



# ABDELHAKIM HANNOUSSE (PH.D)

## GENERAL INFORMATION

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FIRST NAME: Abdelhakim  
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DATE/PLACE OF BIRTH: February 10th, 1979, El-Oued, Algeria  
ADDRESS : Tarek B. Ziad City, B8, N120, El-Bouni, Annaba, Algeria, 23010  
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## DIPLOMAS

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JUL 2020 | Habilitation (University Accreditation) in COMPUTER SCIENCE, **Larbi Tebessi University**, Tebessa, Algeria

NOV 2011 | PhD in COMPUTER SCIENCE, **Ecole des Mines de Nantes**, Nantes, France  
Title: "Aspectualizing Component Models: Implementation and Interference Analysis"  
Supervisor: Pr. Mario SUDHOLT  
Co-supervisors: Dr. Rémi DOUENCE & Dr. Gilles ARDOUREL

SEPT 2006 | Magistère Degree in DISTRIBUTED ARTIFICIAL INTELLIGENCE, **Badji Mokhtar University**, Annaba, Algeria  
Supervisor: Pr. Hayet F. MEROUANI  
Co-supervisor: Pr. Djamel MESLATI

JUN 2003 | Engineering Degree in ARTIFICIAL INTELLIGENCE , **Badji Mokhtar University**, Annaba, Algeria - SUMMA CUM LAUDE

JUN 1998 | High School Diploma in MATHEMATICS, **Sidi-Brahim High School**, Annaba, Algeria

## TRAININGS

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AUG 24-28, 2009 | Summer School of AOSD (Aspect-Oriented Software Development), ECOLE DES MINES DE NANTES, France

JUN, 3-12, 2009	Young Researchers School in Programming (EJCP 2009), DINARD AND RENNES, France
2008-2009	Doctoral Training Courses, Nantes, France : (1) Design of embedded systems, (2) Parallel Computing, (3) Research Methodology, (4) Research and Business.
JAN - SEPT 2007	Fellow at UNITED NATIONS UNIVERSITY, INTERNATIONAL INSTITUTE FOR SOFTWARE TECHNOLOGY UNU-IIST, Macau, China Researcher in the context of formal methods, component-based systems, design patterns and their compositions.

## PROFESSIONAL BACKGROUND

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SINCE 2011 | Senior Lecturer at 8 MAY 1945 UNIVERSITY, Guelma, Algeria

### Taught Courses:

1. Programming paradigms (2012)
2. Formal methods for parallel computing (2012)
3. Component-based software engineering (2012)
4. Algorithmics and software programming (2011, 2013-2021)
5. Database Management and GIS (Geographic Information Systems) (2022)
6. Computer Science & Statistics (2022)
7. Computer tools (2022)
8. Knowledge Engineering (Since 2023)
9. Files and data structures (Since 2023)
10. Advanced Object-oriented programming (Since 2023)

### Supervised and defended Master projects in the cybersecurity field:

1. Détection des sites d'hameçonnage pour assurer la sécurité sur Internet (Maroua Chemlal - 2020)
2. La détection des webshells pour assurer la sécurité des serveurs web (Mohamed Amine Aid - 2021)
3. Détection des attaques XSS pour la sécurité des sites Web : Une approche basée sur l'apprentissage automatique (Sabrina Gheraibia - 2022)
4. Détection des Vulnérabilités des applications Web aux attaques XSS (Zaid Guelmi - 2022)
5. A meta-scan-based approach for the detection of injection vulnerabilities in web applications (Seyyid Taqy Eddine Oudjani - 2023)
6. Enhancing Social Network Security: Machine Learning-Based Bot Detection (Zied Talha - 2024)
7. Advanced Android Malware Detection: Leveraging Machine Learning for Zero-Day Threat Defense (Yehya Djaghout - 2024)

### Supervised Ph.D projects in the cybersecurity field (advanced state):

1. Unknown cyber threat detection using outlier analysis (Moudjib Rahmane Benzitouni - Since 2020)
2. Detection and Prediction of Multi-Step Cyber Attacks (Salima Yahiouche - Since 2021)

