

**Süleyman Cengizci**  
**Department of Scientific Computing, PhD Candidate, METU**  
**Computer Programming, Lecturer, ABU**

Address: ABÜ A2-33, Üniversite Cad. No: 2, 07190, Döşemealtı / Antalya / Turkey

Tel: +90 242 245 02 10 (Internal #2210)

Fax: +90 242 245 00 45

E-Mail: [suleyman.cengizci\(at\)antalya.edu.tr](mailto:suleyman.cengizci@antalya.edu.tr)

: [cengizci.suleyman\(at\)metu.edu.tr](mailto:cengizci.suleyman@metu.edu.tr)

: [suleymancengizci\(at\)gmail.com](mailto:suleymancengizci@gmail.com)

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## EDUCATION

- **Ph.D in Scientific Computing** (2014 - 2019) [Middle East Technical University, Institute of Applied Mathematics](#), Department of Scientific Computing, Ankara / Turkey

Specializations: Scientific Computing, Numerical Solutions of Ordinary and Partial Differential Equations, Finite Element Methods, Hypersonic Fluid Mechanics

Thesis: Numerical Solutions of Navier - Stokes Equations under Hypersonic Reactive Flow Conditions

Thesis Supervisor: [Prof. Ömür Uğur](#) (Middle East Technical University, Director to Institute of Applied Mathematics)

- **M.S in Applied Mathematics** (August, 2014) [Nevşehir Hacı Bektaş Veli University](#) (Middle East Technical University – Engineering Sciences, Ankara / Turkey), Graduate School of Natural and Applied Sciences, Nevşehir / Turkey

Specializations: Applied Mathematics (Asymptotic Methods, Singular Perturbation Problems),  
: Spectral Methods ([Middle East Technical University – Engineering Sciences](#))

Thesis: Asymptotic Analysis of Singular Perturbation Problems

Thesis Supervisor: Asst. Prof. Mehmet Tarık ATAY

- **Certificate in Mathematical Education** (June 2014) Pedagogical Formation, [Akdeniz University](#), Faculty of Education
- **Bachelor Degree in Mathematics** (June, 2012) [Niğde Ömer Halisdemir University](#) (Niğde / Turkey), Department of Mathematics  
*Thesis: Dual Spaces*
- **High School** (June, 2007) [Metin-Nuran Çakallıklı Anadolu Lisesi](#) (Antalya / Turkey), Natural Sciences

## ACADEMIC FACILITIES

- **Lecturer**, *December 2017 - onwards*  
Computer Programming, [Antalya Bilim University](#), Antalya / Turkey
- **Research Assistant**, *September 2014 – December 2017*  
College of Business, Department of Economics, [Antalya Bilim University](#), Antalya / Turkey

## OTHER FACILITIES

- **Trainee Teacher**, *January 2014- June 2014*  
[Hüsniye Özdilek Mesleki ve Teknik Anadolu Lisesi](#), Antalya / Turkey  
*Courses: High School Mathematics*
- **Trainee Teacher**, *June 2013- May 2014*  
*Antalya Vahap Yılmaz Private Educational Institution*, Antalya / Turkey  
*Courses: High School Mathematics & Geometry*

## EDUCATIONAL FACILITIES

### I. **Antalya Bilim University** (as TA, 2014-2017):

- *Calculus for Social Sciences I (x3)*
- *Calculus for Social Sciences II (x3)*
- *Linear Algebra (x1)*
- *Mathematical Economics (x1)*

### II. **Antalya Bilim University** (as Lecturer, 2017- )

- *Introduction to Linear Algebra (x2)*
- *Information Technologies (x2)*
- *Calculus for Social Sciences I - II (x2)*
- *Mathematics I (x2)*
- *Statistics for Social Sciences (x1)*

## RESEARCH INTERESTS

- *Singular Perturbation Problems*
- *Asymptotic Methods*
- *Numerical Solutions of ODE's and PDE's*
- *Numerical Linear Algebra*
- *Finite Element Methods (FEM)*
- *Scientific Computing*
- *Scientific Programming*

