COMPUTER SCIENCE

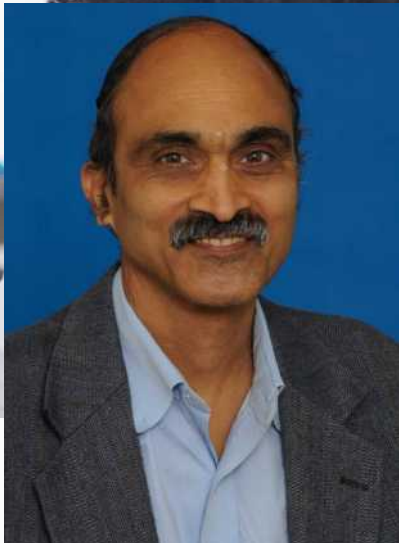## PIONEERING GENERATIONS OF INNOVATIVE MINDS FOR 40 YEARS

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WE ARE #TOGETHER APART, AND #TOGETHER WE ARE MONARCH STRONG

A SPECIAL SUMMER NEWSLETTER TO FOLLOW FOR OUR 2019 - 2020 GRADUATES

CHAIR'S NOTE

Ravi Mukkamala, PhD
Department Chair

Dear Alumni, Students, and Faculty.

Welcome to Computer Science Department's Newsletter. As the world is facing the COVID-19 pandemic and the associated economic impact, we are facing the same at ODU and the department. There are talks of deep budget cuts. I am sure, with the help of our students, faculty, alumni, and administrators, we will get through this phase. In the meanwhile, we are taking all precautions to keep everyone safe.

On the positive side, last year has been a very productive year with several events.Our local chapter of ACM had organized a resume workshop for CS students.

Dane Howard (BSCS'2017) from IBM was the invited speaker. Our CS graduate team won 2nd place in the 3rd Annual CyberOps conference held at ODU. The team members were Lalita Sharkey, Sharkey, Yuming He, Mahsa Sharifi and Cathy Deng. Congratulations to this team for its achievement.

CS students were also quite active in celebrating the 2020 International Women's Day. The department encourages women participation in all our programs.

Our faculty have won several awards at the university and college level. Dr. Ayman Elmesalami, Senior Lecturer, has been designated as the University Distinguished Teacher.

In addition, he won ODU's Teaching with Technology Award. Dr. Jian Wu, Assistant Professor, won the College of Sciences Outstanding Undergraduate Research Mentor of the Year Award. Dr. Cong Wang, Assistant Professor, won the prestigious College of Science's Cheng Fund for Innovative Research. He received a $11K award towards his research.

Two of our undergraduates, Mr. Angelos Angelopoulos and Mr. Sean Leonard, both under the supervision of Dr. Nikos Chrisochoides, won the prestigious Provost's Award for Outstanding Researcher award. This is the first time that CS students have won this award.

CHAIR'S NOTE

With the initiative of Dr. Sampath Jayaratna, Assistant Professor, the department has conducted a Research Open House, dubbed as "Trick or Research," on the Halloween day. It was well attended by several undergraduate students who were introduced to the research projects.

With the help of our Industry Advisory Board, we were able to initiate our Industry Speaker Series. This year we had, 6 speakers (3 each in fall and Spring). The scheduled talk by Frank Byrum had to be canceled due to pandemic and the lockdown.

We also had our second alumni meet on November 7, 2019 at O'Connor Brewing Company in Norfolk. It was very well attended. Several of our Emeritus Faculty also attended the meet.

We would like to congratulate our alumnus and Assistant Chair of the Industry Advisory Board, Ms. Tracy Gregorio, for winning the 2019 Vandeventer Black Award for Excellence in Business Strategy. Tracy is the President of G2Ops, Inc.

Finally, let me thank each and every one of you for your support to the department. As significant budget cuts are looming, it is more than ever that we need your financial support.

Be Safe,

Ravi Mukkamala

WE.ARE.MONARCH.STRONG
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WE.ARE.MONARCH.STRONG
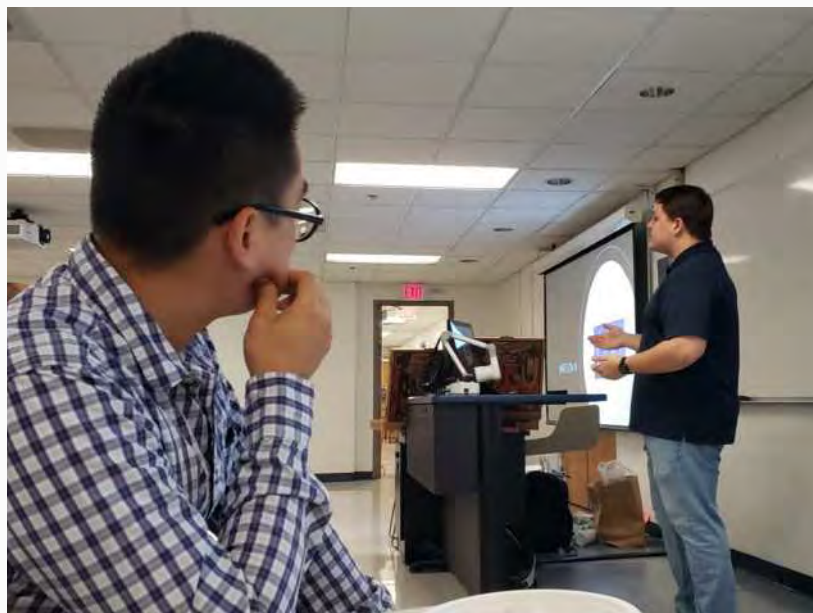WE.ARE.MONARCH.STRONG

