

## Zoltán Hornák

Leading trainer, owner

**Birth:** December 13, 1972, Várpalota, Hungary  
**Home:** Szérúskert street 19, 1033, Budapest, Hungary  
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## EDUCATION

- 1995-1998** PhD student at Budapest University of Technology and Economics
- 1990-1995** M.Sc. degree in Technical Informatics at Budapest University of Technology
- 1986-1990** Specialized mathematical class at Svetozar Markovic secondary school, Subotica
- 1996 -** Postgraduated course (Phd) at Technical University of Budapest  
Task: Structured protection of computer systems against intrusions
- 1990-1996** M.Sc. degree, major in Technical Informatics with excellent diploma at Technical University of Budapest, Faculty of Electrical Engineering and Informatics
- 1986-1991** Secondary school Lovassy László, Veszprém

## PROFESSIONS

- 2014 -** SCADEMY Secure Coding Academy Ltd, Budapest, Hungary  
**Owner**  
**Leading Trainer**
- 2001 -** SEARCH-LAB Security Evaluation Analysis and Research Laboratory Ltd, Budapest, Hungary  
**Owner**  
**Managing Director**
- 1996 -** Budapest University of Technology and Economics,  
Dept. of Measurement and Information Systems  
**Assistant Professor**  
Topics:
  - Research project management
  - Product security, security testing and auditing
  - Computer vision, object tracking, image processing
  - Data security, cryptography, PKI
  - Biometrics

**1997-1999** Insurance Technology security consulting Ltd. (part time job)

**Project manager**

**Technical leader**

**Reviewer**

Topics:

- Technical security audits
- IT security infrastructure planning
- Data center security and energy efficiency
- Risk assessment and management
- Traffic Measurement System audit
- Auditing availability, virus protection, Internet access, access control systems

**1993-1997** HUNIX Ltd. Working according to distribution and co-operation contract

**Leader of the development team**

**Developer of the VirusBuster program package**

Products:

- VirSec virusguard system under DOS (Pascal and Assembly languages)
- VirusBuster for Novell virusguard under Novell servers (NetWare 3.1x, 4.x, C language)
- VirusBuster 7.00 viruskiller: Watcom C++ with DOS4GW 32 bit DOS extender (its kernel is platform independent)
- VirusBuster for WinWord: virusguard against macro viruses  
Runs under Microsoft Word, written in WordBasic
- VirusBuster for Excel: virusguard against macro viruses  
Runs under Microsoft Excel, written in VisualBasic
- Multimedia educational CD about viruses (unfinished project)
- KeyCard chipcard identification system for PC  
(hardware card, unique contact, ROM software)

**1991-1993** ANT Ltd. (working according to distribution and co-operation contract)

**Programmer: the development of the VirSec complex virusguard system**

**1990-1991** KOMP gmk. (working according to distribution and co-operation contract)

**Programmer: development of the ViruSafe resident virusguard and the Hsvir viruskiller**

## TEACHING EXPERIENCE

- 2008 -** Secure coding trainings for corporate development groups on various topics
- 2003-2004** Development of Biztostu e-Learning portal on IT Security ([www.biztostu.hu](http://www.biztostu.hu))
- 2003 -** Security of Infocommunication Systems (3 semester long joint courses addressing IT security)
- 2000 -** Data Security (co-lecturer, mandatory course for students in their 3rd year)
- 1999 -** Computer Security Techniques (optional course for student in their 4th year)
- 1996-1999** Lectures on data security at the Technical University of Budapest as a Phd student
- 1992-1996** Courses on computer viruses organized by Hunix Ltd. (eg: Virus searching and killing in practice, Protection against viruses, How to use VirusBuster antivirus system, ...)
- 1994** Courses on data security and safety organized by Center of Computer Applications (SZÁMALK) as an invited lecturer

## CERTIFICATIONS AND AWARDS

- 2003** Foundation for the Technological Progress of the Industry (IMFA):  
Young Engineering Innovator of Year 2002
- 2001** John von Neumann Computer Society (NJSZT): Kemény János prize
- 1999** CISA (Certified Information Security Auditor) certification #9921546
- 1993** COMPF AIR: VirusBuster antivirus won 1st fair prize (50% co-author)
- 1992** MICROCAD: VirusBuster antivirus won 2nd fair prize (50% co-author)

## LANGUAGES

- 1990** English intermediate level language state exam, but since then the actual knowledge level is fluent
- 1996** German basic level language state exam  
Hungarian as mother tongue

## PUBLICATIONS AND REFERENCES

- 2008** Ervin Tóth, Zoltán Hornák, Gergely Tóth: Protection system against Overload and Distributed Denial of Service Attacks, Third International Conference on Dependability of Computer Systems DepCoS-RELCOMEX 2008, 16-18 June 2008, Szklarska Poreba, Poland
- 2008** Gergely Tóth, Gergely Kőszegi, Zoltán Hornák: Case study: automated security testing on the Trusted Computing platform, EUROSEC 2008 Workshop, 11 March 2008, Glasgow, United Kingdom
- 2007** Ernő Jeges, Zoltán Hornák: Data Hiding in Biometric Templates, Inter-Academia 2007 (IA '07), Hamamatsu, Japan
- 2007** Gergely Eberhardt, Zoltán Nagy, Ernő Jeges and Zoltán Hornák: Watermarking software to signal copy protection, Mathematical Methods, Models and Architectures for Computer Networks Security (MMM ACNS '07), 13-15 September 2007, St. Petersburg, Russia
- 2006** Gergely Tóth, Zoltán Hornák: The Chances of Successful Attacks against Continuous-time Mixes, Nordsec 2006 Conference, 19-20 October 2006, Linköping, Sweden
- 2006** Gergely Eberhardt, Zoltán Nagy, Ernő Jeges and Zoltán Hornák: Copy Protection through Software Watermarking and Obfuscation, Security and Privacy in Mobile and Wireless Networking 2006 (SecPri MobiWi 2006), 19 May 2006, Coimbra, Portugal

