

ONE HUNDRED AND THIRD COMMENCEMENT

MONDAY, MAY 15, 2017

REED COLLEGE

The Program

PROCESSIONAL*

INTRODUCTORY REMARKS

John R. Kroger, President

WELCOME

Roger M. Perlmutter '73, Chairman, Board of Trustees

ALUMNI WELCOME

Richard Roher '79

REED COLLEGIUM MUSICUM

"As Torrents in Summer" from *Scenes from the Saga of King Olaf*, Op. 30 Music by Edward Elgar (1857–1934) Text by Henry Wadsworth Longfellow (1807–1882)

"You are the New Day" Music and text by John David (b. 1946), arr. Bob Chilcott

COMMENCEMENT ADDRESS INTRODUCTION John R. Kroger, President

ADDRESS

Arun Rath '92

CONFERRING OF THE DEGREE OF BACHELOR OF ARTS

John R. Kroger, President

CONFERRING OF THE DEGREE OF MASTER OF ARTS IN LIBERAL STUDIES

John R. Kroger, President

RECESSIONAL*

MARSHALS

Commencement Marshal

Jeffrey Parker, George Hay Professor of Economics

Student Marshals

Arthur Glasfeld, Amgen-Perlmutter Professor of Chemistry Virginia Hancock '62, Professor of Music, Emerita

Faculty Marshals

Margot Minardi, Associate Professor of History & Humanities Sonia Sabnis, Associate Professor of Classics and Humanities

* The audience is requested to rise for the processional and recessional.

Please remain in place during the recessional until the faculty and class of 2017 have left the tent. Sign language interpretation is provided by Access Services Northwest. Our bagpiper is Ogden Kimberly. Graduates and guests are invited to a reception after the ceremony in the Gray Campus Center Quad.

Arun Rath '92

Arun Rath has distinguished himself in public media as a reporter, producer, and editor. In his current role as a shared correspondent for NPR and Boston-based public station WGBH, he covers a variety of beats, from neuroscience and the arts to the war court in Guantanamo Bay.

He began his journalism career as an intern with NPR's *Talk of the Nation*, eventually joining the staff and becoming the show's director after working on several NPR News programs during the 1990s. In 2000, he was tasked with re-booting *On the Media*, which tripled its audience and won a Peabody Award.

Rath spent 2005 as senior editor at the culture and arts show *Studio 360*. He moved to television in 2005 to produce documentaries and manage radio partnerships for *Frontline*, while continuing to report on culture and music for the PBS series *Sound Tracks*.

At *Frontline* and *The World*, Rath specialized in national security and military justice. He reported for and produced four films for *Frontline*, including an Emmy-nominated investigation of the Haditha Incident in Iraq, in which a group of United States Marines killed 24 unarmed Iraqi civilians.

Rath also covered the Chelsea Manning court martial for espionage and has made numerous trips to Guantanamo Bay, Cuba, to cover the military commission prosecuting 9/11 mastermind Khalid Sheikh Mohammed. From 2013 to 2015, Rath was the weekend host of NPR's *All Things Considered*. His *Frontline* documentary about a recently released detainee and the untold history of Guantanamo Bay, *Out of Gitmo*, aired in February.

Rath received a bachelor of arts degree in English from Reed College in 1992.

Music by Columbia Brass

Greg Garrett & Craig Gibson, trumpets Jennifer Harrison, horn David Bryan & Jack Quinby, trombones

PRELUDE

Arrival of the Queen of Sheba from *Solomon* George F. Handel (1685–1759)

Hail Columbia, Prima Donna, Lilly Lee, Maggie by my Side from *American Brass Band Journa*l

March, Song Without Words, Fantasy on the Dargason from *Second Suite in F for Band* Gustav Holst (1874–1934)

PROCESSIONAL

March Imperial William E. Holcombe (1924–2010)

RECESSIONAL

Trumpet Voluntary John Stanley (1712–1786)

Collegium Musicum

ЈОНИ К. СОХ

Visiting Assistant Professor of Music

Soprano

lo Blanchett '20 Kate Ehrenberg '20 Nina Matthews '20 Lyn Peterson '20 Yiyang Wang '18

Alto

Rachel Gosselin '19 Jules Oh '20 Ellery Sloane-Barton '18 Jasmine Williams '17

Tenor

Ben Baran '18 Thomas Barr '20 Jay Lee '20

Bass

Gregor McGee '18 Nico Terry '17 Edward Zhu '19

"As Torrents in Summer"

from Scenes from the Saga of King Olaf, Op. 30 Music by Edward Elgar (1857–1934) Text by Henry Wadsworth Longfellow (1807–1882)

As torrents in summer, Half dried in their channels, Suddenly rise, tho' the sky is still cloudless. For rain has been falling. Far off at their fountains;

So hearts that are fainting Grow full to o'erflowing, And they that behold it, Marvel, and know not That God at their fountains Far off has been raining!