STUDENT SPOTLIGHT

IBM CALLS FOR STUDENTS' RESUMES

Back in Spetember (2019) ACM hosted a Resume Workshop for students.

Filling in for CS Alum Chris Bliss, IBM's Dane Howard delivered a talk about IBM and accepted resumes from all the interested people. The event was a huge success.

THANK YOU ACM &

IBM

STUDENT SPOTLIGHT

OUR OUTSTANDING UNDERGRADUATE RESEARCHERS

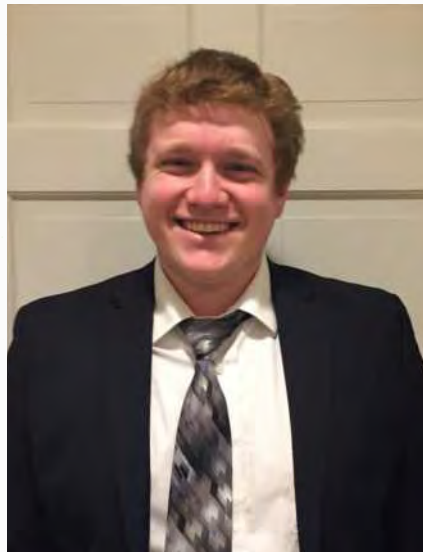Congratulations to three of our undergraduate researcher.

Angelos Angelopoulos, working under the supervision of Dr. Nikos Chrisochoides, has received this year's Provost's Award for Outstanding Researcher award. Another CS undergraduate, Sean Leonard, working under the supervision of Dr. Nikos Chrisochoides, also received this award. We were told that the competition was extremely competitive.

Noah Jennings, working under the supervision of Dr. Shubham Jain, has been selected for a Virginia Space Grant Consortium (VSGC) Undergraduate Research Scholarship for the 2020-21 academic year. Special thanks to Dr. Nelson – who made this scholarship application one of the required components in his undergrad research class – encouraging and helping Noah in preparing this submission. His research was also supported by the NIH MARC program - co-PI Dr. Ranjan and Dr. He.

Congrats and a job well done to all three students. We are so proud of you.

ANGELOS ANGELOPOULOS

SEAN LEONARD

NOAH JENNINGS

DON'T FORGET OUR GRAD STUDENTS

**Jing He, PhD
Professor**

Each year Computer Science Department selects two students for the Outstanding Teaching Assistant Award and two students for the Outstanding Researcher Award. The following four students were selected for the awards. Congratulations to the four students and I would like to thank instructors and advisors who submitted nominations.

COMPUTER SCIENCE OUTSTANDING TEACHING ASSISTANT AWARDS – 2019-2020

CLAUS OTHERSEN
MS STUDENT, GRADUATING MAY 2020

Claus obtained his B.S. and M.S. degrees in Computer Science at ODU. During his study at ODU, he has worked for the Systems Group, as a research assistant, as a teaching assistant, and as an intern at Naval Sea Warfare Center (NSWC). Claus is described as a teaching assistant with "friendly and approachable professional demeanor, genuine interest in the success of his students." "Claus is always excited to perform additional tasks and take more responsibilities." He is the teaching assistant for CS150 – Problem and Programming", the first programming course with students from different departments.

JOI BEST
MS STUDENT

Joi obtained her B.S. degree in Computer Science at ODU and is expected to complete M.S. in December 2020. As an undergraduate student, she has received STEM Bridge scholarship, VSGC undergraduate Research Scholarship, and Karlem Riess Scholarship. She is also an awardee of Hussein Abdel-Wahab Memorial Graduate Scholarship. Joi has worked as a teaching assistant and then a lead teaching assistant for CS120G/121G– Information Literacy and Research. As a lead teaching assistant, "she organized weekly meetings, delegated tasks, and facilitated effective communication between the professors and TAs". During the Covid-19 period, "she instructed an online recitation which brings different obstacles that she has managed to overcome."

