

## Prof. NAZİFE BAYKAL

### Personal Information

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### International Researcher IDs

ScholarID: Lii8HVEAAAAJ

ORCID: 0000-0003-0432-8057

Publons / Web Of Science ResearcherID: A-4883-2016

ScopusID: 56049419400

Yoksis Researcher ID: 9482

### Education Information

Doctorate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Bilgisayar Mühendisliği (Dr), Turkey 1990 - 1996

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Bilgisayar Mühendisliği (Dr), Turkey 1988 - 1991

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Mathematics, Turkey 1983 - 1987

### Dissertations

Doctorate, Hydips: A Hybrid neural network based diagnostic tool for perinatal surveillance, Middle East Technical University, Graduate School of Natural and Applied Sciences, Bilgisayar Mühendisliği (Dr), 1996

Postgraduate, Pattern recognition using Kohonen's self organizing feature map, Middle East Technical University, Graduate School of Natural and Applied Sciences, Bilgisayar Mühendisliği (Dr), 1991

### Research Areas

Engineering and Technology

### Academic Titles / Tasks

Professor, Middle East Technical University, Graduate School of Informatics, Information Systems, 2007 - Continues

### Academic and Administrative Experience

Rector's Advisor, Middle East Technical University, Presidency Office, Presidency Office, 2016 - 2022

KK Kampüsü Yöneticisi, Middle East Technical University, Graduate School of Informatics, Information Systems, 2016 - 2020

Head of Department, Middle East Technical University, Graduate School of Informatics, Cybersecurity, 2015 - 2016

Director of The Institution, Middle East Technical University, Graduate School of Informatics, 2014 - 2016

Middle East Technical University, Graduate School of Informatics, 2011 - 2014  
Middle East Technical University, Graduate School of Informatics, 2008 - 2011  
Middle East Technical University, Graduate School of Informatics, 2005 - 2008  
Director of The Institution, Middle East Technical University, Graduate School of Informatics, Information Systems, 2004 - 2005

## Courses

Cyber Systems and Information Security, Postgraduate, 2021 - 2022

## Advising Theses

BAYKAL N., Performance evaluation of lightweight cryptographic algorithms for internet of things security, Postgraduate, S.Polat(Student), 2019  
BAYKAL N., A novel online approach to detect DDOS attacks using mahalanobis distance and Kernel-based learning, Doctorate, S.Daneshgadeh(Student), 2019  
Baykal N., Tezcan C., Lynxtun, Postgraduate, G.ORAL(Student), 2018  
BAYKAL N., A window-based characterization method for biophysical time series, Doctorate, D.KATIRCIOĞLU(Student), 2017  
BAYKAL N., AN EFFICIENT AND NOVEL DETECTION TECHNIQUE FOR NEXT GENERATION WEB-BASED EXPLOIT KITS, Doctorate, E.SÜREN(Student), 2016  
BAYKAL N., An infrastructure for efficient reporting workflow in grid based teleradiology applications, Doctorate, A.OZAN(Student), 2015  
BAYKAL N., Semantic concept recognition from structured and unstructured inputs within cyber security domain, Postgraduate, A.GÖKHAN(Student), 2015  
YAZICI A., BAYKAL N., Database security in private database clouds, Postgraduate, O.ÇINAR(Student), 2015  
BAYKAL N., Virtual penetration testing with phase based vulnerability analysis, Postgraduate, E.ÇALIŞKAN(Student), 2015  
BAYKAL N., A survey about the integration of social engineering attacks and cyber security policies exploiting Turkish vulnerabilities in Turkey, Postgraduate, A.TOSUN(Student), 2015  
BAYKAL N., A Survey about the integration of social engineering attacks with cyber security exploiting Turkish vulnerabilities in Turkey, Postgraduate, A.Tosun(Student), 2015  
ÖZKAN YILDIRIM S., BAYKAL N., Developing and verifying a set of principles for the cyber security of the critical infrastructures of Turkey, Doctorate, B.KARABACAK(Student), 2015  
BAYKAL N., Permission based malware detection analysis in Android applications, Postgraduate, U.PEHLİVAN(Student), 2014  
BAYKAL N., ACARTÜRK C., Comparison of classification algorithms for mobile malware detection: market metadata as input source, Postgraduate, N.Baltacı(Student), 2014  
BAYKAL N., ÇAKIR M. P., Bibliometric analysis of clinical medicine publications in Turkey, Postgraduate, M.KOÇAK(Student), 2014  
BAYKAL N., Increasing trustworthiness of security critical applications using trusted computing, Doctorate, Y.UZUNAY(Student), 2014  
ACARTÜRK C., BAYKAL N., A comparison of classification algorithms for mobile malware detection: Market metadata as input source, Postgraduate, N.BALTACI(Student), 2014  
BAYKAL N., Analysis and modeling of routing and security problems in wireless sensor networks with mathematical programming, Doctorate, D.İNCEBACAK(Student), 2013  
BAYKAL N., Agile and collaborative systems engineering, Doctorate, E.Aşan(Student), 2013  
BAYKAL N., A multi-layer model for privacy preserving policy making for disclosure of public health data, Doctorate, M.ALIZADEH(Student), 2013

