

Asst. Prof. Ercan Serif KAYA

Department of Civil Engineering
Faculty of Engineering
Alanya Alaaddin Keykubat University
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EDUCATION

- Sept 2013** **PhD in Architectural and Civil Engineering**
Kumamoto University, Dept. of Architectural and Civil Engineering
Graduate School of Science and Technology, Kumamoto, Japan
- Sept 2010** **MSc in Civil and Environmental Engineering**
Kumamoto University, Dept. of Civil and Environmental Engineering
Graduate School of Science and Technology, Kumamoto, Japan
- July 2008** **BSc in Civil Engineering**
Ege University, Dept. of Civil Engineering
Engineering Faculty, Izmir, Turkey

HONORS & AWARDS

- Oct 2010** **MEXT PhD Scholarship**
MONBUKAGAKUSHO, Japanese Government Scholarship (3 years)
- Oct 2008** **MEXT MSc Scholarship**
MONBUKAGAKUSHO, Japanese Government Scholarship (2 years)
- July 2008** **Second Honors in BSc**
Graduated with Second Honors in BSc
Department of Civil Engineering, Ege University, Turkey

EXPERIENCE

- July 2015 – Jun 2016** **Visiting Professor**
Gebze Technical University
Dept. of Earthquake and Structural Engineering

Research studies mainly focused on buried pipelines and model development using ABAQUS finite element model software with collaboration of Bogazici University, Kandilli Observatory and Earthquake Research Institute. I was in charge of teaching “*Nonlinear analysis of structural systems*” course of grad students in English, as well.

Apr 2015 - Present

Assistant Professor / Head of Dept.

Alanya Alaaddin Keykubat University
Engineering Faculty, Dept. of Civil Engineering

I am working as Assistant Professor at the Alanya University which was Akdeniz University till April, 2015 and I am in charge of giving lectures at the department of Civil Engineering including Engineering Mechanics, Strength of material (I-II), Concrete Technology and Calculus.

Dec 2014 - Apr 2015

Assistant Professor / Head of Dept.

Akdeniz University
Alanya Engineering Faculty, Dept. of Civil Engineering

Mar 2014 - Dec 2014

Visiting Researcher

Bogazici University
Kandilli Observatory and Earthquake Research Institute (KOERI)

Research studies on 3D nonlinear soil-pipe model development of buried pipelines using ABAQUS FEA software that takes into account large strain and displacements.

Aug 2012

Observer

Hyogo Earthquake Engineering Research Center, NIED, E-Defense,
Kobe, Japan

Experimental study using shaking table test with $\frac{1}{4}$ scale model of a 20-storey reinforcement concrete frame structure

Jun 2010

Visiting Scientist

Kyushu Sangyou University, Structural Dynamics Laboratory
Fukuoka, Japan
Shaking Table Test – Experimenter

MSc research studies on a scaled experimental model of 16 story frame structure by using shaking table test in Kyushu Sangyou University, Structural Dynamics Laboratory, Fukuoka.

