zintellect
climb higher

Reference Code: CDC-NCHHSTP-2019-0016
Applicant Name: Kovacs, Nicholas
Applied Date: 11/15/2018 11:01:18 AM

Organization: Centers for Disease Control and Prevention (CDC)
Program: National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP)
Application Status: Submitted

General

First Name	Nicholas	**Primary Email**	nattila.kovacs@gmail.com
Middle Name	Attila	**Alternate Email**	
Last Name	Kovacs		
Preferred Name	Nick		
Home Phone			
Work Phone			

Current Address

Country Name	United States
Address	855 Emory Point Dr.
Address 2	3208
State / Province / Region	Georgia
City	Atlanta
Zip / Postal Code	30329

Permanent Address

Country Name	United States
Address	855 Emory Point Dr.
Address 2	3208
State / Province / Region	Georgia
City	Atlanta
Zip / Postal Code	30329

Demographics

How did you find out about this opportunity in Zintellect?
Federal/National Lab or Government Employee

Veteran Status
I am not a veteran

Gender
Male

Ethnicity
Not Hispanic or Latino

Race(s)
White

Voluntary Self-Identification of Disability

Voluntary Disability
No; I do not have a disability.

Education

Education Status	In Progress	**Education Status**	Completed

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Degree	Doctoral Degree
Institution	Georgia Institute of Technology
Dates	8/12/2013 - 12/14/2018
Field of Study	**Life Health and Medical Sciences:** Bioinformatics
Minor(s)/Area(s) of Concentration	Biochemistry
GPA	3.47

Degree	Bachelor's Degree
Institution	Michigan State University
Dates	8/25/2008 - 6/1/2012
Field of Study	**Life Health and Medical Sciences:** Biochemistry, Cellular and Molecular Biology
GPA	3.22

Areas of Interest

- **Business:** Project Management
- **Communications and Graphics Design:** Health Communications, Science Writing
- **Computer Sciences:** Artificial Intelligence (including Robotics, Computer Vision, and Human Language Processing), Databases, Information Retrieval, and Web Search, Graphics and Visualization, Scientific Computing and Informatics, Software Engineering
- **Earth and Geosciences:** Atmospheric Sciences, Chemical Oceanography, Climate Dynamics, Geographic Information Systems, Large-scale Dynamics Meteorology
- **Environmental and Marine Sciences:** Biological Oceanography, Environmental Sciences
- **Life Health and Medical Sciences:** Biochemistry, Bioinformatics, Biophysics, Botany, Cellular and Molecular Biology, Computational Biology, Genetics, Animal and Plant, Infectious Diseases and Zoonoses, Nutritional Sciences, Pharmacology, Public Health, Structural Biology, Virology
- **Mathematics and Statistics:** Applied Mathematics, Biometrics and Biostatistics, Probability and Statistics
- **Other Physical Sciences:** Analytical Chemistry, Biophysical Chemistry
- **Social and Behavioral Sciences:** Science Policy/Science & Society, Science Writing

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Citizenship

Are you legally authorized to work in the United States?
Yes

Will you now or in the future require sponsorship for a visa/immigration status?
No

Conflict of Interest

Do you have relative(s) employed at CDC/NCHHSTP? Relatives are defined as parents, spouse, children, brothers, sisters, grandchildren, grandparents, grandparents-in-law, parents-in-law, brothers-in-law, sisters-in-law, sons-in-law, daughters-in-law, uncles, aunts, first cousins, nieces, and/or nephews. This information is collected to avoid possible conflict of interest in the placement of a participant.
No

Relevant Experience

Organization	Georgia Institute of Technology

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Role Graduate Teaching Assistant

Description Biophysical Chemistry Lab (CHEM 4582) - 6 semesters - Instructed ~8 undergraduate students on experimental and computational protocols. • Macromolecular Structure (CHEM 6572) - 2 semesters - Directed ~25 graduate students on the use of computational modelling programs. • Survey of Biochemistry (CHEM 3511) - 1 semester - Guided ~40 undergraduate students to solve homework problems in weekly recitation.

Dates 8/12/2013 - 12/31/2016

Organization Georgia Institute of Technology

Role PhD candidate

Description Dissertation: Data Mining the Atomic Structure of the Ribosome to Unravel the History of Protein Folding • Summary: The origin of life is found within the structure of the ribosome, the archaeal ribosome is found within the eukaryotic ribosome, and species across life's 3 domains contain a ribosomal common core composed of RNA and protein. • Results: Two, 1 st -author research articles published, third 1 st -author research article under review. • Collaboration: Computational analysis for coworkers' projects resulted in coauthor of 2 experimental and 3 computational research articles. • Communication: Independently wrote and awarded $7,000+ NSF grant to support summer research in Taiwan. Oral and poster presentations at 7 domestic and international scientific conferences. • Mentoring: Awarded $2,500 conference and travel funding for mentoring undergraduate student. • Courses: 4 Biochemisty, 3 Biology, 3 Computer Science, and 1 Math

Dates 8/12/2013 -

Awards, Certifications, or Licenses

Award NSF EAPSI 2017

Award Petit Scholar Mentor 2017

Award 3rd place graduate research symposium 2017

Please list your personal, educational, and professional goals and interests and explain how this opportunity may enable you to achieve those. Describe any experiences or situations that you feel have influenced your interest.