BAYKAL N., Usability evaluation of mobile information and communications technology in health care, Doctorate, B.AKBAŞOĞLU(Student), 2013

AYDIN SON Y., BAYKAL N., A hybrid feature selection model for genome wide association studies, Doctorate, S.CAN(Student), 2013

BAYKAL N., User authentication and distinguishing child users from adults with keystroke dynamics, Doctorate, Y.UZUN(Student), 2013

BAYKAL N., Knowledge discovery in microarray data of bioinformatics, Doctorate, F.SALİH(Student), 2012

BAYKAL N., Bivariate random effects and hierarchical meta-analysis of summary receiver operating characteristic curve on fine needle aspiration cytology, Postgraduate, İ.ERTE(Student), 2011

BAYKAL N., ATTACK TREE BASED INFORMATION TECHNOLOGY SECURITY METRIC INTEGRATING ENTERPRISE OBJECTIVES WITH VULNERABILITIES, Doctorate, B.KARABEY(Student), 2011

AKKAYA A., BAYKAL N., A new framework for evaluation of field based academic performances of higher education institutions, Postgraduate, F.ÖMRÜUZUN(Student), 2011

BAYKAL N., Online health information seeking behavior of middle aged and older people: a case study, Postgraduate, E.Çakır(Student), 2010

BAYKAL N., Auditable and verifiable electronic voting with homomorphic RSA tallying, Doctorate, O.YÜCEL(Student), 2010

BAYKAL N., NetON: A new tool for discovering the semantic potential of biomedical data in UMLS semantic network, Doctorate, B.GÜLDEN(Student), 2010

BAYKAL N., Ontology based information extraction on free text radiological reports using natural language processing approach, Doctorate, E.SOYSAL(Student), 2010

BAYKAL N., ÖZKAN YILDIRIM S., University ranking by academic performance: A scientometrics study for ranking world universities, Postgraduate, O.ALAŞEHİR(Student), 2010

BAYKAL N., BETİN CAN A., A framework for ranking and categorizing medical documents, Doctorate, M.GH.(Student), 2010

BAYKAL N., A new ontology and knowledge base system for performance measurement in health care, Doctorate, O.DENİZ(Student), 2010

BAYKAL N., Online health information seeking habits of middle aged and older people: A case study, Postgraduate, E.ÇAKIR(Student), 2010

KARAGÖZ P., BAYKAL N., A hybrid methodology in process modeling: ?from-to chart process discovery?, Postgraduate, E.ESGİN(Student), 2009

BAYKAL N., Enhanced hole punching for RSSI location tracking in hospitals, Postgraduate, D.PEÇEL(Student), 2008

BAYKAL N., Bilişim suçu olarak çöp postalar, bu konuda dünyada hukuki ve bilişim düzenlemeleri ışığında ülkemize yol haritası, Postgraduate, H.CENGİZ(Student), 2007

TAŞKAYA TEMİZEL T., BAYKAL N., Person name recognition in Turkish financial texts by using local grammar approach, Postgraduate, Ö.BAYRAKTAR(Student), 2007