## PUBLICATIONS

### • Academic Papers

1. (2015) **Cengizci S.**, Eryilmaz A., “Successive Complementary Expansion Method for solving Troesch's Problem as a Singular Perturbation Problem”, *International Journal of Engineering Mathematics* (published) doi:10.1155/2015/949463
2. (2016) **Cengizci S.**, Atay M. T., Eryilmaz A., “A uniformly valid approximation algorithm for singularly perturbed two-point boundary value problems in nonlinear ordinary differential equations” *SpringerPlus* (published) doi: 10.1186/s40064-016-1865-6 (SCI-E)
3. (2016) Atay M. T., **Cengizci S.**, Eryilmaz A., “SCEM Approach for Singularly Perturbed Linear Turning Mid-Point Problems with an Interior Layer”, *New Trends in Mathematical Sciences* (published) doi: 10.20852/ntmsci.2016115661
4. (2017) **Süleyman Cengizci**, “An Asymptotic-Numerical Hybrid Method for Solving Singularly Perturbed Linear Delay Differential Equations,” *International Journal of Differential Equations*, vol. 2017, Article ID 7269450, 8 pages, 2017. doi:10.1155/2017/7269450 (published) (ESCI)
5. (2018) **S. Cengizci**, S. Natesan, M. T. Atay, “An asymptotic-numerical hybrid method for singularly perturbed system of two-point reaction-diffusion boundary-value problems”, *Turkish Journal of Mathematics*, 2018. doi: 10.3906/mat-1807-195 (SCI-E)
6. (2019) **Cengizci S.**, “A comparison between MMAE and SCEM for solving singularly perturbed linear boundary layer problems”, *Filomat* (accepted) (SCI-E)

### • Publications in progress / in review

1. (2019) **Cengizci S.**, Atay M. T., “An asymptotic approach for singularly perturbed turning point problems with dual layers”, *Filomat* (under review) (SCI-E)
2. (2019) **Cengizci S.**, “A hybrid method for solving singularly perturbed differential equations with fractional order” *Communications in Nonlinear Science and Numerical Simulation* (in progress) (SCI)
3. (2019) **Cengizci S.**, “On an efficient method for solving singularly perturbed nonlinear difference-differential equations”, *Communications in Nonlinear Science and Numerical Simulation* (in progress) (SCI)
4. (2019) **Cengizci S.**, “Uniformly valid hybrid method scheme for solving singularly perturbed parabolic partial differential equations”, (in progress)
5. (2019) **Cengizci S.**, “A hybrid method for solving a system of singularly perturbed two-point convection-diffusion equations”, *Differential Equations and Dynamical Systems* (under review) (E-SCI)

6. (2019) **Cengizci S.**, “On an efficient hybrid method for a system of singularly perturbed two-point boundary value problems with turning point”, (in progress)
7. (2019) **Cengizci S.**, “A finite element based hybrid method for solving singularly perturbed nonlinear differential equations”, (in progress)
8. (2019) **Cengizci S.**, “An asymptotic-numerical hybrid scheme for solving singularly perturbed difference-differential equations exhibiting interior layer behavior”, (in progress)
9. (2019) **Cengizci S.**, “Numerical experiments on singularly perturbed one-dimensional Bratu problem”, (in progress)

- **Conference Presentations**

1. (2015) **Cengizci S.**, Atay M. T., Eryilmaz A., “A uniformly valid approximation algorithm for singularly perturbed two-point boundary value problems in nonlinear ordinary differential equations”, International Conference on Advancements in Mathematical Sciences, Antalya, Turkey.
2. (2016) **Cengizci S.**, Eryilmaz A., “A hybrid approach for solving singularly perturbed turning point problems exhibiting dual layers”, International Conference on Mathematics and Mathematics Education (ICMME-2016), Fırat University, Elazığ, Turkey, 12-14 May 2016.
3. (2017) **Cengizci S.**, “On an efficient hybrid method for solving singularly perturbed difference-differential equations exhibiting turning layer behavior”, (ICCESEN 2017) - 4th International Conference on Computational and Experimental Science and Engineering, Antalya, Turkey, 4-8 October 2017
4. (2017) **Cengizci S.**, “On an asymptotic-numerical hybrid method for solving singularly perturbed nonlinear delay differential equations”, (ICCESEN 2017) - 4th International Conference on Computational and Experimental Science and Engineering, Antalya, Turkey, 4-8 October 2017
5. (2017) **Cengizci S.**, “SCEM for solving a system of singularly perturbed convection-diffusion equations”, International Conference On Applied Analysis and Mathematical Modelling (ICAAMM-2017), Istanbul, Turkey, 3-7 July 2017.
6. (2017) **Cengizci S.**, “On an asymptotic-numerical hybrid scheme for solving singularly perturbed turning point problems with dual layers”, International Conference On Applied Analysis and Mathematical Modelling (ICAAMM-2017), Istanbul, Turkey, 3-7 July 2017.
7. (2018) **Cengizci S.**, “Some comparisons between MMAE and SCEM for solving singularly perturbed linear problems”, The Third International Conference on Computational Mathematics and Engineering Sciences (CMES-2018), May 4-6, 2018, Girne, Cyprus.
8. (2018) **Cengizci S.**, “A hybrid simulation for a system of singularly perturbed two-point reaction-diffusion equations”, The Third International Conference on Computational Mathematics and Engineering Sciences (CMES-2018). May 4-6, 2018, Girne, Cyprus.