"You are the New Day"

Music and text by John David (b. 1946), arr. Bob Chilcott

I will love you more than me and more than yesterday if you can but prove to me you are the new day.

Send the sun in time for dawn, let the birds all hail the morning. Love of life will urge me say, you are the new day.

When I lay me down at night, knowing we must pay, thoughts occur that this night might stay yesterday.

Thoughts that we as humans small could slow worlds and end it all lie around me where they fall, before the new day.

One more day when time is running out for ev'ryone, like a breath I knew would come, I reach for a new day.

Hope is my philosophy, just needs days in which to be, Love of life means hope for me, born on a new day. Graduating seniors are listed alphabetically under each of Reed's five academic divisions, followed by interdisciplinary majors that cross the divisions and master's graduates. The listing includes the academic department in which the student majored and any concentration within that major (noted by a colon). The title of the student's thesis is listed, except for students who completed one of Reed's combined degree programs in place of the thesis year at Reed.

The Arts

BRIAN LEIGHTON BARTZ

Art

The Implementation of Labor Systems in an Age of Digital Networks: A Critical Framework for Artistic Resistance

LEE BELCHER

Art

The Myth of Chiron: Personal Storytelling Through Comics and Mythology

ERIC RYAN BOHRER

Art Friendly Confines: Construction of the Stadium Experience

RILEY CHRISTINE BURKE

Theatre Color's Queer Bent: the aesthetics of queer performance

GITANJALI ALETHEIA-INANNA CASTALLIAN Art

Live Loud: The Heavy Metal Underground in Portland

STEVEN JAMES CHIBOUCAS

Art Self-Awareness and the Collaging of Auditory Spaces

ESTELLE C. CILMAN

Art Visualizing Black and Blackness: The Paintings of Jack Whitten

CIARA SHEEHAN COLLINS Art

Get Ready With Me

DYLAN STEVE FAILLA

Art Entangled in the Landscape Photograph

JACK TIMOTHY FINERTY

Scenes of irresponsible engagement in twenty-first century Britian

MICHAEL WILDER FRAZEL

Theatre From Theater To Shining Theatre? Melodrama Audiences, Naturalism, and Napoleon

NEIL EDWIN MAGRUDER GIBSON

Art Sonic Abolition

JOHN PETER GONNELLA

Theatre Your Play is Charming, But Nobody Can Understand Any of It: Directing "Evitarran" Theatre To Engage Audiences

WILL FOSTER GREENBERG

Art Forms of Government on Portland's Playgrounds and Parks

OSCAR RENE GUERRERO

Art What's Ours: A Graphic Memoir

PETER M. GUNNAR

Music The Next Movement: Hip-Hop Collectives of the 1990s as Black Cultural Institutions

ANASTASIA JOY HANSEN

Music Getting Down in the House of the Lord: Musical Flexibility in Worship, Space, and Neighborhood in a North Portland Church

VASILIKI IOANNOU

Music Politics, Pleasure, and the Economics of Hyperreality: An Introduction to the Socio-Sonic Political Philosophy of a Contemporary Greek Techno Collective

SEAN MICHAEL KEY-KETTER

Theatre "There is nothing Funnier Than Unhappiness": Balancing Humor with Suffering using Repetition in Playwriting and the Works of Samuel Beckett

DAPHNE LEELEAN LYDA

Art art is a piece of cake

HARRISON ROSS MARTIN

Art A Provisional Photography

CHLOE ANN CATHLEEN NIELSEN

Art Fragmentation of the Body, Tactility of the Skin: A Feminist Dialogue

CHARLIE PEREZ

Art Towards El Norte

LEILA SIERRA PYLE

Art

"I'm a Salmon": The Role of *Oncorhynchus ssp.* in Storytelling and Place-making in the Pacific Northwest and Implications in a Changing Climate

DYLAN JAMES JOHNSTON RICHARDS

Music how to disappear / Form, Unity, and Thematic Transformation in

JAMIE CHRISTINE SERBIA Art

Sibelius' Seventh Symphony

Dashboard Perspectives

KATHERINE TAMANAHA

Art Rebuilding the Rainforest: Simulacra in a Post-Natural World

LUIS MARIO VALENZUELA

Art Multiply: Engaging Technical Potential in Digital Images

ISABELLA MIMI WEISS

Art An Experimental Investigation of the Effectiveness of Art as Rhetoric

FORREST JAMES WILSON

"The Soul that Pines for Eternity Shall Outspan Death": Animate Corpses in Art c. 1400–1980

History & Social Sciences

MADELEINE RUTH JANACK ADAMS

Anthropology

Communing with the Dead: Spiritualism, Language, and the Construction of Science from 1865–1914

