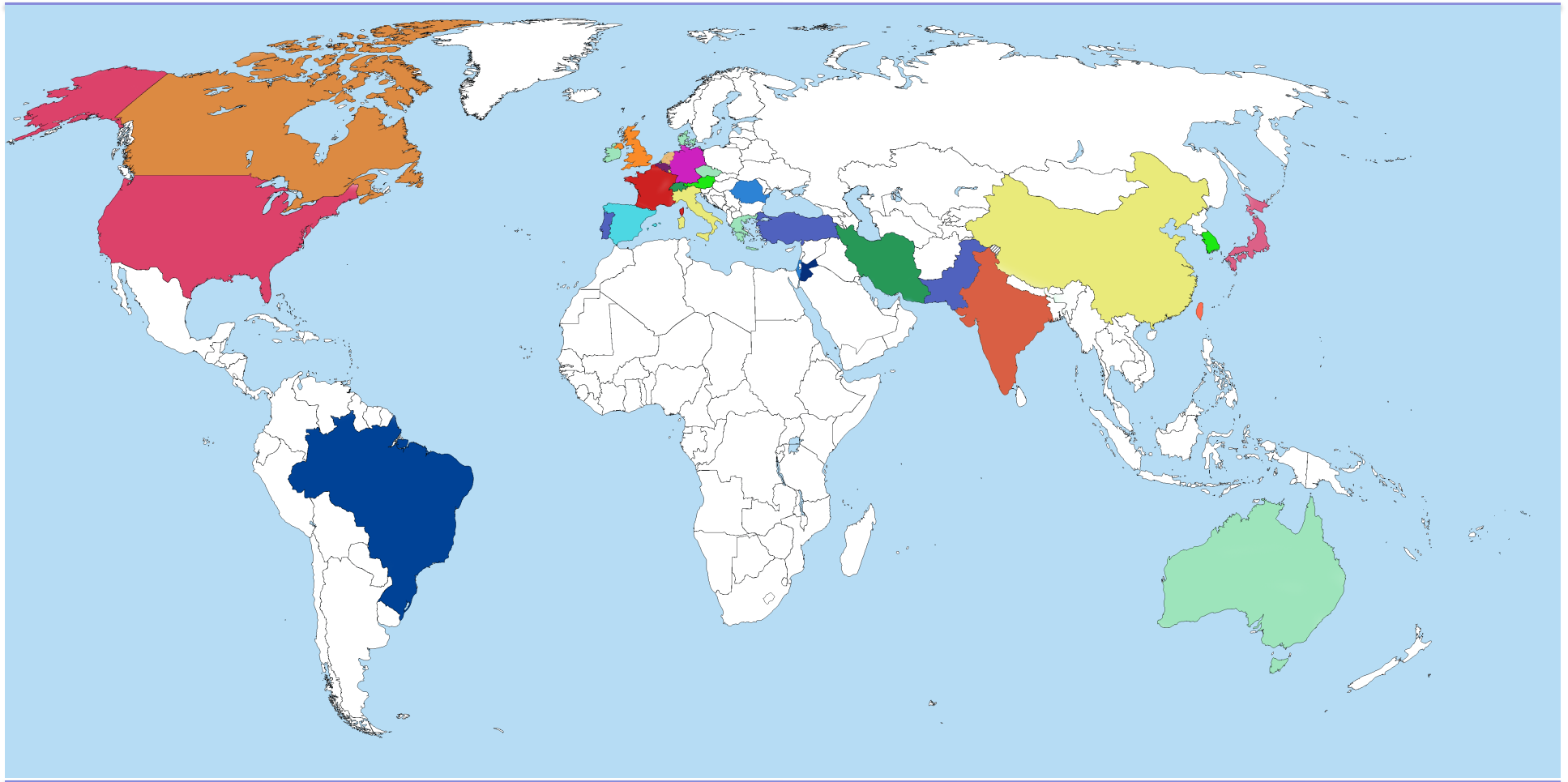
Submissions by a Country of the Contact Author