9. (2019) Cengizci S., “Finite Element Based Hybrid Approximations to Solutions of Singularly Perturbed Problems”, The Fourth International Conference on Computational Mathematics and Engineering Sciences (CMES-2019). April 20-22, 2019, Antalya, Turkey.
10. (2019) Cengizci S., “Finite Element Based Hybrid Approximations to Solutions of Singularly Perturbed Reaction-Diffusion Systems”, The Fourth International Conference on Computational Mathematics and Engineering Sciences (CMES-2019). April 20-22, 2019, Amtalya, Turkey.

## OTHER ACADEMIC FACILITIES

### o Referee/Reviewer:

- *Neural Processing Letters (Springer/SCI-E) x 3*
- *Mathematical Modelling and Analysis (Taylor & Francis / SCI-E) x 1*
- *Mathematical Sciences (Springer/E-SCI) x 1*
- *Mathematical Sciences Letters (Natural Sciences Publishing) x 7*
- *British Journal of Mathematics & Computer Science x 1*
- *Advances in Research x 1*
- *Journal of Advances in Mathematics and Computer Science x 2*
- *Asian Research Journal of Mathematics x 1*
- *Gazi University Journal of Science (E-SCI) x 1*

### o Visiting Research Institutions:

1. *Visiting Researcher, Department of Computing + Mathematical Sciences, California Institute of Technology(CALTECH), USA.  
Supervisor: Prof. Oscar P. Bruno*
2. *Visiting Staff, The Interdisciplinary Center for Scientific Computing (IWR), Ruprecht-Karls University of Heidelberg, Germany, (8-11 May, 2017)  
Supervisor: Prof. Anna Marciniak-Czochra*

## COMPUTER AND PROGRAMMING

*Windows, Linux (Ubuntu), Microsoft Office Pack, MATLAB, FEniCS, Scientific Workplace, LaTeX, C++ Programming Language, Fortran Programming Language, Python Programming Language*

## ACADEMIC MEMBERSHIPS

*International Association of Engineers (IAENG)*

## ACADEMIC RECOGNITION

*Scopus ID: 57151353400*

*LinkedIn*

*Orcid ID: orcid.org/0000-0002-4345-1253*

*Publons*

*arxiv*

*ResearchGate*

## REFERENCES

➤ **Prof. Ömür UĞUR**

*Middle East Technical University, Head of the Department of Scientific Computing*

*Phone: +90 (312) 210 5617*

*e-mail: ougur [at] metu.edu.tr*

*web*

➤ **Prof. Onur KÖKSOY**

*Ege University, Head of the Department of Statistics*

*Phone: +90 (554) 292 77 94*

*e-mail: onur.koksoy [at] ege.edu.tr*

*web*

➤ **Prof. Gerhard Wilhelm WEBER**

*Poznan University of Technology, Chair of Marketing and Economic Engineering*

*e-mail: gerhard-wilhelm.weber[at]put.poznan.pl*

*web*

➤ **Assoc. Prof. Nurettin IRMAK**

*Ömer Halisdemir University, Department of Mathematics*

*e-mail: nirmak [at] ohu.edu.tr*

*web*

➤ **Asst. Prof. Mehmet Tarık ATAY**

*Abdullah Gul University, Department of Mechanical Engineering*

*e-mail: mehmettarik.atay [at] agu.edu.tr*

*web*

➤ **Asst. Prof. Levent KUTLU**

*University of Texas at Arlington, Department of Economics*

*e-mail: kutlulev [at] gmail.com*

*web*