GRACE BENNETT ALEXANDER

Economics Going Global? Analyzing the Effects of Skill Level on Trade Sentiments

JAIME CHRISTINE ARCHER

History An Unlikely Keeper of Order: The Flash Press in 1840s New York

BRIAN ARMADA

Economics Effects of Light Rail Transit in Portland: 1996-2006

ANNE BRAZIL BAKER

Sociology A Place to Be: How the Houseless Create Homes Outside of the Nonprofit and State System

GYULNARA ZHANOVA BARNETT

Political Science The Emergence and Persistence of Women's Involvement in the Kurdish Workers' Party

GABRIELLE REBECCA BLACKMAN

Economics How Does Commodity Dependence Affect Trade in Africa

BRANDON RODERICK BORJON

History Biafran Uncertainties: Challenges to the Norms and Structure of International Humanitarian Aid, 1967–1970

FRANCHESCA ANITA BREEDLOVE

Sociology Risky Business: Risk Calculus and Birth Control Use in College Attending Women

NICHOLAS KEITH BROWN

Political Science Intentional Communal Isolation through Collective Action: A Case Study on Bolinas, California

SOPHIA G. BUCCI

Sociology

Playing with and within Power: Possibilities for Reconfiguration and Transgression in Lesbian+Queer BDSM

SARAH KATHERINE CANAVAN

History The Big Boom: Commerce, Capitalism and the Birth of American Astrophysics

LEAH CELESTINE CANTOR

History Tales from the End of Time

ALEJANDRO SAUL CHAVEZ

Sociology "Can Daddy Try?": An Ethnographic Study of Gendered Parenting Strategies in Public Spaces

ALEX COHEN

History Decentralized Government in Brazil's Old Republic and its End in 1930

KATHRYN S. COLLINS

Political Science "Bet Your Ass We're Paranoid": Examining the Real Forces Behind Mental Health Legislation HR 2646

IEVA DALBINA

Economics International Arms Trade: Examining Effects of Multilateral Arms Control Measures

EVE PAULINA FELSENTHAL

Anthropology Scripting Injury: Non-Suicidal Self-Injury, Adolescence, and the Production of Cultural Categories in the United States

ALEXANDER DAYNE FREITAG

Political Science Bye Bye Bybee? An Analysis of the Ramifications of the Bybee Memo and its Place in Torture Discourse

KATERINA GALKIN

Sociology Setting Aside Affordability: Mandatory Inclusionary Housing and The Fight for Affordable Housing in New York City

FRANCISCA GARFIA

Anthropology Learning to Speak Chinuk Wawa: Language Revitalization in the Pacific Northwest

HANNAH ELIZABETH GRAUNKE

Economics A Proposal for Evaluating International Short-Term Volunteer Trips

PARIS SIMONE GRESHAM

Sociology Restorative Coaching: Reclaiming Black Male Athletes

GRACE PATRICIA HALEY

Political Science Hitting Like a Girl: An Analysis of Female Soldiers as Torturers During the Iraq War, 2003–2011

BENJAMIN WADIE-YOUSIF HAMATI

Economics Analyzing Medical Marijuana as an Exogenous Shock to Labor Supply

ZACHARY BYRD HARDING-LAPRADE

Economics Quantitative Easing Impacts on Corporate Bond Markets

REBECCA WANDA HAUSDORFF

Anthropology Paradox as Paradigm: Understanding Social Change in Post-Revolutionary Cuba

DANIEL HONG

Political Science Violence and the People – Theories of Nationalism in South Korean Postcolonial Film

JULIEN MICHAEL HOWELLS

Political Science A Tale of Two Titties (Strip Clubs and City Regulation)

DREW MONTGOMERY JACKSON

History London's Burning: Riots and the State in Early Modern London

MARK EDWARD JARRETT

Economics Investigating Revealed Placebos for Productivity

ROSA CANCIAN KALISH

Sociology I Would Kill For Your Body: Mean Girls and Peer Appearance Culture

MEGAN ELIZABETH KEATING

Political Science New Rules Mean New Games: Evaluating Regulatory Design and Compliance Outcomes in the Dodd-Frank Wall Street Reform and Consumer Protection Act

MICHAEL CHRISTIAN KEPPLER

Economics Underwater: The Effect of FEMA Food Insurance Policies in Portland, Oregon

MAYA KIMURA

Anthropology Negotiating Exclusions: Southeast Asian Migrant Domestic Worker Subjectivity and Collective Action in Hong Kong

DANA ELIZABETH KOSCIELNY

Sociology Political Poultry: On the Determinants of Change in the American Egg Industry

TASHI NGUDUP LAMA

Economics Determinants of Home and Away Goals Scored in the English Premier League: A Response to Lahvicka (2015)