2009-2010 | Associate Lecturer at ECOLE DES MINES DE NANTES, France

**Taught Courses:**

1. Data structures
2. Human-Machine Interface
3. Object-oriented programming

2005-2007	Consultant at ANNABA HIGHER INSTITUTE OF MANAGEMENT - ISGA, Algeria Tutor/Seminar Leader for local industrial companies: <i>Sonatrach</i> , <i>Sonelgaz</i> .
2004-2005	Associate Lecturer at BADJI MOKHTAR UNIVERSITY, Annaba, Algérie Teaching computer programming languages
2003-2004	Head Manager of the ALGERIAN INSTITUTE OF MANAGEMENT AND APPLIED TECHNOLOGIES - AIMAT, Hassi-Messaoud, Algeria

## PUBLICATIONS

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1. **A. Hannousse**, Y. Djaghout. *Harnessing Ensemble Learning and Static Analysis for Android Malware Detection: An Experimental Study and Solution Proposal*. *Computers & Security*, 2024. **(to appear)**.
2. Moudjib R. Benzitouni, **A. Hannousse**. *Enhancing Intrusion Detection Systems Through Simultaneous Feature Selection and Hyperparameter Tuning*. In proceedings of the 13th International Conference on Information Systems and Advanced Technologies, Tunisia, Springer Verlag, pp. 1–10, 2024. doi: [10.1007/978-3-031-60594-9\\_18](https://doi.org/10.1007/978-3-031-60594-9_18) **(to appear)**
3. **A. Hannousse**, Salima Yahiouche, Mohamed Cherif Nait-Hamoud. *Twenty-two years since revealing cross-site scripting attacks: a systematic mapping and a comprehensive survey*. *Computer Science Review*, 42 (2024), 100634. doi: [10.1016/j.cosrev.2024.100634](https://doi.org/10.1016/j.cosrev.2024.100634)
4. **A. Hannousse**, Mohamed Cherif Nait-Hamoud, Salima Yahiouche. *A deep learner model for multi-language Webshell detection*. *International Journal of Information Security*, 22, 47–61 (2023). doi: [10.1007/s10207-022-00615-5](https://doi.org/10.1007/s10207-022-00615-5)
5. **A. Hannousse**, Salima Yahiouche. *Handling webshell attacks: A systematic mapping and survey*. *Journal of Computers & Security*, 108 (2021), 102366. doi: [10.1016/j.cose.2021.102366](https://doi.org/10.1016/j.cose.2021.102366)
6. **A. Hannousse**, Salima Yahiouche. *Towards Benchmark Datasets for Machine Learning Based Website Phishing Detection: An experimental study*. *Journal of Engineering Applications of Artificial Intelligence*, 104 (2021), 104347. doi: [10.1016/j.engappai.2021.104347](https://doi.org/10.1016/j.engappai.2021.104347)
7. **A. Hannousse**, Salima Yahiouche. *Securing Microservices and Microservice Architectures: A Systematic Mapping Study*. *Computer Science Review*, 41 (2021), 100415. doi: [10.1016/j.cosrev.2021.100415](https://doi.org/10.1016/j.cosrev.2021.100415)
8. **A. Hannousse**. *Searching relevant papers for software engineering secondary studies: Semantic Scholar coverage and identification role*. *IET Software*, 15(1):126-146, 2021, Wiley & Institution of Engineering and Technology publisher. doi: [10.1049/sfw2.12011](https://doi.org/10.1049/sfw2.12011)
9. **A. Hannousse**, Salima Yahiouche. *RF-DNN<sup>2</sup>: An ensemble learner for effective detection of PHP Webshells*. *International Conference on Artificial Intelligence for Cyber Security Systems and Privacy (AI-CSP 2021)*, El-Oued, Algeria, IEEE Computer Society, 2021. doi: [10.1109/AI-CSP52968.2021.9671226](https://doi.org/10.1109/AI-CSP52968.2021.9671226)
10. **A. Hannousse**, Salima Yahiouche. *A semi-automatic document screening system for computer science systematic reviews*. *The 5th Mediterranean Conference on Pattern Recognition and Artificial Intelligence (MedPRAI 2021)*, Istanbul, Turkey, Springer Verlag, 2021. doi: [10.1007/978-3-031-04112-9\\_15](https://doi.org/10.1007/978-3-031-04112-9_15)
11. **A. Hannousse**. *FCM: a component-based platform with explicit support of crosscutting and dynamic features*. *International Journal of Computer Applications in Technology (IJCAT)*, 62(1):71-90, Inderscience publisher, 2020. doi: [10.1504/IJCAT.2020.103910](https://doi.org/10.1504/IJCAT.2020.103910)
12. **A. Hannousse**. *A development process for component software with crosscutting and dynamic features*. *2019 International Conference on Theoretical and Applicative Aspects of Computer Science (ICTAACS)*, Skikda, Algeria, pp. 1-8, IEEE CS, 2019. doi: [10.1109/ICTAACS48474.2019.8988133](https://doi.org/10.1109/ICTAACS48474.2019.8988133)