Personal: I am very proud of my PhD dissertation, google scholar page, and conference presentations I have on YouTube. I chose a career in science because I wanted to contribute to "big picture" scientific research and I accomplished that in graduate school through my dissertation which concerned finding the origin and interrelatedness of life within the structure of the ribosome. Like many graduate students, my scientific interests changed slightly while pursuing my PhD and which Ibegin to show in my 3rd and final 1st-author publication of my PhD. This paper compares more than 400 ribosomal structures that are available on the Protein Data Bank from 27 organisms with a focus on the ribosomes of the disease-causing microbes Leishmania donovani, Plasmodium falciparum, and Trypansosoma brucei and how these differences could be exploited to develop new therapeutics. This paper is still in preparation. Having recently defended my PhD I want to continue working in science but want my research to have a direct impact on the well-being of others. The CDC is the perfect place to accomplish this and this ORISE position is perfect for me because I have all of the qualifications listed in the job ad and many of the activities sound interesting to me, especially "Preparing summaries, presentations, manuscript sections and figures for the visualization and publication of complex data and results", "Integrating statistical analysis to project design and data interpretations", and "Performing bioinformatics analyses of large scale genomics data". Educational: I loved graduate school; my project, advisor, colleagues, and department were all excellent. However, I feel the time is right for me to leave and to begin a new project. I want my next scientific project to be applied science, not basic science like my PhD dissertation. I also want my project to focus on genomics, machine learning, high-performance computing, and public health, which are fields I have a strong foundation in but were not incorporated into my PhD dissertation as much I wanted. This ORISE position includes all of these interests. My favorite courses I have taken are "Programming for Bioinformatics" and "Computational Genomics"

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which are taught my PhD thesis committee member and letter of reference writer, Dr. King Jordan. Computational genomics was especially relevant for this position since in this course, I worked in teams to to assemble genomes and identify the species and strains from which they were isolated from via Hi-Seq NGS reads provided by the CDC. I also really enjoyed a graduate course I took offered by the computer science department, Network Science that included protein-protein interactions and epidemiology homeworks that used open-sourced datasets. Professional: I have always been, and still am a very open-minded person and am ofcourse very open to many different careers in the long-term, but my short-term career goal is to apply genomics and data science to public health. This ORISE position sounds perfect for me since my skillset and interests check-off all the qualifications and activities included for this position. I want this ORISE position to last for 2 years, after which I want to be hired as a full-time employee for the CDC since my friends who work at the CDC enjoy it very much and I know I would as well. I also have career aspirations to work as a science diplomat and this ORISE position would be an excellent step in the right direction since after this ORISE position I could apply to become a Presidential Management Fellow or AAAS Science and Technology fellow which would allow me to work in science policy.

Please list your research, technical and/or professional experience that is relevant to this opportunity.

Going down the list of qualifications on the job ad: - PhD/masters awarded within the last 5 years --- I will be awarded a PhD in Bioinformatics with a minor in Biochemistry in December 2018. - Demonstrated technical activity involvement --- Contributor to the open-sourced project MMTF-PySpark - Knowledge of NGS technology and concrete skills in bioinformatics analysis for Illumina NGS data, is desired. --- In BIOL 7210 (computational genomics), I worked in teams of other students of various disciplines to assemble NGS reads from GAII, HiSeq, and MiSeq instruments of N. meningitidis, H. influenzae, and H. haemolyticus provided by the CDC. Course webpage which shows our pipelines and results: http://compgenomics2015.biology.gatech.edu/index.php/Main_Page - Knowledge of prokaryotic genomics is desired --- See above - Interest in antibiotic susceptibility and resistance mechanisms --- 3rd and final 1st author manuscript in preparation concerns many ribosomal strctures with a focus on Leishmania donovani, Plasmodium falciparum, and Trypansosoma brucei. - Proficiency in at least one high level scripting and programming language is required (e.g. PERL/Python/JAVA, R, C++) --- Use Python daily, used Perl in bioinformatics classes, have used R and Java for specific analyses that were not available in Python. - Knowledge of a Linux environment, running a cluster using SGE and BASH shell scripting is desirable --- Workstation and personal laptop run Ubuntu, and regularly SSH into lab server to submit jobs. - Designing databases using available software packages is a plus (e.g. SQL, MySQL) --- Audited CS 4400 Intro to Databases at Georgia Tech. - Knowledge of statistical or mathematical analysis packages is a plus. --- Extensive use of pandas, numpy, scikit-learn, scipy, statsmodels, and other python modules in past 5 years - Strong oral and written communication skills and strong interpersonal skills are preferred --- Search YouTube for "Nicholas Kovacs" and you will find 3 of my 7 conference presentations - Demonstrate initiative in evaluating and experimenting with new technologies --- Lab was using MATLAB when I joined, now we use Python because it is so much better. Colleagues are also starting to use Jupyter notebooks, pandas, and matplotlib/seaborn. I take responsibility for this change.