BATMAZ İ., BAYKAL N., Defect cause modeling with decision tree and regression analysis: A case study in casting industry, Postgraduate, B.BAKIR(Student), 2007

BAYKAL N., A secure wireless network architecture proposal to be used by governments in case of emergency situations, Postgraduate, M.AKSOY(Student), 2007

BAYKAL N., Design and implementation of an unauthorized internet access blocking system validating the source information in internet access logs, Postgraduate, Y.UZUNAY(Student), 2006

BAYKAL N., The effects of hierarchy on mobile wireless sensor network coverage, Postgraduate, A.UMUT(Student), 2006

BAYKAL N., An XACML based framework for structured patient privacy policy (S3P), Postgraduate, M.ALİZADEH(Student), 2006

BAYKAL N., Performance parameters of wireless virtual private network, Postgraduate, S.İKİZ(Student), 2006

BAYKAL N., Lokman : a medical ontology based topical web crawler, Postgraduate, A.Kyışoğlu(Student), 2005

BAYKAL N., A comparative study on computer aided detection and classification of microcalcifications on mammograms, Postgraduate, L.EFE(Student), 2005

BAYKAL N., Awlp: building a custom wireless access point using open source software, Postgraduate, A.Çakırcalı(Student), 2005

BAYKAL N., Special index and retrieval mechanism for ontology based medical domain search engines, Postgraduate, M.Kubilay(Student), 2005

BAYKAL N., AWPL: Building a custom wireless access point using open source software, Postgraduate, A.ÇAKIRCALI(Student), 2005

BAYKAL N., AKYÜREK S. Z., A geographic information systems tool development for geostatistical analysis of endangered endemic vascular plants of Turkey, Postgraduate, B.DEMİRCİ(Student), 2005

BAYKAL N., A new fuzzy-chaotic modelling proposal for medical diagnostic processes, Postgraduate, T.BEYAN(Student), 2005

BAYKAL N., An implementation on use of handheld technologies in medical research areas : healt habits and history questionnaire on a pocket pc, Postgraduate, H.Esin(Student), 2005

BAYKAL N., Special index retrieval mechanism for ontology based medical domain search engines, Postgraduate, M.KUBİLAY(Student), 2005

BAYKAL N., An implementation on use of handheld technologies in medical research areas: Health habits and history questionnaire on a pocket PC, Postgraduate, E.KIYMAÇ(Student), 2005

BAYKAL N., Implementation and evaluation of an information system for the processes of Turkish faculty training program (ÖYP), Postgraduate, M.KURT(Student), 2004

BAYKAL N., Implementation and evaluation of a<n information system for the processes of Turkish faculty training program(öyp), Postgraduate, M.Kurt(Student), 2004

BAYKAL N., Proposal for an integrated breast diseases research and national cancer registry system design and implementation, Postgraduate, O.DENİZ(Student), 2003

BAYKAL N., On the efficienciency of authentication protocols, digital signatures and their applications in e-health: Atop-down approach, Doctorate, K.BIÇAKCI(Student), 2003

BAYKAL N., Proposal for an integrated breast diseases rsearch and national cancer registry system design and implementation, Postgraduate, O.Deniz(Student), 2003

BAYKAL N., On the efficiency of authentication protocols, digital signatures and their applications in e-health: a top-down approach, Doctorate, K.Bıçakçı(Student), 2003

BAYKAL N., Content and application management framework for for the web, Postgraduate, O.MAT(Student), 2001

BAYKAL N., Content and application management framework for the web, Postgraduate, O.Mat(Student), 2001

BAYKAL N., A Web-based archiving system for documents and images, Postgraduate, N.ZEKİ(Student), 2001

BAYKAL N., A Web based library information system for army schools, Postgraduate, M.Divril(Student), 2001

BAYKAL N., Web-based archiving system for documents and images, Postgraduate, N.Zeki(Student), 2001

YILDIRIM İ. S., BAYKAL N., A Web based information system for army schools, Postgraduate, M.DİVRİL(Student), 2001

