

Răzvan V. Chereji

CONTACT INFORMATION

.....
Section on Chromatin and Gene Expression
Program in Genomics of Differentiation
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RESEARCH INTERESTS

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

EDUCATION

.....
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

POSTDOCTORAL EXPERIENCE

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2013 - Present Post-Doctoral Fellow
David Clark's Lab
NICHD, National Institutes of Health, Bethesda, MD, U.S.A.

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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] Elfving N*, Chereji RV*, Larsson M, Morozov AV, Broach JR & Björklund S – Mediator exists in multiple forms and is predominantly associated to promoters with low nucleosome density (Submitted)
 * These authors contributed equally
- [10] 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*, Accepted in Nucl. Acids Res. (2015)
 * These authors contributed equally
- [11] Qiu H, Hu C, Chereji RV, Cole HA, Fnu Y, Clark DJ, Hinnebusch AG – Genome-wide cooperation by HAT Gcn5, remodeler SWI/SNF, and chaperone Ydj1 in promoter nucleosome eviction and transcriptional activation (Submitted)
- [12] Ocampo J*, Chereji RV*, Eriksson PR, Clark DJ – Interplay among different ATP-dependent chromatin remodeling machines determines nucleosome spacing on active and inactive genes (In preparation)
 * These authors contributed equally

PRESENTATIONS

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|-----------------|---|
| September, 2012 | Biophysical Society Pennsylvania Network Meeting,
Lehigh University, Bethlehem, PA (poster) |
| November, 2012 | The 8 th Gotham-Metro Condensed Matter Meeting,
The New York Academy of Sciences, New York, NY (poster) |
| December, 2012 | 108 th Statistical Mechanics Conference,
Rutgers University, Piscataway, NJ (contributed talk) |
| February, 2013 | Biophysical Society 57 th 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,
Rutgers University, Piscataway, NJ (invited talk) |
| February, 2014 | Biophysical Society 58 th Annual Meeting, San Francisco, CA (poster) |
| March, 2014 | APS March Meeting, Denver, CO (contributed talk) |
| April, 2014 | 10 th 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 th 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) |

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PRESENTATIONS (CONTINUED)

April, 2015	Chromatin-DECODE Seminar, NIH, Bethesda, MD (invited talk)
May, 2015	11 th 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 th Summer Symposium in Molecular Biology, Penn State University, State College, PA (poster)
September, 2015	NIH Research Festival, NIH, Bethesda, MD (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

MEMBERSHIPS

American Physical Society, Biophysical Society

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REFERENCES

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James R. Broach

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