Please list your professional/technical skills and abilities that are relevant to this opportunity, including knowledge/skills related to specialized laboratory equipment or techniques, computer hardware, software or computer languages and/or applications.

Python (biopython / numpy / pandas / scipy / statsmodels / scikit-learn / matplotlib / seaborn / plotly / jupyter / networkx / pyspark), Perl/BioPerl, Bash, R, SGE, SQL, MySQL, MySQL Workbench, Illumina GAII/HiSeq/MiSeq, AWS, Ubuntu, RHEL, genome assembly (fastqc and prinseqq for preprocessing. Velvet, spades, and smalt for assembler. Quast for metrics), Prodigal, BLAST, Prokka, MLST,

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Do you currently participate or have you previously participated in an ORAU or ORISE educational program?
No

If yes, list all project/assignment(s) in which you have participated including dates, location, and mentor for each assignment.

Preferred start date
1/15/2019

Preferred end date
2/1/2019

Georgia Institute of Technology

Office of the Registrar - Transcripts

Office of the Registrar
Georgia Institute of Technology
Atlanta, GA 30332-0315

How to Authenticate This Official Transcript From the Georgia Institute of Technology

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Lastly, one other possible message, Author Unknown, can have two possible meanings: The certificate is a self-signed certificate or has been issued by an unknown or untrusted certificate authority and therefore has not been trusted, or the revocation check could not complete. If you receive this message make sure you are properly connected to the internet. If you have a connection and you still cannot validate the digital certificate on-line, reject this document.

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GEORGIA INSTITUTE OF TECHNOLOGY

A UNIT OF THE UNIVERSITY SYSTEM OF GEORGIA
OFFICE OF THE REGISTRAR - ATLANTA, GEORGIA 30332-0315

OFFICIAL DOCUMENT

Student No: 903-02-4677 Date of Birth: 16-JUN-1990 Date Issued: 19-JUL-2018

Issued To: Nicholas Attila Kovacs
AVOW:19055022
CERTIFIED ELECTRONIC PDF

Record of: Nicholas Attila Kovacs

Current Program
Major : Bioinformatics

INSTITUTION CREDIT:

Fall 2013
Chemistry

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
BMED	8813	A	Special Topics	3.00	W	0.00	
			Biomedical Health Informatics				
CETL	8000	A	GTA Preparation	1.00	S	0.00	
CHEM	6572	A	Macromolecular Structure	3.00	B	9.00	
CHEM	8000	A	Seminar - Chemistry	1.00	S	0.00	I
CHEM	8853	A	Spec Topics-Biochemistry	3.00	S	0.00	
			Career Development Workshop				
CHEM	8901	A	Special Problems	2.00	S	0.00	
CHEM	8902	A	Special Problems	2.00	S	0.00	
CHEM	8997	A	Teaching Assistantship	3.00	V	0.00	
PHYS	8803	A	Special Topics	3.00	W	0.00	
			Biophysics				

Term: Ehrs: 12.00 GPA-Hrs: 3.00 Pts: 9.00 GPA: 3.00

Spring 2014
Chemistry

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
CHEM	6571	A	Enzymology and Metabolism	3.00	B	9.00	
CHEM	6582	A	Biophysical Chemistry	3.00	B	9.00	
CHEM	8000	A	Seminar - Chemistry	1.00	S	0.00	I
CHEM	8002	A	Info Resour-Chem&Biochem	2.00	S	0.00	
CHEM	8997	A	Teaching Assistantship	1.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	11.00	S	0.00	I

Term: Ehrs: 20.00 GPA-Hrs: 6.00 Pts: 18.00 GPA: 3.00

********** CONTINUED ON NEXT COLUMN **********

Institution Information continued:
Summer 2014
Chemistry

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
CHEM	9000	A	Doctoral Thesis	16.00	S	0.00	I

