

# Răzvan V. Chereji

## CONTACT INFORMATION

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National Institute of Child Health and Human Development  
National Institutes of Health  
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## RESEARCH INTERESTS

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Nucleosome positioning, Chromatin organization, Gene regulation, Chromatin remodeling factors,  
Statistical Mechanics, Biophysics

## EDUCATION AND RESEARCH

.....  
2016 - Present                      Research Fellow  
NICHD, National Institutes of Health, Bethesda, MD, U.S.A.  
Adviser: Dr. David J. Clark

2013 - 2016                      Visiting Fellow  
NICHD, National Institutes of Health, Bethesda, MD, U.S.A.  
Adviser: Dr. David J. Clark

2007 - 2013                      Ph.D.  
Rutgers, The State University of New Jersey, NJ, U.S.A.  
Physics Department  
Adviser: Professor Alexandre V. Morozov  
Thesis: Statistical Mechanics of Nucleosomes  
Cumulative GPA: 3.90 / 4

2002 - 2007                      B.Eng.  
Babeş-Bolyai University, Cluj, Romania  
Faculty of Physics  
Graduated as valedictorian  
Adviser: Professor Emil Vinteler  
Thesis: Differential Geometry in General Relativity and Yang-Mills Theory  
Thesis GPA: 10 / 10  
Cumulative GPA: 9.83 / 10

# Răzvan V. Chereji

## AWARDS

2009	Richard J. Plano Outstanding Teaching Assistant Award
2002	Silver Medal at the International Physics Olympiad, Indonesia
2001, 2002	Excellency Diploma awarded by the President of Romania
2001	Bronze Medal at "Tuymaada" International Olympiad, Russia
1999, 2000, 2002	First Prize at Romanian National Physics Olympiad

## SCHOLARSHIPS

2010 - 2013	Graduate Assistantship, Rutgers University
2008 - 2010	Teaching Assistantship, Rutgers University
2007 - 2008	Excellence Fellowship, Rutgers University
2002 - 2007	University Merit Scholarship, Babeş-Bolyai University
2002 - 2007	Romanian Ministry of Education Scholarship
2002 - 2007	"Petrom" Scholarship, OMV Petrom S.A.

## PUBLICATIONS

- [1] Chereji RV, Tolkunov D, Locke G, Morozov AV – Statistical mechanics of nucleosome ordering by chromatin-structure-induced two-body interactions, *Phys. Rev. E* 83 (5), 050903 (2011)
- [2] Chereji RV, Morozov AV – Statistical mechanics of nucleosomes constrained by higher-order chromatin structure, *J. Stat. Phys.* 144 (2), 379-404 (2011)
- [3] Petrenko N, Chereji RV, McClean MN, Morozov AV, Broach JR – Noise and interlocking signaling pathways promote distinct transcription factor dynamics in response to different stresses, *Mol. Biol. Cell* 24 (12), 2045-2057 (2013)
- [4] Elfving N\*, Chereji RV\*, Bharatula V, Björklund S, Morozov AV, Broach JR – A dynamic interplay of nucleosome and Msn2 binding regulates kinetics of gene activation and repression following stress, *Nucl. Acids Res.* 42 (9), 5468-5482 (2014)
- \* These authors contributed equally
- [5] Chereji RV, Morozov AV – Ubiquitous nucleosome crowding and unwrapping in the yeast genome, *Proc. Natl. Acad. Sci.* 111 (14), 5236-5241 (2014)
- [6] Ganguli D\*, Chereji RV\*, Iben JR, Cole HA, Clark DJ – RSC-dependent Constructive and Destructive Interference between Opposing Arrays of Phased Nucleosomes in Yeast, *Genome Res.* 24 (10), 1637-1649 (2014)
- \* These authors contributed equally
- [7] Cole HA, Ocampo J, Iben JR, Chereji RV, Clark DJ – Transcription of Induced Genes in Yeast Correlates with Differential Loss of Histone H2A-H2B Dimers from Coding Regions, *Nucl. Acids Res.* 42 (20), 12512-12522 (2014)
- [8] Chereji RV, Morozov AV – Functional roles of nucleosome stability and dynamics, *Brief. Funct. Genomics* 14 (1), 50-60 (2015)

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## PUBLICATIONS (CONTINUED)

- [9] Chereji RV\*, Kan T-W\*, Grudniewska MK, Romashchenko AV, Berezikov E, Zhimulev IF, Guryev V, Morozov AV, Moshkin YM – Genome-wide profiling of nucleosome sensitivity and chromatin accessibility in *Drosophila melanogaster*, *Nucl. Acids Res.* 44 (3): 1036-1051 (2016)
- \* These authors contributed equally
- [10] Qiu H\*, Chereji RV\*, Hu C, Cole HA, Rawal Y, Clark DJ, Hinnebusch AG – Genome-wide cooperation by HAT Gcn5, remodeler SWI/SNF, and chaperone Ydj1 in promoter nucleosome eviction and transcriptional activation, *Genome Res.* Published in Advance, doi: 10.1101/gr.196337.115 (2016)
- \* These authors contributed equally
- [11] Ocampo J\*, Chereji RV\*, Eriksson PR, Clark DJ – Interplay among different ATP-dependent chromatin remodeling machines determines nucleosome spacing on active and inactive genes, *Nucl. Acids Res.* Published in Advance, doi: 10.1093/nar/gkw068 (2016)
- \* These authors contributed equally