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **landusemix: A Python package for calculating land use mix**  
 AKYOL M. A., Duzgun S., BAYKAL N.  
 SoftwareX, vol.27, 2024 (SCI-Expanded)
- II. **Identification of Land Use Mix Using Point-Based Geospatial Data in Urban Areas**  
 AKYOL M. A., TAŞKAYA TEMİZEL T., Duzgun S., BAYKAL N.  
 Applied Sciences (Switzerland), vol.14, no.16, 2024 (SCI-Expanded)
- III. **Online DDoS attack detection using Mahalanobis distance and Kernel-based learning algorithm**  
 Cakmakci S. D., Kemmerich T., Ahmed T., BAYKAL N.  
 JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, vol.168, 2020 (SCI-Expanded)
- IV. **A simulation environment for cybersecurity attack analysis based on network traffic logs**  
 Daneshgadeh S., Oney M. U., Kemmerich T., BAYKAL N.  
 MODELING AND SIMULATION OF COMPLEX COMMUNICATION NETWORKS, vol.18, pp.55-79, 2019 (SCI-Expanded)
- V. **I see EK: A lightweight technique to reveal exploit kit family by overall URL patterns of infection chains**  
 Suren E., ANGIN P., BAYKAL N.

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.27, no.5, pp.3713-3728, 2019  
(SCI-Expanded)

- VI. **A window-based time series feature extraction method**  
Katircioglu-Ozturk D., GÜVENİR H. A., Ravens U., BAYKAL N.  
COMPUTERS IN BIOLOGY AND MEDICINE, vol.89, pp.466-486, 2017 (SCI-Expanded)
- VII. **A vulnerability-driven cyber security maturity model for measuring national critical infrastructure protection preparedness**  
Karabacak B., Yildirim S., Baykal N.  
INTERNATIONAL JOURNAL OF CRITICAL INFRASTRUCTURE PROTECTION, vol.15, pp.47-59, 2016 (SCI-Expanded)
- VIII. **Regulatory approaches for cyber security of critical infrastructures: The case of Turkey**  
Karabacak B., Yildirim S., Baykal N.  
COMPUTER LAW & SECURITY REVIEW, vol.32, no.3, pp.526-539, 2016 (SSCI)
- IX. **A novel approach to optimize workflow in grid-based teleradiology applications**  
Yilmaz A. O., BAYKAL N.  
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.123, pp.159-169, 2016 (SCI-Expanded)
- X. **Policymaking to preserve privacy in disclosure of public health data: a suggested framework**  
Mizani M. A., BAYKAL N.  
JOURNAL OF MEDICAL ETHICS, vol.41, no.3, pp.263-267, 2015 (SCI-Expanded)
- XI. **URAP-TR: a national ranking for Turkish universities based on academic performance**  
Alasehir O., ÇAKIR M. P., ACARTÜRK C., BAYKAL N., AKBULUT U.  
SCIENTOMETRICS, vol.101, no.1, pp.159-178, 2014 (SCI-Expanded)
- XII. **Attack Tree Based Information Security Risk Assessment Method Integrating Enterprise Objectives with Vulnerabilities**  
Karabey B., BAYKAL N.  
INTERNATIONAL ARAB JOURNAL OF INFORMATION TECHNOLOGY, vol.10, no.3, pp.297-304, 2013 (SCI-Expanded)
- XIII. **A Knowledge Based Search Tool for Performance Measures in Health Care Systems**  
Beyan O. D., BAYKAL N.  
JOURNAL OF MEDICAL SYSTEMS, vol.36, no.1, pp.201-221, 2012 (SCI-Expanded)
- XIV. **Application of a data mining approach to derive operating rules for the Eleviyan irrigation reservoir**  
Sattari M. T., APAYDIN H., ÖZTÜRK F., BAYKAL N.  
LAKE AND RESERVOIR MANAGEMENT, vol.28, no.2, pp.142-152, 2012 (SCI-Expanded)
- XV. **METADATA MANAGEMENT AND SEMANTICS IN MICROARRAY REPOSITORIES**  
Kocabas F., CAN T., BAYKAL N.  
BALKAN JOURNAL OF MEDICAL GENETICS, vol.14, no.2, pp.49-63, 2011 (SCI-Expanded)
- XVI. **Design and evaluation of an ontology based information extraction system for radiological reports**  
Soysal E., Cicekli I., BAYKAL N.  
COMPUTERS IN BIOLOGY AND MEDICINE, vol.40, pp.900-911, 2010 (SCI-Expanded)
- XVII. **An integrated approach to breast diseases and breast cancer registry and research: BDRS as a web-based multi-institutional model**  
Kocgil O. D., Baykal N.  
COMPUTERS IN BIOLOGY AND MEDICINE, vol.37, no.10, pp.1414-1425, 2007 (SCI-Expanded)
- XVIII. **MedicoPort: A medical search engine for all**  
Can A., Baykal N.  
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.86, no.1, pp.73-86, 2007 (SCI-Expanded)
- XIX. **Improved server assisted signatures**  
Bicakci K., Baykal N.  
COMPUTER NETWORKS, vol.47, no.3, pp.351-366, 2005 (SCI-Expanded)
- XX. **Server assisted signatures revisited**  
Bicakci K., Baykal N.  
TOPICS IN CRYPTOLOGY - CT-RSA 2004, PROCEEDINGS, vol.2964, pp.143-156, 2004 (SCI-Expanded)
- XXI. **A new design of privilege management infrastructure with binding signature semantics**

