

## Prof. FATİH YAŞAR

### Personal Information

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### International Researcher IDs

ORCID: 0000-0003-2216-5263

Publons / Web Of Science ResearcherID: G-6047-2013

ScopusID: 55940706100

Yoksis Researcher ID: 7854

### Education Information

Doctorate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği, Turkey 1995 - 2000

Undergraduate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği, Turkey 1988 - 1995

### Foreign Languages

English, B1 Intermediate

### Research Areas

Computer Sciences, algorithms, Simulation and Modelling, Parallel Algorithms, Numerical Algorithms, Physics, General Physics, Statistical physics, thermodynamic and nonlinear dynamic systems, Chemistry, Biochemistry, Biophysical Chemistry, Protein Chemistry, Natural Sciences, Engineering and Technology

### Academic Titles / Tasks

Professor, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2008 - Continues

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2002 - 2008

Research Assistant, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 1993 - 2002

### Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği, 2018 - Continues

Hacettepe Üniversitesi, Atama Kriterleri Belirleme Ve Dosyaları İnceleme Komisyonu, 2017 - Continues

Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2009 - 2012

### Supervised Theses

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

- I. **Molecular Insight into the Effect of HIV-TAT Protein on Amyloid- $\beta$  Peptides.**  
Jana A. K., Keskin R., Yaşar F.  
ACS omega, vol.9, no.25, pp.27480-27491, 2024 (SCI-Expanded)
- II. **Catalytic Reaction Mechanism of Bacterial GH92  $\alpha$ -1,2-Mannosidase: A QM/MM Metadynamics Study**  
SAĞIROĞLUGİL M., YAŞAR F.  
ChemPhysChem, vol.24, no.24, 2023 (SCI-Expanded)
- III. **The stability and dynamics of the A $\beta$ 40/A $\beta$ 42 interlaced mixed fibrils**  
Jana A. K., GÜVEN Ö., YAŞAR F.  
Journal of Biomolecular Structure and Dynamics, 2023 (SCI-Expanded)
- IV. **Resolution exchange with tunneling for enhanced sampling of protein landscapes**  
Yasar F., Ray A. J., Hansmann U. H. E.  
PHYSICAL REVIEW E, vol.106, no.1, 2022 (SCI-Expanded)
- V. **Interconversion between Serum Amyloid A Native and Fibril Conformations**  
Yasar F., Sheridan M. S., Hansmann U. H. E.  
ACS OMEGA, vol.7, no.14, pp.12186-12192, 2022 (SCI-Expanded)
- VI. **Conformational stability of the tetrameric de novo designed hexcoil-Ala helical bundle**  
Demir K., Alici H., YAŞAR F.  
CHINESE JOURNAL OF PHYSICS, vol.56, no.1, pp.46-57, 2018 (SCI-Expanded)
- VII. **Response to "Comment on 'Replica-exchange-with-tunneling for fast exploration of protein landscapes'" [J. Chem. Phys. 145, 057101 (2016)]**  
YAŞAR F., Bernhardt N. A., Hansmann U. H. E.  
JOURNAL OF CHEMICAL PHYSICS, vol.145, no.5, 2016 (SCI-Expanded)
- VIII. **Replica-exchange-with-tunneling for fast exploration of protein landscapes**  
YAŞAR F., Bernhardt N. A., Hansmann U. H. E.  
JOURNAL OF CHEMICAL PHYSICS, vol.143, no.22, 2015 (SCI-Expanded)
- IX. **Folding and self-assembly of a small heterotetramer**  
YAŞAR F., SIERADZAN A. K., HANSMANN U. H. E.  
JOURNAL OF CHEMICAL PHYSICS, vol.140, no.10, 2014 (SCI-Expanded)
- X. **Multicanonical molecular dynamics simulations of the N-terminal domain of protein L9**  
YAŞAR F., Jiang P., Hansmann U. H. E.  
EPL, vol.105, no.3, 2014 (SCI-Expanded)
- XI. **The investigation of the secondary structure propensities and free-energy landscapes of peptide ligands by replica exchange molecular dynamics simulations**  
Demir K., Kilic N., DUDAK F. C., BOYACI İ. H., YAŞAR F.  
MOLECULAR SIMULATION, vol.40, no.13, pp.1015-1025, 2014 (SCI-Expanded)
- XII. **In Silico Cross Seeding of A beta and Amylin Fibril-like Oligomers**  
Berhanu W. M., Yasar F., Hansmann U. H. E.  
ACS CHEMICAL NEUROSCIENCE, vol.4, no.11, pp.1488-1500, 2013 (SCI-Expanded)
- XIII. **Sampling of Protein Folding Transitions: Multicanonical Versus Replica Exchange Molecular Dynamics**  
Jiang P., YAŞAR F., Hansmann U. H. E.  
JOURNAL OF CHEMICAL THEORY AND COMPUTATION, vol.9, no.8, pp.3816-3825, 2013 (SCI-Expanded)
- XIV. **Enhancing the affinity of SEB-binding peptides by repeating their sequence**  
Dudak F. C., Kilic N., Demir K., YAŞAR F., BOYACI İ. H.  
BIOPOLYMERS, vol.98, no.2, pp.145-154, 2012 (SCI-Expanded)