MIKAELA ROSE LIEB

Anthropology Living Well?: Nature and Indigenous Populations in Rafael Correa's Ecuador

ISABEL MARIA LYNDON

History

"Made to Suffer by the Hands of Heartless Men:" Relief, Restitution, and Ethnicity in the Wake of the 1928 St. Francis Dam Disaster

JULIE XIN MARTIN

Economics A Focus on U.S. Regional Variation in the Relationship between High-Skilled Immigration and Patent Production

LILLIAN NICOLSON MARTIN

History

"Nerves of Steel": The British Telegraph System and the Reconfiguration of the Imperial Body

MIRANDA RUTH MISHAN

Political Science From Hegel to the Headscarf: Recognition in Response to Liberal Humanism

LAZOLA VUYO NYAMAKAZI

Economics An Analysis of the 1980s Latin American Crisis – Lessons for Present Day South Africa

CAITLIN ALICIA O'SHEA

Sociology

This Must Not Be the Place for Me: Gender and Inclusive Practice in the Comic Book Industry and Fandom

HALEY RENEE PARRA-CAIN

Political Science

The Humanist Reframing of UN Environmental Talks: A Long, Winding Road to Ensuring Human Rights

ALOYSIUS TRUMAN PRACA PATCHEN

Political Science Para Ingles Ver

KAROLYN ELSAMARIE PATTERSON

Anthropology

"First the earthquake, then the disaster": imagining Peruvians in the highlands as victims and suffers in the aftermath of the 1970 Ancash Earthquake

JEANNETTE THAO PHAN

Anthropology Places of Memory after the War: Locating the Transnational Experience of Vietnamese People Today

NATALIE SARA PONG

Economics Do Japan's Foreign Direct Investments in Singapore Improve Japan's Bilateral Trade Flows with Other ASEAN countries?

FLORENCE RANDARI

Economics Financial Inclusion: A case study of Tanzania

MARCUS LAURENS RIEDLER

Economics The Emergence of Low-Cost Carriers Following Airline Deregulation and Their Effects on Industry Pricing Structure

LEWIS SHO ROBERTSON

Political Science International Regimes in the North Arctic and South China Sea

ALISON CLAIRE RYAN

History Reason in the Time of Cholera: Medical Epistemology & the Remaking of Professional Identity in *The Cholera Gazette*

JORDANA M. RYERSON

Sociology Identity and Agency in Overeaters Anonymous

CYRYL IAN RYZAK

History Necessity and Freedom: The Contradictions of Soviet Socialism: 1917–1933

MARIS SCANLON

Political Science Physician-Assisted Suicide, Reconsidered

RAY SELF

History Organized Oblivion: Modernism and Totalitarianism in the Architectural Theory of Ludwig Hilberseimer

VIVIEN MORGANA SKRUPSKIS

Political Science Immigration Policy in Arizona and Texas: How Anti-Immigration Policy Images Fueled Bill Passage in Arizona but not in Texas

ROSEMARY GIROUARD SOKOLOV

Anthropology Socializing the Political: Decolonial Humanism and Attempts at Unmaking the State in Kurdish Democratic Confederalism

STEFAN PAUL STACKHOUSE

Anthropology Vital Reckonings: Cartographic Power, Abyssal Thought, and the Birth of Modern Piracy in Southeast Asia

SIERRA NICOLE SWANN

Sociology Marginalized Voice and Agentive Choice: How Anti-Trafficking Professionals Frame People in Prostitution

CARTER ROBINSON THOMAS

Political Science How to Avoid Burning Down the House: Making Sense of Local Wildfire Hazard Mitigation Land-Use Decisions

CAMILLA COSTANZA TURCHETTI

Sociology Making the Gain Line: An Examination of Women's Rugby in Italy

MATTISON KARL UNGER

History Christian Missionary Tactics and Community Interaction in China, 1600–1900

ROHAN ADITYA UNNY-LAW

Economics Blood Minerals and Good Intentions: The Legacy of Dodd-Frank in the Democratic Republic of Congo

LIEH CHEN VERTUOSO History

Impeachment and Corruption in Post-Dictatorial Brazil: Lessons Learned from Fernando Collor de Mello and Dilma Rousseff's Impeachments

SAVANAH JO WALSETH

Sociology Sleeping on the Stars: Marginalization on Hollywood's Streets

DOUGLAS GRANT WALTER

History Antiquity Surpassed: The Classics and the Mexican-American War

REBECA WILLIS-CONGER

Sociology Gender Work in Science Policy: A Discourse Analysis of NIH's SABV Announcement

JORDAN RILEY WYNNE

Political Science Razing the Roof: Understanding the Complexities of Gentrification