- 2005 Ernő Jeges, Zoltán Hornák, Csaba Körmöczi: Encoding private key in fingerprint, Mathematical Methods, Models and Architectures for Computer Network Security (MMM ACNS '05), 25-27 September, St. Petersburg, Russia
- 2004 Gergely Tóth, Zoltán Hornák, Ferenc Vajda: Measuring Anonymity Revisited, Nordsec 2004 Workshop, 4-5 November 2004, Helsinki, Finland
- 2003 Csilla Endrődi, dr. Endre Selényi, Zoltán Hornák: Security and Applicability of NTRU, 10th Mini-Symposium, Proceedings of the 2003 Mini-Symposium (<http://www.mit.bme.hu/events/minisy2003/>), ISBN 963 420 741 3, pp. 26-27, Budapest Hungary, 2003
- 2003 Csilla Endrődi, Zoltán Hornák: A new public key cryptosystem: NTRU, NetWorkshop2003, University of Pécs, Pollack Mihály Faculty of Engineering, 2003, Pécs, Hungary
- 2002 Orvos Péter, Hornák Zoltán, Dr. Selényi Endre, Digital Signatures with Signer's Biometric Authentication, CSCS 2002, Szeged
- 2002 Endrődi Csilla, Hornák Zoltán, A nyilvános kulcsú kriptográfia matematikai alapjai, Networkshop 2002, Eger, 2001. március 27.
- 2002 Orvos Péter, Hornák Zoltán, Dr. Selényi Endre, Biometriával ötvözött digitális aláírások irányába, Networkshop 2002, Eger
- 2002 Endrődi Csilla, Hornák Zoltán, Dr. Selényi Endre, ECC vagy RSA?, Networkshop 2002, Eger, 2001. március 27.
- 2002 Csilla Endrődi, Zoltán Hornák, Endre Selényi, Dr., Side-channel Attack of RSA / Az RSA támadása implementációs sajátosságok kihasználásával, Mini-Symposium 2002, pp. 12-13, February 4-5, 2002.
- 2002 Péter Orvos, Zoltán Hornák, Endre Dr. Selényi: Towards Biometric Digital Signatures, IEEE Minisymposium, 2002, Budapest University of Technology and Economics, pp. 14-15., Budapest, Hungary
- 2001 Endrődi Csilla, Hornák Zoltán, Az elektronikus aláírásról szóló törvény elemzése, Networkshop 2001, Sopron, 2001. április 19.
- 2001 Orvos Péter, Hornák Zoltán, Dr. Selényi Endre, Biometrikus azonosítás felhasználása hiteles digitális aláírások előállítására, Networkshop 2001, Sopron
- 2001 Péter Orvos, Zoltán Hornák, Endre Dr. Selényi: Biometric Generation of Digital Keys, IEEE Minisymposium, 2001, Budapest University of Technology and Economics, Budapest, Hungary
- 2000 Zoltán Hornák: Micro-payment With Mobile Phones, MIRT 7th Mini-symposium, 2000, Budapest University of Technology and Economics, Budapest, Hungary
- 1999 CONEX Adatbiztonság Szakmai Fórum: Szervezési és technikai intézkedések az adatvédelmi követelmények érvényesítésére
- 1999 Mobile Banking - the Ideal Money, Mérnökújság, Magazine of the Hungarian Chamber of Engineers
- 1999 Minisymposium (Technical University of Budapest): Realization of Access Control Methods
- 1998 IFIP SEC'98: Security Education in Hungary
- 1997 Minisymposium (Technical University of Budapest): The Zero Rights model
- 1996 Computer Security Conference (HISEC'96): Protection against programmers
- 1996 MsC Thesis (Technical University of Budapest):  
Protection against programmers' intentional, malicious code
- 1995 Students Scientific Conference (TUB): Protection against Programmers' Intentional Faults (1st prize)
- 1995 National Conference of John von Neumann Computer Society:  
Development of the VirusBuster Antivirus Product
- 1994 Database Systems Conference (DAT'94): Protection against Computer Viruses (invited paper)
- 1994 Magazine of the Hungarian Telecommunication Company (TÁVKÖZLÉS): Virtual Intrusion (article)

- 1993 Computer Security Conference (HISEC'93):  
Virtual Intrusion Manipulating Computer's I/O (Best paper award)
- 1992 ALAPLAP magazine: CEB viruses (article)
- 1989 MIKROMAGAZIN: Killer for Cascade and Vienna viruses (article)

## COMPETITIONS

- 1991 International Olympiad in Informatics: participant  
National Competition in Computer Science: 6th place  
National Competition in Mathematics: final
- 1990 International Olympiad in Informatics: 2nd prize  
National Competition in Mathematics: 6th place  
National Competition in Computer Science: 2nd place
- 1989 National Competition in Physics: final  
National Competition in Chemistry: final  
National Competition in Computer Science: 18th place
- 1988 National Competition in Physics: 10th place  
National Competition in Mathematics: special prize  
National Competition in Computer Science: final  
National Competition in Geography: 23th place