- XV. **Thermodynamic and structural analysis of interactions between peptide ligands and SEB**  
Dudak F. C., Soykut E. A., Oguz M. E., YAŞAR F., BOYACI İ. H.  
JOURNAL OF MOLECULAR RECOGNITION, vol.23, no.4, pp.369-378, 2010 (SCI-Expanded)
- XVI. **The Systematic Simulations of the Hopfield Model by Multicanonical Algorithm**  
YAŞAR F., DİLAVER M.  
CHINESE JOURNAL OF PHYSICS, vol.47, no.2, pp.226-237, 2009 (SCI-Expanded)
- XVII. **THE STUDY OF PHASE TRANSITION BY PERIODIC DISTRIBUTION OF BIMODAL BONDS IN 2D POTTS MODEL**  
YAŞAR F., DİLAVER M.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.20, no.2, pp.223-236, 2009 (SCI-Expanded)
- XVIII. **Solvation model effects on two specific peptides of milk protein**  
YAŞAR F., DEMİR K.  
CHINESE JOURNAL OF PHYSICS, vol.45, no.6, pp.622-636, 2007 (SCI-Expanded)
- XIX. **The simulation of spin glass model of neural networks by the Wang-Landau algorithm**  
YAŞAR F., DİLAVER M.  
COMPUTER PHYSICS COMMUNICATIONS, vol.177, no.8, pp.625-630, 2007 (SCI-Expanded)
- XX. **The study of quenched bond randomness by Wang-Landau algorithm**  
Yasar F.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.18, no.7, pp.1107-1117, 2007 (SCI-Expanded)
- XXI. **The study of helix-coil transition of polyalanine with single histogram method**  
Yasar F., DEMİR K.  
COMPUTER PHYSICS COMMUNICATIONS, vol.175, no.9, pp.604-611, 2006 (SCI-Expanded)
- XXII. **Study of two bioactive peptides in vacuum and solvent by molecular modeling**  
Yasar F., DEMİR K.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.17, no.6, pp.825-839, 2006 (SCI-Expanded)
- XXIII. **The investigation of the secondary structures of various peptide sequences of beta-casein by the multicanonical simulation method**  
Yasar F., Celik S., Koksel H.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.363, no.2, pp.348-358, 2006 (SCI-Expanded)
- XXIV. **The investigation of the spin glass properties of the Hopfield neural network model**  
YAŞAR F.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.16, no.3, pp.427-437, 2005 (SCI-Expanded)
- XXV. **The equilibrium thermodynamics of various peptide sequences**  
Yasar F.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.15, no.4, pp.583-593, 2004 (SCI-Expanded)
- XXVI. **Molecular modeling of various peptide sequences of gliadins and low-molecular-weight glutenin subunits**  
Yasar F., Celik S., Koksel H.  
NAHRUNG-FOOD, vol.47, no.4, pp.238-242, 2003 (SCI-Expanded)
- XXVII. **Efficiency of the multicanonical simulation method as applied to peptides of increasing size: The heptapeptide deltorphin**  
YAŞAR F., Arkin H., Celik T., Berg B., Meirovitch H.  
JOURNAL OF COMPUTATIONAL CHEMISTRY, vol.23, no.12, pp.1127-1134, 2002 (SCI-Expanded)
- XXVIII. **Multicanonical simulations of some peptides**  
ARKIN H., YAŞAR F., CELİK T., Berg B., Meirovitch H.  
Computer Physics Communications, vol.147, pp.600-603, 2002 (SCI-Expanded)
- XXIX. **Molecular modelling of pentapeptide and tetrapeptide sequences of C-hordein**  
Arkin H., YAŞAR F., ÇELİK S., Celik S., KÖKSEL H.  
JOURNAL OF THE INSTITUTE OF BREWING, vol.107, no.6, pp.383-388, 2001 (SCI-Expanded)
- XXX. **Multicanonical simulation of spin systems with bond randomness**  
Yasar F.

- INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.12, no.6, pp.793-800, 2001 (SCI-Expanded)
- XXXI. **MOLECULAR MODELING OF TWO HEXAPEPTIDE REPEAT MOTIFS OF HMW GLUTENIN SUBUNITS**  
HANDAN A., YAŞAR F., ÇELİK T., ÇELİK S., KÖKSEL H.  
International Journal Of Modern Physics C, vol.12, pp.281-292, 2001 (SCI-Expanded)
- XXXII. **Multicanonical simulations of five tetrapeptide sequences in the central domain of HMW glutenin**  
Arkin H., Yasar F., ÇELİK T., Celik S., Koksel H.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.11, no.8, pp.1595-1606, 2000 (SCI-Expanded)
- XXXIII. **Multicanonical procedure for continuum peptide models**  
YAŞAR F., Celik T., Berg B., Meirovitch H.  
JOURNAL OF COMPUTATIONAL CHEMISTRY, vol.21, no.14, pp.1251-1261, 2000 (SCI-Expanded)
- XXXIV. **Study of autocorrelation times in 2D potts model under quenched bond randomness**  
Yasar F., Gunduc Y., Celik T.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.11, no.4, pp.707-712, 2000 (SCI-Expanded)
- XXXV. **Effects of the distribution of bimodal bonds on phase transition in 2D Potts model**  
YAŞAR F., Gündüç Y., CELIK T.  
Physica A: Statistical Mechanics and its Applications, vol.274, no.3, pp.537-544, 1999 (SCI-Expanded)
- XXXVI. **Softening of phase transition by random distribution of bimodal-bonds in the 2D 8-state Potts model**  
Yasar F., Gunduc Y., Celik T.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.10, no.5, pp.961-966, 1999 (SCI-Expanded)
- XXXVII. **Rounding of phase transition in the 2D 8-state random bond Potts model**  
ÇELİK T., YAŞAR F., Gündüç Y.  
Computer Physics Communications, vol.121, pp.194-196, 1999 (SCI-Expanded)
- XXXVIII. **Softening of the phase transition in a two-dimensional Potts model under quenched bond randomness**  
Yasar F., Gunduc Y., ÇELİK T.  
PHYSICAL REVIEW E, vol.58, no.4, pp.4210-4212, 1998 (SCI-Expanded)
- XXXIX. **Short-time dynamics of cluster growth in the Potts model**  
Yasar F., GUNDUC Y., AYDIN M., CELIK T.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.255, pp.430-438, 1998 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Softening of Phase Transition in the Potts Model Under The Quenched Bond Randomness**  
YAŞAR F., GÜNDÜÇ Y., TARİK Ç.  
Turkish Journal of Physics, pp.233, 1999 (Scopus)
- II. **Cluster Study of Phase Transition in Two Dimentional Q State Potts Model**  
AYDIN M., GÜNDÜÇ Y., ÇELİK T., YAŞAR F., BURCU O.  
Turkish Journal of Physics, pp.64-72, 1997 (Scopus)
- III. **Dynamics of Clusters in Three Dimensional 3 State potts Model**  
YAŞAR F., GÜNDÜÇ Y., AYDIN M., ÇELİK T.  
Turkish Journal of Physics, pp.153, 1997 (Scopus)
- IV. **Multicanonical Simulations of the Hopfield Model**  
YAŞAR F., TARİK Ç.  
Turkish Journal of Physics, pp.71, 1996 (Scopus)