## PRESENTATIONS

- |                 |   |
|-----------------|---|
| September, 2012 | Biophysical Society Pennsylvania Network Meeting,<br>Lehigh University, Bethlehem, PA (poster)                        |
| November, 2012  | The 8 <sup>th</sup> Gotham-Metro Condensed Matter Meeting,<br>The New York Academy of Sciences, New York, NY (poster) |
| December, 2012  | 108 <sup>th</sup> Statistical Mechanics Conference,<br>Rutgers University, Piscataway, NJ (contributed talk)          |
| February, 2013  | Biophysical Society 57 <sup>th</sup> Annual Meeting, Philadelphia, PA (poster)  |
| March, 2013     | APS March Meeting, Baltimore, MD (contributed talk)   |
| June, 2013      | University of California San Francisco, San Francisco, CA (invited talk)  |
| June, 2013      | National Institutes of Health, Bethesda, MD (invited talk)  |
| September, 2013 | BioMaPS Institute for Quantitative Biology Student Seminar,<br>Rutgers University, Piscataway, NJ (invited talk)      |
| February, 2014  | Biophysical Society 58 <sup>th</sup> Annual Meeting, San Francisco, CA (poster)                                       |
| March, 2014     | APS March Meeting, Denver, CO (contributed talk)  |
| April, 2014     | 10 <sup>th</sup> Annual NICHD Fellows Meeting, Washington, DC (poster)  |
| June, 2014      | NICHD Scientific Retreat, NIH, Bethesda, MD (poster)  |
| June, 2014      | PGD Seminar, NIH, Bethesda, MD (seminar)  |
| September, 2014 | CSHL Epigenetics & Chromatin Meeting, Cold Spring Harbor, NY (poster)   |
| February, 2015  | Biophysical Society 59 <sup>th</sup> Annual Meeting, Baltimore, MD (poster)   |
| March, 2015     | APS March Meeting, San Antonio, TX (invited talk + contributed talk)  |
| March, 2015     | Keystone Symposia: DNA Methylation / Epigenomics, Keystone, CO (poster)   |
| April, 2015     | NCI Symposium on Chromosome Biology, NIH, Bethesda, MD (poster)   |
| April, 2015     | Chromatin-DECODE Seminar, NIH, Bethesda, MD (invited talk)  |

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## PRESENTATIONS (CONTINUED)

May, 2015	11 <sup>th</sup> Annual NICHD Fellows Meeting, Washington, DC (poster)
May, 2015	PGD Seminar, NIH, Bethesda, MD (seminar)
June, 2015	FASEB conference: Transcription, Chromatin, and Epigenetics, Palm Beach, FL (poster)
July, 2015	34 <sup>th</sup> Summer Symposium in Molecular Biology, Penn State University, State College, PA (poster)
September, 2015	NIH Research Festival, NIH, Bethesda, MD (poster)
January, 2016	PGD Seminar, NIH, Bethesda, MD (seminar)
February, 2016	Biophysical Society 60 <sup>th</sup> Annual Meeting, Los Angeles, CA (poster)
March, 2016	APS March Meeting, Baltimore, MD (contributed talk)
April, 2016	12 <sup>th</sup> Annual NICHD Fellows Meeting, Washington, DC (poster)

## TEACHING EXPERIENCE

Summer, 2012	General Physics II
Summer, 2010	General Physics II
Spring, 2010	Extended Analytical Physics II
Fall, 2009	Extended Analytical Physics I
Summer, 2009	General Physics II
Spring, 2009	Extended Analytical Physics II
Fall, 2008	Extended Analytical Physics I

## TEST SCORES

August, 2008	Ph.D. Candidacy Examination, overall percentage: 89.1%
November, 2006	GRE Subject: Physics, score: 990 / 990

## OTHER SKILLS

MATLAB, R, Bash, LaTeX, Adobe Illustrator, Adobe InDesign, Adobe Dreamweaver

## PROFESSIONAL ACTIVITIES

Reviewer	Biophysical Journal, Epigenetics
Member	American Physical Society, Biophysical Society

# Răzvan V. Chereji

## REFERENCES

### David J. Clark

Chief, Section on Chromatin and Gene Regulation  
Program in Genomics of Differentiation, NICHD  
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### Gordon L. Hager

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### Alan G. Hinnebusch

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### Alexandre V. Morozov

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### James R. Broach

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### Joel L. Lebowitz

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