Term: Ehrs: 16.00 GPA-Hrs: 0.00 Pts: 0.00 GPA: 0.00

Fall 2014
Chemistry

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
BIOL	8803	A	Special Topics	3.00	A	12.00	
			Programming for Bioinformatics				
CHEM	6573	A	Molecular Biochemistry	3.00	A	12.00	
CHEM	7001	A	Intro to Research	3.00	A	12.00	
CHEM	8000	A	Seminar - Chemistry	1.00	S	0.00	I
CHEM	8903	A	Special Problems	3.00	B	9.00	
CHEM	8997	A	Teaching Assistantship	1.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	7.00	S	0.00	I

Term: Ehrs: 20.00 GPA-Hrs: 12.00 Pts: 45.00 GPA: 3.75

Spring 2015
Chemistry

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
BIOL	7210	A	Computational Genomics	3.00	A	12.00	
CHEM	8000	A	Seminar - Chemistry	1.00	S	0.00	I
CHEM	8997	A	Teaching Assistantship	3.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	14.00	S	0.00	I

Term: Ehrs: 18.00 GPA-Hrs: 3.00 Pts: 12.00 GPA: 4.00

Summer 2015
Chemistry

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
CHEM	8997	A	Teaching Assistantship	3.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	10.00	S	0.00	I
MATH	3215	A	Probability & Statistics	3.00	C	6.00	

Term: Ehrs: 13.00 GPA-Hrs: 3.00 Pts: 6.00 GPA: 2.00

********** CONTINUED ON PAGE 2 **********

Reta Pikowsky, Registrar
Georgia Institute of Technology

GEORGIA INSTITUTE OF TECHNOLOGY

A UNIT OF THE UNIVERSITY SYSTEM OF GEORGIA
OFFICE OF THE REGISTRAR - ATLANTA, GEORGIA 30332-0315

OFFICIAL DOCUMENT

Student No: 903-02-4677 Date of Birth: 16-JUN-1990 Date Issued: 19-JUL-2018

Record of: Nicholas Attila Kovacs

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
Fall 2015							
Chemistry							
BIOL	7111	A	Molecular Evolution	3.00	W	0.00	
CHEM	8997	A	Teaching Assistantship	1.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	13.00	S	0.00	I
CS	4710	A	CS for Bioinformatics	4.00	A	16.00	
Term: Ehrs: 17.00 GPA-Hrs: 4.00 Pts: 16.00 GPA: 4.00							
Spring 2016							
Bioinformatics							
CHEM	8997	A	Teaching Assistantship	3.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	18.00	S	0.00	I
Term: Ehrs: 18.00 GPA-Hrs: 0.00 Pts: 0.00 GPA: 0.00							
Summer 2016							
Bioinformatics							
CHEM	8997	A	Teaching Assistantship	3.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	13.00	S	0.00	I
Term: Ehrs: 13.00 GPA-Hrs: 0.00 Pts: 0.00 GPA: 0.00							
Fall 2016							
Bioinformatics							
CHEM	8997	A	Teaching Assistantship	3.00	V	0.00	
CHEM	9000	A	Doctoral Thesis	18.00	S	0.00	I
Term: Ehrs: 18.00 GPA-Hrs: 0.00 Pts: 0.00 GPA: 0.00							
Spring 2017							
Bioinformatics							
BIOL	8803	A	Special Topics	3.00	V	0.00	
Proteomics: Techs & Apps							
CHEM	9000	A	Doctoral Thesis	18.00	S	0.00	I
Term: Ehrs: 18.00 GPA-Hrs: 0.00 Pts: 0.00 GPA: 0.00							
Summer 2017							
Bioinformatics							
CHEM	9000	A	Doctoral Thesis	16.00	S	0.00	I
Term: Ehrs: 16.00 GPA-Hrs: 0.00 Pts: 0.00 GPA: 0.00							

********** CONTINUED ON NEXT COLUMN **********

SUBJ	NO.	C	COURSE TITLE	CRED	GRD	PTS	R
Institution Information continued:							
Fall 2017							
Bioinformatics							
CHEM	9000	A	Doctoral Thesis	14.00	S	0.00	I
CS	7280	A	Network Science	3.00	A	12.00	
KOR	1001	A	Elementary Korean I	4.00	V	0.00	
Term: Ehrs: 17.00 GPA-Hrs: 3.00 Pts: 12.00 GPA: 4.00							
Spring 2018							
Bioinformatics							
CHEM	9000	A	Doctoral Thesis	17.00	S	0.00	I
Term: Ehrs: 17.00 GPA-Hrs: 0.00 Pts: 0.00 GPA: 0.00							

********** BEGIN GRADUATE SEMESTER TOTALS **********

	Earned Hrs	GPA Hrs	Points	GPA
TOTAL INSTITUTION	233.00	34.00	118.00	3.47
TOTAL TRANSFER	0.00	0.00	0.00	0.00
OVERALL	233.00	34.00	118.00	3.47
REGENTS	233.00	34.00	118.00	3.47

ACADEMIC STANDING Good Standing

********** END GRADUATE SEMESTER TOTALS **********

********** END OF TRANSCRIPT **********

Current Schedule:

Summer 2018
CHEM 9000 A Doctoral Thesis 16.00 IN PROGRESS
Hours: 16.00

********** END OF RECORD **********

Reta Pikowsky, Registrar
Georgia Institute of Technology

GEORGIA INSTITUTE OF TECHNOLOGY OFFICIAL DOCUMENT INFORMATION

ACCREDITATION

The Georgia Institute of Technology is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor's, master's, and doctoral degrees. Inquiries to the Southern Association of Colleges and Schools (SACS) should be forwarded to Southern Association of Colleges and Schools, 1866 Southern Lane, Decatur, Georgia 30033-4097, phone (404)679-4500. The Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – phone: (410)347-7700, has accredited engineering B.S. degrees in Aerospace, Biomedical, Chemical and Biomolecular, Civil, Computer, Electrical, Industrial, Materials Science, Mechanical, Nuclear and Radiological, Polymer and Fiber, and two engineering B.S. degrees offered through the Regional Engineering Program: Civil and Computer. Not currently accredited are the B.S. in Environmental Engineering and three engineering B.S. degrees offered through the Regional Engineering Program: Electrical, Mechanical, and Environmental. The American Chemical Society has accredited the B.S. degree in chemistry; the Human Factors and Ergonomics Society has accredited the Ph.D. in Engineering Psychology; the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the National Commission on Orthotic and Prosthetic Education (NCOPE) has accredited the M.S. Degree in Prosthetics and Orthotics (MSPO). The B.S. in Computer Science program is accredited by the Computing Accreditation Commission (CAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – phone: (410) 347-7700. The College of Management and all of its degrees are fully accredited by the Association to Advance Collegiate Schools of Business. The National Architectural Accrediting Board has accredited the Master of Architecture; the American Council for Construction Education has accredited the B.S. in Building Construction; the M.S. in Building Construction and Integrated Facility Management is recognized by the International Facility Management Association (IFMA) and the Design Build Institute of America (DBIA). The Planning Accreditation Board has accredited the Master of City and Regional Planning; the B.S. in Industrial Design has been accredited by the National Association of Schools in Art and Design (NASAD) and is recognized by the Industrial Designers Society of America. Extended version may be viewed at
http://www.catalog.gatech.edu/general/accred.php

CALENDAR

Prior to July 1, 1948, the Georgia Institute of Technology was known as the Georgia School of Technology. From September, 1946, through Summer Term, 1999, the Institute was on the quarter system. Effective Fall Term, 1999, all curricula are based upon a semester calendar with three terms per calendar year. For academic calendar information please visit www.registrar.gatech.edu/home/calendar.php

CONTACT INFORMATION

Office of the Registrar, Georgia Institute of Technology, Atlanta, GA 30332-0315, 404-894-4150 (voice) 404-894-0167 (fax),
comments@registrar.gatech.edu, or http://www.registrar.gatech.edu

COURSE NUMBERING SYSTEM

Course numbers below 1000 denote remedial courses and may not be used in satisfying degree requirements. Course numbers below 3000 denote lower division (freshman and sophomore) courses. Those numbered 3000-4999 denote upper division (junior and senior) courses. Courses designed for graduate students are numbered 6000 and above.

GRADING SYSTEM

Effective September 17, 1973

Grade	Definition	Quality Points Per Credit Hour
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Passing	1
F	Failure	0
S	Satisfactory completion of a course taken under pass/fail, or of a course in which no other letter grade may be assigned	0
U	Unsatisfactory completion of a course taken under pass/fail, or of a course in which no other letter grade may be assigned	0
V	Audit (no academic achievement implied)	0
I	Incomplete	0
W	Withdrew	0
NR	Not Reported. Assigned when an instructor fails to submit grades by the published deadline, through no fault of the student (effective Summer Quarter, 1988).	0
IJ	Incomplete Judical. The "IJ" is used when academic misconduct has been reported in a class and the investigation is being conducted.	

GRADE POINT AVERAGE

The scholastic average is computed by dividing the quality points earned by the number of credit hours scheduled in which a final grade of A, B, C, D or F has been recorded. In the case of repeated courses, all grades earned are calculated into the grade point average with the exception of those changed via grade substitution (see below). The Institution grade point average displayed will take substituted grades into consideration. The Regents grade point average displayed will be a calculation of all grades. Prior to Fall Term, 1999, all instances of an individual course, including those associated with repeated and remedial courses, were counted in the total number of earned hours. Effective Fall Term 1999, earned hours from repeated courses and remedial courses (those numbered below 1000) will not be included in the earned hours total.