## Papers Published in Refereed Scientific Meetings

- I. **Mixed Model Replica Exchange to Study Switching Proteins**  
NATHAN A. B., ULRICH H. H., YAŞAR F.

From Computational Biophysics To System Biology (CBSB15), Oklahoma, United States Of America, 17 - 19 May 2015

II. **Hybrid MC MD simulation of the Trp cage miniprotein in implicit solvent**

YAŞAR F., NATHAN B., ULRICH H. H.

From Computational Biophysics to Systems Biology (CBSB2015), Oklahoma, United States Of America, 17 - 19 May 2015

III. **Non linear lens distortion correction procedure in biomechanical analysis of human movement**

ARITAN S., YAŞAR F.

9th Annual Congress European College of Sport Science, Clermont-Ferrand, France, 3 - 06 July 2004

IV. **Molecular modeling of peptide sequences of gliadins and LMW-glutenin subunits**

Yasar F., CELIK S., KOKSEL H.

8th International Gluten Workshop, Viterbo, Italy, 8 - 10 September 2003, pp.74-77

## Supported Projects

YAŞAR F., Project Supported by Higher Education Institutions, Replica Exchange Tünelleme Yöntemi ve Uygulamaları, 2015 - 2018

DİLAVER M., YAŞAR F., Project Supported by Higher Education Institutions, From Computational Biophysics to System Biology CBSB2016 olarak adlandırılan Uluslararası Çalıştayın düzenlenmesi, 2015 - 2017

YAŞAR F., Project Supported by Higher Education Institutions, Hybrid MC/MD simulation of implicit Trpcage mini-protein, 2015 - 2015

YAŞAR F., Project Supported by Higher Education Institutions, Makromoleküller için Hibrit Simulasyon Tekniği Geliştirilmesine Yönelik Bilimsel İşbirliği, 2014 - 2015

YAŞAR F., Project Supported by Higher Education Institutions, Biyolojik Makromoleküllerin Simülasyonları için yeni tekniklerin uygulanması, 2012 - 2015

## Metrics

Publication: 47

Citation (WoS): 250

Citation (Scopus): 260

H-Index (WoS): 7

H-Index (Scopus): 7

## Congress and Symposium Activities

From Computational Biophysics to System Biology (CBSB2016), Attendee, Ankara, Turkey, 2016

From Computational Biophysics to System Biology (CBSB2015), Attendee, Oklahoma, United States Of America, 2015

From Computational Biophysics to System Biology (CBSB2014), Attendee, Gdansk, Poland, 2014

From Computational Biophysics to System Biology (CBSB2013), Attendee, Oklahoma, United States Of America, 2013

From Computational Biophysics to System Biology (CBSB2012), Attendee, Tennessee, United States Of America, 2012

## Scholarships

Nato-A2 Yurt dışı bursu, TUBITAK, 1999 - Continues

Doktora-Eğitim Bursları, TUBITAK, 1997 - Continues

Yurt-İçi Yüksek lisans bursu, TUBITAK, 1996 - Continues

## **Non Academic Experience**

Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Müh. Bölümü, Prof.Dr.

Oklahoma Üniversitesi, Ziyaretçi Profesör

Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Müh. Bölümü, Doç. Dr.

Forschungszentrum Jülich, Araştırmacı

Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Müh. Bölümü, Dr. Araş. Görevlisi

Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Müh. Böl., Araş. Görevlisi