Jul 2006 – Aug 2006

Intern

Dikili City Hall, Izmir, Municipal Department of Technical Services
Internship

Jun 2006 – Jul 2006

Intern

Afa Prefabrik, Precast Concrete Ind. & Trade and Co. Inc.
Internship

PUBLICATIONS

1. Akşar, B., Akbas, B., **Kaya, E.S.**, Cakir, F., “Relative Story Displacements and Torsional Effects Caused by Strength Variations in Concentrically Braced Frames” Gazi University Engineering-Architectural Faculty Journal, 2017 (*In Print – In Turkish*).
2. Ozdemir, M.A., **Kaya, E.S.**, Aksar, B., Seker, B.S., Cakir, F., Akbas, B., “Seismic Vulnerability of Masonry Jack Arch Slabs” Engineering Failure Analysis, 2017. <http://dx.doi.org/10.1016/j.engfailanal.2017.02.008>
3. **Kaya, E.S.**, Uckan, E., O’Rourke, M.J., Karamanos, S.A., Akbas, B., Cakir, F., Cheng, Y., “Failure Analysis of a Welded Steel Pipe at Kullar Fault Crossing,” Engineering Failure Analysis, Vol. 71, pp. 43-62, 2017. <http://dx.doi.org/10.1016/j.engfailanal.2016.10.004>
4. **Kaya, E.S.**, Uckan, E., Cakir, F., Akbas, B., “A 3D nonlinear analysis of buried steel pipes at strike slip fault crossings” Gradevinar, Vol. 68(10), pp. 815-823, 2016. [DOI: 10.14256/JCE.1317.2015](https://doi.org/10.14256/JCE.1317.2015)
5. Uckan, E., Akbas, B., **Kaya, E.S.**, Cakir, F., Ipek, C., Makaraci, M., Ataoglu, S., “Design Issues of Buried Pipelines at Permanent Ground Deformation Zones” Disaster Science and Engineering, Vol. 2(2), pp. 53-58, 2016.
6. **Kaya, E.S.**, Katayama, T., Wijaya, M.N., Yamao, T., “Seismic Performance Investigation of the Folded Cantilever Shear Structure: An Experimental Study” International Journal of Civil Engineering & Technology, IJCIET, 4(4), 251-266, 2013.
7. **Kaya, E.S.**, Katayama, T., Yamao “Seismic Characteristics of the Folded Cantilever Shear Structure” International Journal of Civil Engineering & Technology, IJCIET, 4(2), 58-79, 2013.
8. Wijaya, M.N., Katayama, T., **Kaya, E.S.**, Yamao, T., “Earthquake Response of Modified Folded Cantilever Shear Structure with Fixed-Movable-Fixed Sub-Frames” International Journal of Civil Engineering & Technology, IJCIET, 4(4), 194-207, 2013.

PROCEEDINGS IN CONFERENCE/SYMPOSIUM BOOKS

1. **Kaya, E.S.**, Uckan, E., Cakir, F., Siyahi, B., Akbas, B., “Analysis and Design of Buried Steel Pipes at Fault Crossings,” 12th International Congress on Advances in Civil Engineering ACE2016, Bogazici University, Istanbul, Turkey, September 21-23, 2016.
2. **Kaya, E.S.**, Cakir, E., Aksar, B., Shen, J., Seker, O., Akbas, B., “Numerical Modeling Techniques for Braces in Steel Concentrically Braced Frames Gebze Technical University, Graduate School of Natural and Applied Sciences, Graduate Studies Symposium Presentation Days, 17-18 May 2016.

3. Uckan, E., **Kaya, E. S.**, O'Rourke, M., Cakir, F., Akbas, B., Cheng, Y., "The Performance of Thames Water Pipeline at the Kullar Fault Crossing," 7th China-Japan-US Trilateral Symposium on Lifeline Earthquake Engineering, 1-4 June, Shanghai, China, 2016.
4. Uckan, E., **Kaya, E. S.**, Akbas, B., Cakir, F., Karamanos, S. A., "Three Dimensional Finite Element Model Simulation of a Steel Pipeline at a Strike Slip Fault Crossing," ICONIC2016, 1st International Conference on Natural Hazards and Infrastructure, Chania, Greece, 28-30 June, 2016.
5. Uckan, E., Akbas, B., **Kaya, E.S.**, Cakir, F., Ipek, C., Makaraci, M., Ataoglu, S., "Design Issues of Buried Pipelines at Permanent Ground Deformation Zones," Natural Disasters and Disasters Management Symposium (DAAYS'16), Karabuk, Turkey, March 2-4, 2016.
6. Cakir, F., **Kaya, E.S.**, Aksar, B., Shen, J., Seker, O., Akbas, B., "Merkezi Çaprazlı Çerçevelerde Çapraz Elemanlarda Sayısal Modelleme Teknikleri," 6ncı Çelik Yapılar Sempozyumu, Eskişehir, 15-17 Ekim 2015.
7. Cakir, F., Uckan, E., Gunaydın H.M., **Kaya, E.S.**, Shen, J., Akbas, B., "Seismic Performance Evaluation of Historical Masonry Aqueducts," 3rd Turkish Conference on Earthquake Engineering and Seismology, Dokuz Eylül University, Izmir, October 14-16, 2015.
8. Uckan, E., Akbas, B., Shen, J., Wen, R., Seker, O., Paolacci, F., **Kaya, E.S.**, "Soil Effect on Response of Buried Steel Pipes at Strike-Slip Fault Crossings," Second European Conference on Earthquake Engineering and Seismology, Special Session: Seismic Assessment of Lifelines, Istanbul, August 25-29, 2014.
9. Wijaya, M.N., Katayama, T., **Kaya, E.S.**, Yamao, T., "Seismic Responses of the Folded Cantilever Shear Structure Models" Proceeding of Constructional Steel, Japan Society of Steel Structures, JSSC13, Vol. 21, 477-483, November 14-15, 2013, Tokyo, Japan.
10. Wijaya, M.N., Katayama, T., **Kaya, E.S.**, Yamao, T., "Seismic Performance of Fixed-Movable-Fixed Supported Folded Cantilever Shear Structure" The Proceedings of Thirteenth East Asia-Pacific Conference on Structural Engineering and Construction, EASEC13, September 11-13, 2013, Hokkaido, Japan.
11. Wijaya, M.N., Katayama, T., **Kaya, E.S.**, Yamao, T., "Seismic Response Analyses of 3-D Model Folded Cantilever Shear Structure", The Seventh International Student Conference on Advanced Science and Technology, ICAST, 107-108, October 29-30, 2012, Seoul, Korea.
12. Wijaya, M.N., Katayama, T., **Kaya, E.S.**, Yamao, T. "Earthquake Resistant Ability of Movable and Fixed Supported Folded Cantilever Shear Structure" International Symposium on Earthquake Engineering, JAEE, November 8-10, 2012, Tokyo, Japan.