GRADE SUBSTITUTION

Beginning with first-time freshmen entering Fall 2005, students may request a grade substitution for no more than two courses taken in the first two semesters where the grade is "D" or "F". The original grade will not be included in the computation of the grade point average, but will appear on the transcript. For further information, refer to Student Rules and Regulations, V. Grades and Scholastic Average, C. Grade Substitution at
http://www.registrar.gatech.edu/rules/5.php

ANTICIPATED GRADUATION DATE

Anticipated graduation dates are calculated for all students based on the average number of terms required to complete degree requirements with the assumption that the student will enroll as a full-time student each term (including summer term). The anticipated graduation date should not be viewed as a guarantee of graduation. Graduation is based on hours, courses and scholastic average only; no prescribed time is set.

ACADEMIC STANDING

GOOD

Student is not on academic warning or probation; is maintaining satisfactory academic progress.

WARNING

A sub-set of GOOD. Student's most recent academic performance has been unsatisfactory or the overall average is below the minimum requirement.

PROBATION

Student's most recent academic performance has been extremely unsatisfactory or the overall academic average has continued to be below the minimum requirement.

REVIEW

Student who normally would be dropped from the rolls due to academic deficiencies but appears from the record not to have completed the term. Student cannot be enrolled on Review status.

DROP/DISMISSAL

Student has been dropped from the rolls due to academic deficiencies.

DEANS LIST/ FACULTY HONORS

Term honors for undergraduate students on GOOD academic standing. Deans List – 3.0 grade point average for term with no Incomplete grades and a full load taken on letter grade basis. Faculty Honors – 4.0 grade point average for term with no Incomplete grades or Withdrawals and a full load taken on letter grade basis.

TRANSFER CREDIT

In general, a grade of "C" or better is required before transfer credit is awarded. Courses transferred from another institution are recorded as the equivalent Georgia Tech courses and the grades are not recorded.

TRANSCRIPT LEGEND

SUBJ = Subject
NO = Course Number
C = Campus (A = Atlanta Campus)
Full listing at www.registrar.gatech.edu/faculty/campuscodes.php

TITLE Course Title
CRED = Credit Hours
GRD = Grade
PTS = Quality Points
R = Indicates course has been repeated.
Repeat column codes:
E = Excluded from earned hours and GPA
I = Included in earned hours and GPA
A = Included in GPA, but not in earned hours

Nicholas Attila Kovacs

Bioinformaticist & Data Scientist

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Education

Ph.D. Bioinformatics — *Atlanta, Georgia*
Georgia Institute of Technology — *Aug 2013 - Dec 2018*

B.S. Biochemistry and Molecular Biology/Biotechnology — *East Lansing, Michigan*
Michigan State University — *Aug 2008 - May 2012*

Skills

Computational Acumen	Python, R, SQL, Bash, Perl, MATLAB, Javascript, Git, PySpark, Tableau, Adobe
Computational Sciences	Structural Bioinformatics, Next-Generation Sequencing, Molecular Dynamics, Drug Docking
Data Science	Machine Learning, Network Science, Statistics, Object-Oriented Programming
Experimental Sciences	Molecular Biology, Biochemistry, Organic Chemistry, Analytical Chemistry
Clubs	GaTech PhD2Consulting Club, Bioengineering & Bioscience Unified Grad Students, Data Science for Scientists

Publications

(9) **Kovacs, N. A.**, Penev, P. I., Chivukula, V., Petrov, A. S., Williams, L. D. "Ribosomal Protein Structure: Deep Evolution", In preparation

(8) **Kovacs, N. A.**, Penev, P. I., Venapally, A., Petrov, A. S., Williams, L. D. "Circular Permutation Obscures the Universality of a Ribosomal Protein", ***J. Mol. Evol.*** 86, pgs 581-592 (2018)

(7) Bernier, C.R., Petrov, A. S., **Kovacs, N. A.**, Penev, P. I., Williams, L. D. "Translation: The Universal Structural Core of Life", ***Mol. Biol. Evol.*** 35, pgs 2065-2076 (2018)

(6) Gómez Ramos, L. M., Degtyareva, N. N., **Kovacs, N. A.**, Holguin, S. Y., Jiang, L., Petrov, A. S., Biesiada M., Hu, M. Y., Purzycka, K. J., Arya, D. P., Williams, L. D. "Eukaryotic Ribosomal Expansion Segments as Antimicrobial Targets", ***Biochemistry*** 56, pgs 5288-5299 (2017)

(5) **Kovacs, N.A.**, Petrov, A.S., Lanier, K.A., and Williams, L.D. "Frozen in Time: The History of Proteins", *Mol. Biol. Evol.* 34, pgs 1252-1260 (2017)

(4) Gómez Ramos, L.M., Smeekens, J.M., **Kovacs, N.A.**, Bowman, J.C., Wartell, R.M., Wu, R., and Williams, L.D. "Yeast rRNA Expansion Segments: Folding and Function", *J. Mol. Biol.* 428, pgs 4048-4059 (2016)