Literature & Languages

CODY G. BARNES

Spanish In Pursuit of Justice: Rhetorical Strategies in *Operación Masacre* by Rodolfo Walsh

LUCAS WILLIE MAYER BINION English

A Finely Orchestrated Paradox

TARA GABRIELLA BORGILT

Spanish Presences of Absence: Photography and the Fantastic

ELI MARION BRUDNICK

General Literature Opening the Wound: Reading Tragedy in the Early Works of Lev Shestov

HAYDEN ELLSWORTH BUNKER

English This cell's my court: Mimetic Fictionality, Reader-Character Engagement, and the Generation of the Possible Worlds in Shakespeare's *The Tempest*

ALEXANDER FRANCIS CARACOTSIOS

Spanish El dinero, el tiranito y el ladrón en *Las aguafuertes porteñas* de Roberto Arlt

CHRISTOPHER REID CREECH

English Human Weakness and its Exposure: The Ethical Model of *The Master and Margarita*

LYLE ROBERT DANIEL

English Materialist Poetics in Stein and Armantrout

SANDRA ESMERALDA DE ANDA

English The Construction of the Self through a Gendered Discourse in Ingmar Bergman's Films

JULIET GRACE DE LA HUERGA English

Behind Closed Doors: The Use of Public and Private Information in Jane Austen's *Pride and Prejudice* and the World of *Lizzie Bennet*

POPPY RAE ELLARD

English

"The country is diseased": Richard Fariña's Use of the Coming-of-Age Narrative as a Cultural Critique in Been Down So Long It Looks Like Up To Me

HANNAH CATHERINE ERHART

English bb girl's catalog of things otherwise forgotten

ALEXANDER PIERCE GIRKIN

English This Whole Black and Brown World Heaving Upward: Reading the Land in Jean Toomer's *Cane*

CONNOR ARTHUR GREER English Glow

INDIA RAE HAMILTON

English Toothless: a collection of short stories

SIERRA FAITH HILL

English Headwater: Poems

DYLAN RUSSELL HOLMES

Comparative Literature Seeing Between the Wander Lines: Elaborating the communal cinema of Fernand Deligny

GENEVIEVE MARIE HOOK

Classics Making Italy Great Again: The *Aeneid* as Mythological Justification for Roman Power and Land Occupation

PETER PHILLIPS HOUSE

English Stop/Go: Time, Music, and Photography in Jennifer Egan's A Visit from the Goon Squad and W.G. Serbald's Austerlitz

CAROLINA IGLESIAS OTERO

General Literature Physiologies: on the senses of a young fate

NAIMA MEDELIA KARCZMAR-BRITTON English Mythologies

HAYDEN DANA KINNEY

English "An Abstraction Blooded": Reading as Embodied Thought in the Poetry of Wallace Stevens

BENJAMIN ORION LANDAUER

Chinese Cyberfeminist Poetics in China and Taiwan: Zhai Yongming, Yin Lichuan, and Xia Yu

ELEANOR STORER LAWRENCE

French Marguerite de Valois Female Selfhood in Patriarchal Societies

ALEXIS ROSE LEONETTI

English Cold War Life and Confederate Literature: Luce, Faulkner, and O'Connor as Voices of Mid-Century America

HAZEL LIGHT

French A Revolution in Pronouns: Grammar and Politics in the Fiction of Monique Wittig

GRACE ELENA MOON

English The Language of Space and the Space of Language: How Diction and Form Create Virtual Topographies in Nonlinear Electronic Fiction

YING YING NG

Classics Poetic Justice: Declamatory Rhetoric and Poetry in the Songs of Orpheus

CHARLES EVERT NUNZIATO

Comparative Literature Lyric and Revolution: History and Sociality in the Poetry of Osip Mandelstam and Anna Akhmatova

ALEXANDRA KIRSTEN PARKER

English One out of Many: Singleness and Community in Christopher Isherwood's *A Single Man*

DANIEL MICHAEL POGUST

English The Imitator's Garden: Four Varities of Mimesis in John Steinbeck's *East of Eden*

TAYLOR JACKSON POPE

English Mansplaining with Joyce: Queering *Ulysses*

CALYX BODEN REED

English Some Author: E.B. White as an American Nature Writer

NOAH ALEXANDER SAMEL

English Reconciling the Religious and Political in Graham Greene's The Quiet American

LEWIS SEARS SHERMAN

Classics The Endurance of Truth: Views on Law and Knowledge in Plato and al-Farabi

MARYANN ELIZABETH SHNELL

English

Jane Austen Reception in the Victorian Period: Realism, The Social Problem Novel, and the Sensation Novel

HENRY COLE SMITH

English Crab Canon

CAROLINE VAN SYCKEL TOLL Chinese

Humanimals: An Analysis of the Progression of Animal-Human Hybrids in Mo Yan's *Life and Death Are Wearing Me Out*

