



**ASSIST. PROF.DR. GÜLAY ÜNEL**  
**Işık University**  
**Department of Information Technologies**  
**gulay.unel@isikun.edu.tr**

- 1. Name** : Gülay Ünel
- 2. Birth Date** : 1978
- 3. Academic Title** : Assistant Professor
- 4. Education :**

DATES	DEGREE	UNIVERSITY	DEPARTMENT
1996-2000	BS	Bilkent University	Computer Engineering and Information Science
2000-2002	MS	Bilkent University	Computer Engineering and Information Science
2002-2008	PhD	University of Waterloo	Computer Science

#### **5. Academic Titles**

YEAR	TITLE	UNIVERSITY	DEPARTMENT
2011	Assist. Prof.	Işık University	Information Technologies

#### **6. Supervised MS and PhD Theses**

#### **7. Publications**

##### **7. 1. Journal Publications (SCI-Expanded)**

1. G. Unel, M. E. Donderler, O. Ulusoy, U. Gudukbay, An Efficient Query Optimization Strategy for Spatio-Temporal Queries in Video Databases. Journal of Systems and Software, vol.73, no.1, 2004.

##### **7. 2. Journal Publications (Non SCI-Expanded)**

### 7.3. International Conference Papers

1. G. Unel, D. Toman, Deciding Weak Monadic Second-order Logics using Complex-value Datalog. Proc. Applications of Description Logics 2004, CEUR WS vol.115, 2004.
2. G. Unel, D. Toman, Deciding Weak Monadic Second-order Logics using Complex-value Datalog. Proc. LPAR-12, short paper, 2005.
3. G. Unel, D. Toman, An Incremental Technique for Automata-based Decision Procedures. Proc CADE, 2007.
4. G. Unel, D. Toman, Logic Programming Approach to Automata-based Decision Procedures. Proc. ICLP, 2007.
5. F. Fischer, G. Unel, B. Bishop, D. Fensel, Towards a scalable, pragmatic Knowledge Representation Language for the Web. Proc. PSI (Perspectives of System Informatics), 2009.
6. G. Unel, D. Roman, Stream Reasoning: A Survey and Further Research Directions. Proc. Web as a Stream Workshop, FQAS, 2009.
7. A. Aavani, S. Tasharro\_, G. Unel, E. Ternovska, D. Mitchell, Speed-up Techniques for Negation in Grounding. Proc. LPAR-16, 2010.

### 7.4. Book Chapters

1. F. Fischer, G. Unel, Reasoning in Semantic Web-based Systems. Semantic Web Information Management A Model-Based Perspective, R. De Virgilio, F. Giunchiglia, L. Tanca (Eds.), 2010.

### 8. Research Projects

LarKC – Large Knowledge Collider (2009-2010): Researcher and work package leader in EU FP 7 Large-Scale Integrating Project LarKC (see: <http://www.larkc.eu/>).

MX – Modeling and Solving Search Problems with Logic (2008-2009): Researcher in the research and development project supported by MITACS, Canada (see: <http://www.cs.sfu.ca/research/groups/mxp/>)

BilVideo (2000-2002): Researcher in the research and development project supported by TUBITAK (see: <http://www.cs.bilkent.edu.tr/~bilmdg/bilvideo/>).

### 9. Administrative Positions and Employment History

#### 9.1. Administrative Positions

DATES	UNIVERSITY/ INSTITUTION	POSITION
2012-	Işık University	Co-head of Department, Information Technologies
2012-	Işık University	Faculty of Arts and Sciences, Member of Faculty Management Council

2012-	Işık University	Faculty of Arts and Sciences, Member of Faculty Council
-------	-----------------	---

## 9.2. Employment History

DATES	TITLE	UNIVERSITY/ INSTITUTION	DEPARTMENT
2002-2008	Research Assistant	University of Waterloo	Computer Science
2008-2009	Postdoc	Simon Fraser University	Computer Science
2009-2010	Postdoc	University of Innsbruck	Semantic Technologies Institute
2010-2011	Sessional Instructor	University of Waterloo	Computer Science
2011-	Assist. Prof. Dr.	Işık University	Information Technologies

## 10. Scientific and Professional Membership

## 11. Awards and Honours

## 12. Courses Taught (Last Two Years)

- \* Elementary Algorithm Design and Data Abstraction
- \* Database Systems
- \* Data Mining
- \* CRM Systems
- \* Data Structures and Algorithms
- \* Semantic Web

## 13. Other Academic and Scientific Activities

## 14. Research Interests

- \* Automated Deduction
- \* Deductive Databases
- \* Multimedia Databases
- \* Query Evaluation and Optimization
- \* Optimization of Decision Procedures
- \* Logic-Automata Connection