(3) Petrov, A.S., Gulen, B., Norris, A.M., **Kovacs, N.A.**, Bernier, C.R., Lanier, K.A., Fox, G.E., Harvey, S.C., Wartell, R.M., Hud, N.V., and Williams, L.D. "History of the Ribosome and the Origin of Translation", *Proc. Natl. Acad. Sci. U.S.A.* 112, pgs 15396-15401 (2015)

(2) Petrov, A.S., Bernier, C.R., Hsiao, C., Norris, A.M., **Kovacs, N.A.**, Waterbury, C.C., Stepanov, V.G., Harvey, S.C., Fox, G.E., Wartell, R.M., Hud, N.V., and Williams, L.D. "Evolution of the Ribosome at Atomic Resolution", *Proc. Natl. Acad. Sci. U.S.A.* 111, pgs 10251-10256 (2014)

(1) Sharma, M., Predeus, A.V., **Kovacs, N.A.**, and Feig, M. "Differential Recognition Specificities of Eukaryotic MutSα and MutSβ", *Biophys. J.* 106, pgs 2483-2492 (2014)

Research Experience

Adviser: Dr. Loren Williams — *Georgia Institute of Technology*
Graduate Research Assistant — *Aug 2013 - Current*

PhD Thesis: *The History of Proteins Revealed by Data Mining the Ribosome*
- **Hypothesis**: The ribosome is a molecular fossil; its structure can be mined to unravel the evolution of life
- **Tools**: Python, PyMOL, Adobe Illustrator, Perl, MATLAB, JavaScript
- **Funding**: NASA Astrobiology Institute
- **Support**: Data analysis for experimental labmates

Adviser: Dr. Chiaolong Hsiao — *National Taiwan University*
East Asia and Pacific Summer Institutes Fellow — *Jun 2017 - Aug 2017*
- **Project**: The Evolution of Proteins in Eukaryotes: Data Mining the Ribosome Strucutre
- **Tools**: Python, PyMOL
- **Funding**: National Science Foundation - East Asia and Pacific Summer Institutes

Adviser: Dr. Michael Feig — *Michigan State University*
Undergraduate Research Associate — *Dec 2012 - May 2012*
- **Project**: Molecular simulations of Mismatch Repair Enzymes MutSα and MutSβ

Adviser: Dr. Peter Westhoff — *Heinrich-Heine Universität*
Molecular Biology Exchange Student — *May 2011 - Jul 2011*

- **Project**: DNA-protein interaction of cis-regulatory elements in ***Flaveria sp.***

Adviser: Dr. Yair Shachar-Hill — *Michigan State University*
Undergraduate Research Associate — *Jun 2010 - Mar 2011*

- **Project**: Metabolic flux analysis of carbon through ***Nanochloropsis sp.***
- **Project**: Aquaporin signalling in ***Arabidopsis thaliana*** gametogensis

Adviser: Dr. Cristoph Benning — *Michigan State University*
Undergraduate Research Associate — *Feb 2010 - May 2010*

- **Project**: Protein-protein interactions in ER to chloroplast lipid trafficking

Awards and Scholarships

NSF East Asia and Pacific Institutes — *National Taipei University*
EAPSI Fellow — *Mar 2017 - Mar 2018*

- **Project**: The Evolution of Proteins in Eukaryotes: Data Mining the Ribosome Structure
- **Adviser**: Dr. Chiaolong Hsiao
- **PI**: Nicholas Attila Kovacs
- Awarded $5,400 stipend, $1,667 living allowance, and roundtrip airfare to Taipei, Taiwan

Petit Undergraduate Research Scholars Program — *Georgia Institute of Technology*
Graduate Mentor — *Jan 2017 - Dec 2017*

- Research mentor for undergraduate student
- Awarded $2,500 for materials and conference travel

BASF Chemistry Symposium — *Georgia Institute of Technology*
3rd Place — *Apr2017*

- Oral presentation of PhD thesis research to Chemistry Department and science panel from BASF
- Awarded $300

Presentations

The Evolution of Proteins: Data Mining the Ribosome Structure — *Tokyo, Japan*
Earth and Life Science Institute 6th International Symposium · poster — *Jan 2018*

The History of Proteins — *Charlottesville, VA*
Astrobiology Graduate Student Conference · oral — *Jun 2017*

Eukaryotic Ribosomal Protein Evolution — *Atlanta, GA*
BASF Chemistry Symposium · oral — *Apr 2017*

Frozen in Time: The History of Proteins — *Quy Nhon, Vietnam*
Search for Life: From Early Earth to Exoplanets · oral — *Dec 2016*

Frozen in Time: The History of Proteins — *Atlanta, GA*
Georgia Tech Chemistry Retreat · oral — *Oct 2016*