- Bicakci K., Baykal N.  
PUBLIC KEY INFRASTRUCTURE, PROCEEDINGS, vol.3093, pp.306-313, 2004 (SCI-Expanded)
- XXII. **SAOTS: A new efficient server assisted signature scheme for pervasive computing**  
Bicakci K., Baykal N.  
SECURITY IN PERVASIVE COMPUTING, vol.2802, pp.187-200, 2004 (SCI-Expanded)
- XXIII. **Health Informatics**  
Baykal N.  
BIOMATERIALS: FROM MOLECULES TO ENGINEERED TISSUES, vol.553, pp.337-358, 2004 (SCI-Expanded)
- XXIV. **One-time passwords: Security analysis using BAN logic and integrating with smartcard authentication**  
Bicakci K., Baykal N.  
COMPUTER AND INFORMATION SCIENCES - ISCIS 2003, vol.2869, pp.794-801, 2003 (SCI-Expanded)
- XXV. **INTERPRETATION OF DOPPLER BLOOD-FLOW VELOCITY WAVE-FORMS USING NEURAL NETWORKS**  
BAYKAL N., REGGIA J., YALABIK N., ERKMEN A., BEKSAC M.  
JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION, pp.865-869, 1994 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Evaluating learning management systems: Adoption of hexagonal e-learning assessment model in higher education**  
Ozkan S., Koseler R., BAYKAL N.  
Transforming Government: People, Process and Policy, vol.3, no.2, pp.111-130, 2009 (ESCI)
- II. **Evaluation of a Hospital Information System in an International Context: Towards Implementing PB-ISM in Turkey**  
ÖZKAN YILDIRIM S., BAYKAL N., Sincan M.  
Electronic Journal of Information Systems in Developing Countries, vol.28, no.1, pp.1-10, 2006 (Scopus)

### Refereed Congress / Symposium Publications in Proceedings

- I. **An Empirical Investigation of DDoS and Flash Event Detection Using Shannon Entropy, KOAD and SVM Combined**  
Daneshgadeh S., Kemmerich T., Ahmed T., BAYKAL N.  
International Conference on Computing, Networking and Communications (ICNC), Hawaii, United States Of America, 18 - 21 February 2019, pp.658-662
- II. **Detection of DDoS Attacks and Flash Events Using Shannon Entropy, KOAD and Mahalanobis Distance**  
Daneshgadeh S., Ahmed T., Kemmerich T., BAYKAL N.  
22nd International Conference on Innovation in Clouds, Internet and Networks and Workshops (ICIN), Paris, France, 18 - 21 February 2019, pp.222-229
- III. **DDoS Attack Modeling and Detection Using SMO**  
Daneshgadeh S., BAYKAL N., ERTEKİN BOLELLİ Ş.  
16th IEEE International Conference on Machine Learning and Applications (ICMLA), Cancun, Mexico, 18 - 21 December 2017, pp.432-436
- IV. **Binary Classification Performance Measures/Metrics: A Comprehensive Visualized Roadmap to Gain New Insights**  
Canbek G., SAĞIROĞLU Ş., TAŞKAYA TEMİZEL T., BAYKAL N.  
2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October 2017, pp.821-826
- V. **Clustering and Visualization of Mobile Application Permissions for End Users and Malware Analysts**

Canbek G., BAYKAL N., SAĞIROĞLU Ş.