13. **A. Hannousse**. *Dealing with crosscutting and dynamic features in component software using aspect-orientation: requirements and experiences*. IET Software, (13)5:434-446, Institution of Engineering and Technology publisher, 2019. doi: [10.1049/iet-sen.2018.5324](https://doi.org/10.1049/iet-sen.2018.5324).
14. **A. Hannousse**, *Aspectualizing Component Models: Implementation and Interferences Analysis*, LAP LAMBERT Academic publishing, 1st edition, Saarbrücken, Germany, 2012
15. **A. Hannousse**, Rémi Douence, Gilles Ardourel, *Static Analysis of Aspect Interaction and Composition in Component Models*, In Proceeding of the 10th International Conference on Generative Programming and Component Engineering, Portland, Oregon, USA, ACM, 2011. doi: [10.1145/2047862.2047871](https://doi.org/10.1145/2047862.2047871).
16. **A. Hannousse**, Rémi Douence, Gilles Ardourel, *Composable Controllers in Fractal: Implementation and Interference Analysis*, In Proceeding of the 37th EUROMICRO Conference on Software Engineering and Advanced Applications, Oulu, Finland, IEEE CS, 2011. doi: [10.1109/SEAA.2011.18](https://doi.org/10.1109/SEAA.2011.18).
17. **A. Hannousse**, Gilles Ardourel, Rémi Douence, *Views for aspectualizing component models*, In Proceedings of the Ninth AOSD Workshop on Aspects, Components, and Patterns for Infrastructure Software, ACP4IS'10, pp. 21-25, Rennes, France, 2010
18. Z. Chen, **A. Hannousse**, D. Van Hung, I. Knoll, X. Li, Y. Liu, Z. Liu, Q. Nan, J. Okika, A.P. Ravn, V. Stolz, L. Yang, and N. Zhan. *Modelling with relational calculus of object and component systems-rCOS*. In CoCoME, The Common Component Modelling Example, volume 5153 of Lecture Notes in Computer Science, pages 116-145. Springer Berlin / Heidelberg, 2008. doi: [10.1007/978-3-540-85289-6\\_6](https://doi.org/10.1007/978-3-540-85289-6_6).
19. **A. Hannousse**, O. Kazar, D. Meslati, Liu. Z., *A Cohabitation Framework for AOSD Techniques*, In International Review on Computers and Software, IRECOS, vol. 2, n. 4, Praise Worthy Prize, 2007
20. **A. Hannousse**, Z. Liu, *Towards a Calculus for Design Patterns: Patterns Formalization*, Available as a technical report n. 386 at UNU-IIST, <http://www.iist.unu.edu>, 2007
21. **A. Hannousse**, D. Meslati, H.F. Merouani, *Aspect Oriented Programming and Composition Filters: A Conceptual Comparative Study*, In Actas del III Taller de Desarrollo de Software Orientado a Aspectos, DSOA'05, pp.1-10, Granada, Spain, 2005
22. **A. Hannousse**, D. Meslati, H.F. Merouani, *Aspect Oriented Programming and Composition Filters: A Design Patterns Based Comparative Study*, In Proceeding of International Conference on Applied Informatics, CIAA'05, pp. 224-228, Bordj Borreridj, Algeria, 2005
23. D. Meslati, M.T. Kimour, **A. Hannousse**, *On Composition Filters And AspectJ: A PSM to PSM Transformation*, In Seventh International Symposium On Programming and Systems, ISPS'05, Algiers, Algeria 2005
24. **A. Hannousse**, D. Meslati, H.F. Merouani, *State Of The Art Of The Advanced Separation Of Concerns: A Design Patterns Based Comparative Study*, In International Conference on Production, CIP'05, Tlemcen, Algeria, 2005
25. D. Meslati, **A. Hannousse**, M.A. Kenouni, *La Composition de Filtres et AspectJ: Une Comparaison Conceptuelle*, In Eighth Maghrebien Conference on Software Engineering and Artificial Intelligence, MCSEAI'04, Sousse, Tunisia, 2004
26. **A. Hannousse**, Djamel Meslati, Hayet Merouani, *ASOC: A Qualitative and a Quantitative Study Based-Design Patterns*, In Proceedings of National Conference on Informatics of Biskra, SNIB'06, Biskra, Algeria, 2006