NOE NICOLAS VILLARREAL

English Creating an Identity Degree awarded posthumously

JASMINE TINTUT WILLIAMS

English Searching for Sayagyi: A Study of Anglo-Burmese Literature

CLAY LOFTUS WILWOL

Spanish Acerca de lo fronterizo: Reflexiones sobre la obra de Yuri Herrera

PRISCILLA SHUK-YEENG WU English

Weaponizing the Words of The Woman Warrior by Maxine Hong Kingston: Empowering Language, Myth, and Chinese American Feminist Identity

Mathematics & Natural Sciences

ABRAR ALI ABIDI

Physics Quantifying cellular mechanotransduction in morphogenesis and cancer

MICHAELA JULIANNA ADAMS

Biology Telomere Length Variation in *Xenopus laevis* Tissues

TAYLOR WHITNEY ALLEN

Mathematics Subgame Perfect Rational Secret Sharing

SABRINA MARBUT APPEL

Physics Simulating the Gravitational Lensing of Massive Particles: An Exploration of Scattering Solutions of the Schwarzschild Metric

AMANDA JADE ASATO

Chemistry

An Airshed and Source Region Impact Factor Tool Utilizing Output from the NOAA HYSPLIT Model

ALISON MARIE ASHBY

Biochemistry and Molecular Biology Laminin Expression Affects Zebrafish Retinal Stem Cells

WILLIAM HENRY ASHFIELD IV

Physics Reduced Simulations: A New Technique for γ – γ Angular Correlation Analysis

ELLA CAROLINE BANYAS

Physics The Gravitational Signature of a Dirac Monopole

DAKODA JOY BRADLEY

Chemistry Synthesis of An Intramolecular DASA Photoswitch

ALEXA ADELE BUCKNER

Biology

Decreased Tolomerase Activity in Conjunction with Life Stress in *Astatotilapia burtoni*

JACLYN LAUREN CALKINS

Biology

Characterizing the Genetic Transposable Element Content of the Aquatic Crustacean Daphnia magna

LYDIA GRACE SOPHIA CAMPBELL

Biology Focal Adhesion Proteins in the Polarity and Motility of *Drosophila* Epithelial Cells

COLE CHARLES CAMPTON

Mathematics Equivalence of Discrete Configuration Space Models

VIKRAM CHAN-HERUR

Biology Effects of PerC regulation and membrane vesicles of Enteropathogenic *Escherichia coli* on a pro-inflammatory response

VIVIA CHI

Chemistry Extraction and Measurement of Vitamin K in Blood Plasma using HPLC-MS/MS

ELIAS COHEN

Physics Memristors: Characterization, Applications, and Quantized Conductance

JAELIN HERO COLA

Biology Microtubule Polarity in Migratory Drosophila melanogaster Cells

GABRIEL MICHAEL COLACION

Physics Imaging Electron-Hole Liquid Droplets in Uniaxially Stressed Gallium Phospide

JONATHAN KENT CROOM

Physics Slacking Off: the Physics of Low Tension Highlining

AUDREY ELIZABETH DANNAR

Chemistry Direct Conversion of Visible Light to Mechanical Energy: Towards Dimerized Donor-Acceptor Stenhouse Adducts as Photochromic Molecular Actuators

KAUSTUV DATTA

Physics Extracting Information from Jets at Hadron Colliders Using Deep Learning

MOIRA KATHLEEN DIFFERDING

Biology Your Microbes are Super Models: Using Microbiome data to Reproducibly Predict Crolms Disease

MADELINE JANE DINSDALE

Biology A tale of two phages: Investigation of the therapeutic potential of *SiphoRed1* and *SiphoRed2*.

ROSE MARGARET HOFFMAN DRISCOLL

Biology Epigenetic regulation of aromatase underlies environmental sex determination in the cichlid fish *Pelvicachromis pulcher*

YUKA ESASHI

Physics Generation and Characterization of Nondiffracting Beams

MULDROW DOSKEY ETHEREDGE

Mathematics-Physics Electrodynamics on Smooth Pseudo-Riemannian Manifolds

CAMERON ALEXANDER FISH

Mathematics: Computer Science A GPU approach to the Abelian sandpile model

NICHOLAS WILLIAM PHILIP FRANZESE

Mathematics-Biology Examining the Practicality of Shortest Hyperpaths for Signaling Pathway Analysis: The Cheating Hyperpath Algorithm as an Alternative Approach

KEVIN BRYANT FREYMILLER

Physics Numerical Modeling of Waves and Wave Breaking

RIK GHOSH

Mathematics Parametric Curve Fitting and Vector Graphics

MCKENZIE BEVERLY GIVENS

Biology Histoire de l'oeil: Retinoic Acid, Gdf6a and Fgf signaling during late-stage retinogenesis