The History of Protein Folding — *Madison, WI*
Astrobiology Graduate Student Conference · oral — *Jul 2015*

The History of Protein Folding — *Troy, NY*
Astrobiology Graduate Student Conference · poster — *Jul 2014*

Teaching Experience

Adviser: Dr. Loren Williams — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Fall 2016*

- **Course**: CHEM 6572 - Macromolecular Structure (half time)

Adviser: Dr. Mary Peek — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Fall 2016*

- **Course**: CHEM 4582 - Biochemisty Laboratory II (half time)

Adviser: Dr. Pamela Peralta-Yahya — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Summer 2016*
- **Course**: CHEM 3511 - Survey of Biochemistry

Adviser: Dr. Mary Peek — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Spring 2016*
- **Course**: CHEM 4582 - Biochemisty Laboratory II

Adviser: Dr. Mary Peek — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Fall 2015*
- **Course**: CHEM 4582 - Biochemisty Laboratory II

Adviser: Dr. Mary Peek — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Summer 2015*
- **Course**: CHEM 4582 - Biochemisty Laboratory II

Adviser: Dr. Mary Peek — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Spring 2015*
- **Course**: CHEM 4582 - Biochemisty Laboratory II

Adviser: Dr. Loren Williams — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Fall 2014*
- **Course**: CHEM 6572 - Macromolecular Structure

Adviser: Dr. Mary Peek — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Spring 2014*
- **Course**: CHEM 4582 - Biochemisty Laboratory II

Adviser: Dr. Mary Peek — *Georgia Institute of Technology*
Graduate Teaching Assistant — *Fall 2013*
- **Course**: CHEM 4582 - Biochemisty Laboratory II

Opportunity Title: Bioinformatics Fellowship
Opportunity Reference Code: CDC-NCHHSTP-2019-0016

Organization	Centers for Disease Control and Prevention (CDC)
Reference Code	CDC-NCHHSTP-2019-0016
How to Apply	A complete application consists of: • An application • Transcripts – Click here for detailed information about acceptable transcripts • A current resume/CV, including academic history, employment history, relevant experiences, and publication list • Two educational or professional references All documents must be in English or include an official English translation. If you have questions, send an email to CDCrpp@orau.org. Please include the reference code for this opportunity in your email.
Application Deadline	4/1/2019 12:00:00 AM Eastern Time Zone
Description	An ORISE fellowship opportunity is available in the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. CDC mission is to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same. CDC increases the health security of our nation. As the nation's health protection agency, CDC saves lives and protects people from health threats. To accomplish our mission, CDC conducts critical science and provides health information that protects our nation against expensive and dangerous health threats, and responds when these arise. This fellowship opportunity may provide the opportunity to be involved in the following activities: • Providing customized or guided computational support within a team environment. • Evaluating existing methods for genomic data analysis. • Developing, validating, optimizing and implementing analysis pipelines for genomic data analysis. • Performing bioinformatics analyses of large scale genomics data. • Processing data through genomic data analysis pipelines. • Supporting various research projects as assigned by supervisor. • Partnering with department personnel and researchers in the institution. • Developing new applications for genomic data analysis as requested. • Integrating statistical analysis to project design and data interpretations. • Providing data management recommendations, being a team supporter in development of database, as required. • Establishing schedules and monitoring status of projects on an ongoing basis. • Preparing summaries, presentations, manuscript sections and figures for the visualization and publication of complex data and results. • Performing other related duties as assigned or requested. • Enhancing professional growth and development by reviewing current literature and by participation in

Opportunity Title: Bioinformatics Fellowship
Opportunity Reference Code: CDC-NCHHSTP-2019-0016

educational programs, workshops, conferences, and in-service meetings.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and CDC. The initial appointment is for one year, but may be renewed upon recommendation of CDC contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at CDC in the Atlanta, Georgia, area. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits.

Qualifications

Master's of science or a doctoral degree in bioinformatics or other related field being pursued or received within with the last five years.

- Demonstrated technical activity involvement.
- Knowledge of NGS technology and concrete skills in bioinformatics analysis for Illumina NGS data, is desired.
- Knowledge of prokaryotic genomics is desired.
- Interest in antibiotic susceptibility and resistance mechanisms.
- Proficiency in at least one high level scripting and programming language is required (e.g. PERL/Python/JAVA, R, C++).
- Knowledge of a Linux environment, running a cluster using SGE and BASH shell scripting is desirable.
- Designing databases using available software packages is a plus (e.g. SQL, MySQL).
- Knowledge of statistical or mathematical analysis packages is a plus.
- Strong oral and written communication skills and strong interpersonal skills are preferred.
- Demonstrate initiative in evaluating and experimenting with new technologies.

Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree received within 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (1 👁)
  - **Mathematics and Statistics** (2 👁)