13. **Kaya, E.S.**, Katayama, T., Yamao, T. “Seismic Response Analyses of the Folded Cantilever Shear Structure: Analytical and Experimental Studies” The Proceedings of Twelfth East Asia-Pacific Conference on Structural Engineering and Construction, Elsevier, EASEC12, Vol. 14, 1275-1280, January 26-28, 2011, Hong Kong, China.
14. **Kaya, E.S.**, Katayama, T., Yamao, T. “Experimental Study on Seismic Performance of the Folded Cantilever Shear Structure” The Sixth International Student Conference on Advanced Science and Technology, ICAST, 159-160, September 24-25, 2011, Jinan, China.
15. **Kaya, E.S.**, Katayama, T., Yamao, T. “New Seismic Isolation Approach: The Folded Cantilever Shear Structure” Japan Society of Civil Engineers Annual Meeting, JSCE, 81-82, September 7-9, 2011, Ehime, Japan.
16. **Kaya, E.S.**, Katayama, T., Yamao, T. “Experimental Analysis of the Folded Cantilever Shear Structure” The Sixth International Symposium on Steel Structures, ISSS, November 3-5, 2011, 954-958, Seoul, Korea.
17. **Kaya, E.S.**, Katayama, T., Yamao, T. “Experimental Study of the Folded Cantilever Shear Structure in terms of Vibration Characteristics” Japan Society of Steel Structures, JSSC11, Vol.19, 381-386, November 17-18, 2011, Tokyo, Japan.
18. **Kaya, E.S.**, Katayama, T., Yamao, T. “Seismic Response Analysis of the Folded Cantilever Shear Structure” The Ninth U.S. National and Tenth Canadian Conference on Earthquake Engineering, EQCONF, July 25-29, 2010, Toronto, Canada.
19. **Kaya, E.S.**, Katayama, T., Yamao, T. “Seismic Characteristic Behavior of the Folded Cantilever Shear Structure” The Fourth International Student Conference on Advanced Science and Technology, ICAST, 279-280, May 25-26, 2010, Izmir, Turkey.
20. Katayama, T., **Kaya, E.S.**, Yamao, T. “折曲がり片持ちせん断構造体の地震応答性状, 土木学会西部支部研究発表会, 29-30, March 6, 2010 (Japanese).

SOME SELECTED COURSES FROM GRADUATE AND DOCTORAL PROGRAM

- Seismic and Damage Control Design of Structures
- Digital Structure Systems
- Risk Management for Disasters
- Stability and Ductility of Structures
- Theory on the Ultimate Strength Design of Steel Structures
- Advanced Subsurface Space Engineering
- Applied Continuum Mechanics

GRADUATION PROJECTS

PhD	Seismic Performance Investigation of the Folded Cantilever Shear Structure Which Consists of Fixed and Movable Sub-Frames Kumamoto University, 2013
MSc	Seismic Characteristic Behavior of the Folded Cantilever Shear Structure Kumamoto University, 2010
BSc	Determination of Internal Friction Angle of Soils of Different Origin by Using Shear Box Test Ege University, 2008

SKILLS

Language	Turkish : Native language English : Fluent (TOEIC - 720) Japanese : Fluent (JLPT - N2 level)
CAE/CAD Software	ABAQUS (FEA/Simulia) Sap2000 (CSI) Solid Works TDAPIII (3-D Dynamic Analysis Program) AutoCAD
Structural Dynamics Laboratory Experiments	Dynamic Response Analysis: Shaking Table Test Structural Dynamic Parameters: Free Vibration, Mode Shape, Resonance Tests
Programming	Fortran QBasic Scilab Matlab