FORREST EMERSON GLEBE

Mathematics Pushing the Limit

ROSE CAROLINE GONOUD

Chemistry The Synthesis and Characterization of Novel Decoquinate Analogs with Significant Antimalarial Activity

ROBERT GOTTESMAN

Physics Lighting the Way: Computations of Stable Forms of Optical Lift

VINCENT LEW GRIFFITH

Physics Computational Modeling of Stirling Engines

CLARA M. HERRERA

Biochemistry and Molecular Biology Toward the Development of Substrate-based Inhibitors of *Mycobacterium tuberculosis* Lipase, LipY

KRISTIN MICHELLE HIRATA

Biochemistry and Molecular Biology Distribution of the Transcriptional Regulatoir Ler *E. coli* Using PALM

MICHAEL EVAN JACOBSON

Biochemistry and Molecular Biology Towards a Robust Telomerase Assay

SAMUEL MARTIN JOHNSTON

Mathematics Cohomological Lego Bricks: Group Cohomology in Higher Category and Simplicial Theory

KERRY ANNE JONES

Biology Telomerase Expression in Dividing and Quiescent *Xenopus* Cultures

CHRISTOPHER CHARLES KEANE

Mathematics The Brauer-Manin Obstruction for K3 Surfaces

HYUN JI KIM

Biochemistry and Molecular Biology Synthesis of Gemcitabine Derivatives for Use in Understanding Pancreatic Cancer Heterogeneity and Drug Resistance

LARA HELEN KINCHELOE

Physics Maxwell's Daemon in an Information Engine

JOEWIE J. KOH

Mathematics: Computer Science Algorithms for the Computation of Delanny Triangulations

ALEC RICHARD KOSIK

Mathematics: Computer Science Semantic Parsing with Substructural Logics

SYDNEY ALICE LASTELLA

Biology Gdf6a Protein Migratory Behavior in the Developing Zebrafish (Danio Rerio) Embryo

HALEY NOELLE LEATHERMAN

Biology A Comparison of Enhanced Cadmium Uptake in Hyperaccumulator *Brassica juncea* with Synthetic EDTA versus Organic Metal Chelators

ALEXANDER LIEBMAN-PELAEZ

Physics Orbital Currents in a Spinless Three-Band Model of the Cuprates

ERIK OSVALDO LOPEZ

Mathematics: Computer Science Password Hash Functions

GUSTAVO ALFONSO LOPEZ

Biology Non-canonical RN-tre: functional independence from GAP activity

YASEMIN DONACIANA LOPEZ

Biology Cohabitation to Restore the Rat Microbiome After Antibiotic-Induced Dysbiosis

OLEKSANDR LUSHCHYK

Chemistry A Dusty Road: Palladium Catalysis via the Mizoroki-Heck Reaction

YASMINA ANNE DUMONT MARDEN

Mathematics Block Clustering Using Adjacency Matrices

ZACHARY S. MATHE

Chemistry Synthesis of an Iridium Hydride Complex: Towards a Model System for Hydrogen Tunneling

KIMBERLY ANN MCGOWEN Bioloav

Stem Cell Polarity in the Ciliary Marginal Zone of *col15a1b* Mutants and Morphants

KARL GERHART MENZEL

Biology Salamanders is Peril: Predator Response Strategies in *Plethodon vehiculum*

BRENT CHRISTOPHER MICHEL

Chemistry An *ab initio* Valence Bond Study of Charge-Shift Bonding in ortho-Benzyne

BENJAMIN CHRISTOPHER ALTMANN MORRISON

Mathematics-Physics Dread the Oracles, not Quantum Alone but Zero-Knowledge Too: Two Separations Between Quantum and Zero-Knowledge Classes

MISHA SOPHIA NAIMAN

Biology Tethered-Wg: assessment of localized Wg signal on long-range cellular identity in *Drosophila melanogaster*

CATHERINE AILAN NESHYBA

Chemistry Methods for Analysis of Extended X-ray Absorption Fine Structure in Biochemical Systems: Demeter and EXCURV

STEPHANIE SINYO OPIYO

Biology Short Term Androgen Treatment and Treatment and Transformation in Female *Xenopus laevis*

AURORA MARGUERITE LABOUNTY OWENS

Mathematics INFFOREST Variable Importance for Random Forests

ALEXANDER C. PAN

Mathematics: Computer Science Parallel Graph Algorithms

EDGAR FERNANDO PEREZ

Physics Chaos and bifurcations in the Monopole Ion Trap

HUNTER MICHAEL PETERSON

Biology

Characterizing the Transposable Element Content of the *Crotalus mitchellii* Genome