1. USA, France – 20 each
2. Japan – 15
3. Germany – 13
4. Belgium – 12
5. Canada – 11
6. UK – 9
7. India, Netherlands – 5 each
8. China, Italy, Taiwan – 4 each
9. Austria, Korea – 3 each
10. Iran, Luxembourg, Switzerland – 2 each
11. Australia, Brazil, Czech Republic, Denmark, Greece, Ireland, Israel, Jordan, Pakistan, Portugal, Romania, Spain, Turkey – 1 each



CHES Map of the World (based on a contact author affiliation)





Submissions by Category



1. ATTACKS AGAINST IMPLEMENTATIONS AND COUNTERMEASURES AGAINST THESE ATTACKS

- 70 submissions

2. CRYPTOGRAPHIC HARDWARE

- 45 submissions

3. CRYPTOGRAPHIC SOFTWARE FOR EMBEDDED SYSTEMS

- 12 submissions

4. HARDWARE TROJANS AND TRUSTED ICs – 8 submissions

5. APPLICATIONS AND IMPLEMENTATION ENVIRONMENTS

- 6 submissions

6. OTHER - 7 submissions



Selection Process



- **148 Submissions**
 - 30 countries, 5 continents
- **53 Program Committee Members**
 - 20 countries, 5 continents
- **150 External Reviewers**
- **582 Reviews**
 - On average 3.93 per paper



Program Committee by Country



France :	10
USA :	9
Belgium, Germany, UK :	4 each
Japan, Switzerland :	3 each
Canada, Italy, Korea :	2 each
Austria, Brazil, India, Ireland, Luxembourg, Mexico, Netherlands, New Zealand, Taiwan, Turkey:	1 each



Accepted Papers by a Country of the Contact Author



1. Belgium – 8 (out of 12)
2. Germany – 4 (out of 13)
3. France, USA – 4 (out of 20)
4. Luxembourg – 2 (out of 2)
5. Japan – 2 (out of 15)
6. Czech Republic, Portugal – 1 (out of 1)
7. Taiwan – 1 (out of 4)
8. UK – 1 (out of 9)
9. Canada – 1 (out of 10)



Technical Program



- **9 Regular Sessions**
 - 3 each day, 27 regular talks
- **3 Special Sessions**
 - Monday: **DPA Contest**
 - Tuesday: **Benchmarking of Cryptographic Hardware**
 - Wednesday: **Hot Topic Session: Hardware Trojans and Trusted ICs**
- **3 Invited Talks**
- **Poster Session & Rump Session**



Invited Talks



Monday, 10:50 - 11:50

Srini Devadas, MIT, USA

Physical Unclonable Functions and Secure Processors

Tuesday, 10:55 - 11:55

Christof Paar, Ruhr-Universität Bochum, Germany

Crypto Engineering: Some History and Some Case Studies

**This talk marks 10 years after the first CHES
at WPI in Worcester, Massachusetts, USA,
organized by Christof Paar and Cetin Koc.**

Wednesday, 10:30 - 11:30

Randy Torrance and Dick James, Chipworks Inc., Canada

The State-of-the-Art in IC Reverse Engineering



Hot Topic Session



Motivation:

Enhance the list of traditional CHES topics with one or more new **"hot"** topics every year, and thus also attract a new group of authors and new audience to CHES

This Year's **Hot** Topic:

Hardware Trojans and Trusted ICs

Special Session Chair:

Anand Raghunathan, Purdue University, USA



Session Chairs



- **Monday, Sep. 7**
 - Session 1: **Guido Bertoni**
 - Session 2: **Helena Handschuh**
 - Session 3: **Marc Joye**
 - Special Session 1: **Elisabeth Oswald**
- **Tuesday, Sep. 8**
 - Session 4: **Catherine Gebotys**
 - Session 5: **Erkay Savas**
 - Session 6: **Luca Breveglieri**
 - Special Session 2: **Patrick Schaumont**
- **Wednesday, Sep. 9**
 - Session 7: **Jorge Guajardo**
 - **Hot** Topic Session: **Anand Raghunathan**
 - Sessions 8 & 9: **Louis Goubin**



Best Paper Awards



Presentation of Best Paper Awards

**Tuesday, 20h15 - Casino Montbenon
(just before the start of the Rump Session)**





Program Committee & External Reviewers



**Special Presentation of the Program
Committee and all External Reviewers**

**Tuesday, 22h00 - Casino Montbenon
(just after the end of the Rump Session)**





Enjoy the Workshop!!!