5th International Symposium on Digital Forensic and Security (ISDFS), Tirgu Mures, Romania, 26 - 28 April 2017

- VI. **On Differential Factors**  
TEZCAN C., DOĞANAKSOY A., OKAN G. O., ŞENOL A., Doğan E., Yücebaş F., BAYKAL N.  
11. INTERNATIONAL CONFERENCE ON INFORMATION SECURITY, 25 October 2016
- VII. **Differential Attacks on Lightweight Block Ciphers PRESENT, PRIDE, and RECTANGLE Revisited**  
TEZCAN C., OKAN G. O., Senol A., Dogan E., Yucebas F., BAYKAL N.  
5th International Workshop on Lightweight Cryptography for Security and Privacy (LightSec), Cappadocia, Turkey, 20 - 21 September 2016, vol.10098, pp.18-32
- VIII. **Feature Extraction and Classification Phishing Websites Based on URL**  
Aydin M., BAYKAL N.  
IEEE Conference Communications and Network Security CNS, Florence, Italy, 28 - 30 September 2015, pp.769-770
- IX. **The Analysis of Feature Selection Methods and Classification Algorithms in Permission Based Android Malware Detection**  
Pehlivan U., Baltaci N., ACARTÜRK C., BAYKAL N.  
IEEE Symposium on Computational Intelligence in Cyber Security, Florida, United States Of America, 9 - 12 December 2014, pp.81-88
- X. **An Infrastructure for Efficient Reporting Workflow in Grid Based Teleradiology Architectures Using Relation Based Semantic Matching and Integer Linear Programming**  
Yilmaz A. O., BAYKAL N.  
Federated Conference on Computer Science and Information Systems (FedCSIS), Warszawa, Poland, 7 - 10 September 2014, vol.2, pp.241-245
- XI. **Integration of Federated Medical Systems for Vendor Neutral Image Access in Teleradiology Applications**  
Yilmaz A. O., BAYKAL N.  
25th European Medical Informatics Conference (MIE), İstanbul, Turkey, 31 August - 03 September 2014, vol.205, pp.538-542
- XII. **Turkey's Approaches on Cyber Security Policy Framework**  
BAYKAL N.  
NATO Advanced Research Workshop (ARW) on Best Practices and Innovative Approaches to Develop Cyber Security and Resiliency Policy Framework, Ohrid, Macedonia, 10 - 12 June 2013, vol.38, pp.82-98
- XIII. **The Need of a Semantic Layer between UMLS and Biomedical Information Systems**  
BAYKAL N.  
Metadata and Semantic Research: 5th International Conference, İzmir, Turkey, 12 - 14 October 2011, pp.163-169
- XIV. **Homomorphic RSA Tallying and Its Randomization for e-Voting**  
Yucel O., BAYKAL N.  
6th International Conference on e-Government, Cape-Town, South Africa, 30 September - 01 October 2010, pp.160-167
- XV. **Voter Verifiable and Single Transferable Electronic Voting for Elections with Electoral Barriers**  
Yucel O., BAYKAL N.  
9th European Conference on e-Government, London, Canada, 29 - 30 June 2009, pp.703-710
- XVI. **Evaluating learning management systems: Hexagonal e-learning assessment model (HELAM)**  
Ozkan S., Koseler R., BAYKAL N.  
5th European and Mediterranean Conference on Information Systems, EMCIS 2008, Dubai, United Arab Emirates, 25 - 26 May 2008
- XVII. **Assessing hospital information systems processes: A validation of prise information systems success model in healthcare**  
Ozkan S., BAYKAL N., Sincan M.  
14th Americas Conference on Information Systems, AMCIS 2008, Toronto, Canada, 14 - 17 August 2008, vol.6, pp.3956-3967
- XVIII. **EVEREST: An efficient method for verification of digital signatures in real-time teleradiology**

Bicakci K., Baykal N.