DEBORAH MODI RADUMA

Chemistry Cd and As: Impact of Long-term Atmospheric Deposition on Reed Canyon Soil Quality

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Biology The Role of Male Advertisement Calls in the Female Reproductive Cycle of *Xenopus laevis*

RICARDO GABRIEL ROJAS-ECHENIQUE

Mathematics The Dress Map over Local Fields

BENJAMIN ISAAC SCHLOESSER

Mathematics Tensor Triangular Geometry, Derived Categories, and Schemes

MELINDA RACHEL SERRATO

Chemistry Toward a NIR Photoswitch

FOSTER SEYBERT

Biochemistry and Molecular Biology Investigating the DNA Binding of the Metalloregulator SloR

NICHOLAS EDWARD TYDEMAN SOLOMON

Mathematics: Statistics Local Dependence in Exponential Random Network Models

AUGUST OWEN STAUBUS

Biochemistry and Molecular Biology The Restricted Section: Towards a Structure of the Restriction Enzyme Xhol

NICHOLAS BRET TERRY

Mathematics Determining Restrictions on Potentially Friendly Numbers

VIVIAN TYLINSKI

Mathematics The Stationary Density and Threshold Density of Sandpiles

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Biology Tracing the Origins of the Ciliary Marginal Zone

KARLA L. VELARDE-PERAZA

Biology

Investigating the Mechanism Responsible for Organization & Maintenance of Acentriolar Microtubule Networks During Interphase in *Drosophila melanogaster* via Force Activation of the Centrosome

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Mathematics Predicted Decay Ideal

EVAN FRANCIS WELCH

Biochemistry and Molecular Biology Telomerase Inhibition: hPinX1 or Buffer

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Mathematics Combined Program, University of Washington

YIZHOU YAO

Biochemistry and Molecular Biology Towards an Understanding of BosR via CASTing Method and Structural Analysis

MICAL YOHANNES

Biology Characterizing Binding Properties of Alpaca-derived Recombinant Nanobodies for Tuberculosis Virulence Factors ESAT-6 and LAM

Philosophy, Religion, Psychology & Linguistics

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Psychology Accumbal Ghrelin and Glucagon-Like Peptide 1 Modulation of Ethanol Reward and Ingestive Behavior in Female Rats

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Philosophy De Evidentia Machina

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Religion Religious Experience Revisited

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Forging New American-Muslim Identities after 9/11: Through Islamic Education, Children's Books, and Muslim Women's Online Media

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An Experimental Analysis of Pigeons' Demand for Food and Water in a Token Economy

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A Note on the Beginnings of Reed College & Commencement

In the late 1800s, the Reverend Thomas Lamb Eliot suggested to two of his parishioners, Oregon pioneers Simeon and Amanda Reed, that they use their wealth for the betterment of society. He urged them to found "a Reed Institute of lectures and arts and music and museum." In 1908, with contributions from Simeon and Amanda's estate after their deaths, a board of trustees led by Eliot established the Reed Institute in Portland, Oregon.

Reed College began its first classes in 1911 with 50 students—26 men and 24 women—and 15 faculty members. As an innovative experiment to restore relevancy to the liberal arts in an age dominated by science and industry, Reed sought neither the size and specialization of the university nor the intercollegiate athletics and elaborate social life that had become standard at many private colleges.

Under the inspiration and guidance of Reed's founding president, William Trufant Foster, the college set out to build a democratic community without regard for nationality, gender, religion, race, or class. No fundamental distinctions were made between students and faculty in what was called "the quest for truth." Students were expected to do original work in a major subject area—the senior thesis. A principle of honor governed all aspects of campus life.

Reed held its first commencement ceremony in 1915, for which President Foster conferred degrees on the back steps of Eliot Hall. In the last few decades, the college has usually invited a notable graduate to give the commencement address; recent alumni commencement addresses have been given by Kathleen Saadat '74, Igor Vamos '90, Jennifer Ferenstein '88, Robert Smith '89, Larry Sanger '91, and Michelle Nijhuis '96.

For over a hundred years Reed has remained steadfast in its belief in the intrinsic value of rigorous scholarship, the joy of serious intellectual pursuit, and the essential role of community in the development of knowledge.

A Note on Academic Regalia

Academic regalia worn at commencement reveal different types of academic achievement through the use of different styles and colors of gowns and hoods. The bachelor's gown has a long, pointed sleeve; the master's is a long closed sleeve with a slit at the elbow; and the doctor's is a very full, bell-shaped sleeve with the bands matching the color of the gown opening. The hoods are lined in the official color of the institution that conferred the degree, although the bachelor's hood is rarely used. The colored velvet binding in the hoods indicates the academic area in which the degree was earned—white for liberal arts, yellow for science, purple for law, red for theology, green for medicine, and blue for philosophy.