## REVIEWER & PROGRAM COMMITTEE MEMBER

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### REVIEW FOR:

- Expert Systems With Applications - Elsevier
- Information and Software Technology - Elsevier
- Computers & Security - Elsevier
- Information Sciences - Elsevier
- Engineering Applications of Artificial Intelligence - Elsevier

- Journal of King Saud University - Computer and Information Sciences - Elsevier
- Cyber Security and Applications - Elsevier
- SoftwareX - Elsevier
- Procedia of Computer Science - Elsevier
- ACM Computing Surveys - ACM
- Digital Threats: Research and Practice - ACM
- IEEE Access - IEEE
- IEEE Transactions on Dependable and Secure Computing - IEEE
- IEEE Internet of Things Magazine - IEEE
- Evolutionary Intelligence - Springer
- Cluster Computing - Springer
- World Wide Web - Springer
- Discover Data - Springer
- Journal of Software : Evolution and Process - Wiley
- IET Software - IET & Wiley
- The Scientific World Journal - Wiley
- PeerJ Computer Science - PeerJ Inc.
- Applied Sciences - MDPI
- Electronics - MDPI
- Applied Artificial Intelligence (AAI) - Taylor & Francis
- Cybernetics and Systems (UCBS) - Taylor & Francis
- Journal of Intelligent & Fuzzy systems (IFS) - IOS Press
- Computer Modeling in Engineering & Sciences (CMES) - Tech Science Press
- International Journal of Electronic Security and Digital Forensics (IJESDF) - Inderscience
- Jordanian Journal of Computers and Information Technology (JJCIT) - SRSF & PSUT
- Advances in Systems Science and Applications (ASSA)
- Journal of Information Security (JIS) - SCIRP
- Indonesian Journal of Electrical Engineering and Computer Science (IJEECS) - IAES
- IAES International Journal of Robotics and Automation (IJRA)- IAES

#### PROGRAM COMMITTEE MEMBER:

- ICAECE: International Conference on Advances in Electrical and Computer Engineering. 2023 Edition (IEEE)
- MLIS: The 4th International Conference on Machine Learning and Intelligent Systems. 2022 Edition (IOS Press)
- SETIT: The 2022 IEEE 9th International Conference on Sciences of Electronics, Technologies of Information and Telecommunications. 2022 Edition (IEEE)
- CSAE: The 5th International Conference on Computer Science and Application Engineering. 2021 Edition (ACM)
- MedPRAI : The Mediterranean conference on Pattern Recognition and Artificial Intelligence. 2016-2024 Editions (Springer)
- ICTAACS : IEEE International Conference on Theoretical and Applicative Aspects of Computer Science, 2019, 2022 Editions (IEEE)
- ICECET: International Conference on Electrical, Computer and Energy Technologies, 2022 Edition, (IEEE)
- ICECCME: International Conference on Electrical, Computer, Communications and Mechatronics Engineering, 2022 Edition, (IEEE)