11th World Congress on Medical Informatics, San-Francisco, Costa Rica, 7 - 11 September 2004, vol.107, pp.1241-1245

**XIX. Server assisted signatures revisited**

BIÇAKCI K., BAYKAL N.

TOPICS IN CRYPTOLOGY - CT-RSA 2004, PROCEEDINGS, 23 - 27 February 2004, vol.2964, pp.143-156

**XX. Optimization of an online course with web usage mining**

Akman L., Akkan B., Baykal N.

IASTED International Conference on Artificial Intelligence and Applications, Innsbruck, Austria, 16 - 18 February 2004, pp.21-25

**XXI. A GIS system for ambulatory transportation**

Gulden B., Mumcuoglu E., Baykal N.

2nd IASTED International Conference on Biomedical Engineering, Innsbruck, Austria, 16 - 18 February 2004, pp.431-435

**XXII. Design and performance evaluation of a flexible and efficient server assisted signature protocol**

Bicakci K., Baykal N.

8th IEEE International Symposium on Computers and Communication (ISCC 2003), Antalya, Turkey, 30 June - 03 July 2003, pp.1239-1244

**XXIII. Infinite length hash chains and their applications**

Bicakci K., Baykal N.

11th IEEE International Workshop on Enabling Technologies - Infrastructure for Collaborative Enterprises (WET ICE 2002), Pennsylvania, United States Of America, 10 - 12 June 2002, pp.57-61

**XXIV. Wireless and mobile security**

Bicakci K., Baykal N.

5th International Conference on Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies (KES 2001), Osaka, Japan, 6 - 08 September 2001, vol.69, pp.1282-1286

**XXV. Resilient backpropagation for RBF networks**

Baykal N., Erkmen A.

4th International Conference on Knowledge-Based Intelligent Engineering Systems and Allied Technologies, Brighton, United Kingdom, 30 - 31 August 2000, pp.624-627

**XXVI. An experimental comparison of symbolic and neural learning algorithms**

Baykal N., Tolun M.

2nd International Conference on Knowledge-Based Intelligent Electronic Systems (KES 98), Adelaide, Australia, 21 - 23 April 1998, pp.306-315

**XXVII. Tagged potential field extension to self organizing feature maps**

Baykal N., Erkmen A.

2nd International Conference on Knowledge-Based Intelligent Electronic Systems (KES 98), Adelaide, Australia, 21 - 23 April 1998, pp.292-298

**XXVIII. Step down logistic regression for feature selection**

Baykal N.

International Conference on Applied Statistical in Medical Sciences, Ankara, Turkey, 01 August 1997, vol.4, pp.121-131

## Supported Projects

BAYKAL N., ÖZDEMİR O. B., Project Supported by Higher Education Institutions, Mobil Zararlı Yazılımların Analizi Sistemi Geliştirilmesi, 2014 - 2016

BAYKAL N., ÇAKIR M. P., AKKAYA A., Ömrüuzun F., GÜREL KÖYBAŞI N. A., BARIŞ B. T., ACARTÜRK C., Koçak M., Project Supported by Higher Education Institutions, Dünya Üniversiteleri Akademik Performanslarının İncelenmesi., 2012 - 2014

BAYKAL N., Project Supported by Higher Education Institutions, Dünya Üniversiteleri Akademik Performanslarının



İncelenmesi, 2011 - 2012

BAYKAL N., Project Supported by Higher Education Institutions, Mobil Kişisel Sağlık Platformu., 2010 - 2010

## **Patent**

BAYKAL N., Method and Tool for Information Security Assessment that Integrates Enterprise Objectives with Vulnerabilities, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, Standard Registration, 2013

## **Metrics**

Publication: 55

Citation (WoS): 387

Citation (Scopus): 470

H-Index (WoS): 12

H-Index (Scopus): 13

## **Non Academic Experience**

Koç-Unisys Computer Systems Co.