COMPUTER SCIENCE OUTSTANDING RESEARCHER AWARDS – 2019-2020

SALIM SAZZED
PHD STUDENT

Salim received his BS and MS degrees in Computer Science and Engineering from University of Dhaka, Bangladesh. He started the PhD program at ODU in Fall 2016 working in the area of bioinformatics. He is the first author of two journal papers, co-authors of two other journal papers, and a co-author of a conference paper. He actively participated in local events and gave multiple presentations at PhD gatherings and at the Graduate Research Achievement Day.

GAVINDYA JAYAWARDENA
PHD STUDENT

Gavindya received her B.S. degree in Computer Science and Engineering from University of Moratuwa, Sri Lanka. She joined the PhD program at ODU in January 2019 working in eye tracking research. Within the short period of time at ODU, she is the first author of two conference papers, a co-author of two other conference papers, and a co-author of a book chapter. One of the papers received the best paper award at the conference. She received the travel award to present the work at a conference in Germany. She is actively involved in service events such as Great Computing Challenge, 2nd JRMF Math and Computer Science Festival, and Treat-or-Research".
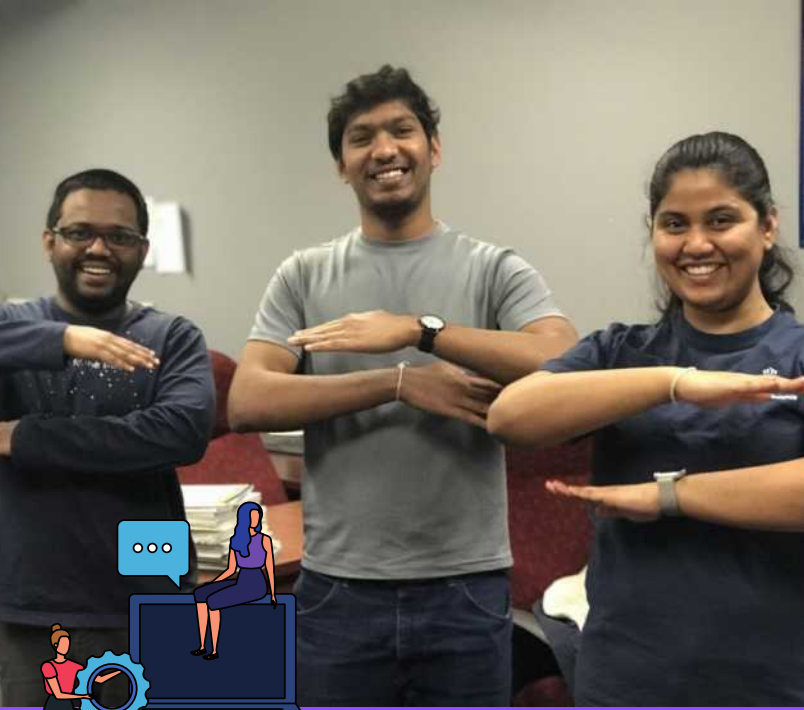
ODU'S CYBER EAGLE TAKES 2ND PLACE

Master's Students Lalita Sharkey, Yuming He, Mahsa Sharifi and Cathy Deng attended the 3rd annual CyberOps and CTF hosted by ODU in October (2019). There were more than 150 attendees from different universities, with over 30 competing teams. Join us in congratulating our eagles.

ODU'19 CYBEROPS

Saturday | 10-19-2019

Constant Hall rm 1002
8am - 6pm

Register Here!

Meet potential recruiters

Capture the Flag Competition
Team-based cyber security challenge
No experience needed

MetaCTF   VIRGINIA   360iT
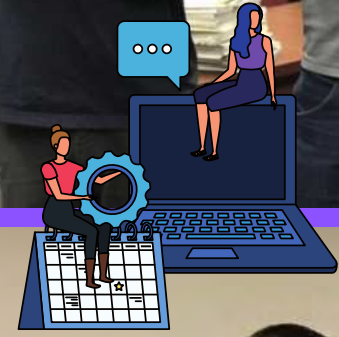
2020 International Women's Day

This year our students answered the call to unite for gender equality. CS students rallied behind those around the world, doing the equal stance in solidarity for equality. Nothing but Monarch pride.

#ODUCSWomen
#IWD2020

FACULTY NEWS

CONGRATULATIONS!!!

Dr. Ayman El Mesalami
Senior Lecturer

Congratulation on receiving ODU's Teaching with Technology for 2019-2020 academic year.

Dr. Cong Wang
Assistant Professor

Congratulation on winning a $11k fund awarded by the Cheng Fund for Innovative Research.

Dr. Jian Wu
Assistant Professor

Congratulations on winning the College of Sciences Outstanding Undergraduate Research Mentor of the Year award for 2019-2020 academic year.

TINY COMPUTERS MAKE A BIG IMPACT ON LEARNING

By: David Simpson

Semester after semester, Ayman Elmesalami noticed that a few of his introductory computer programming students would grow frustrated or bored with writing code.

He had a hunch why.

"The problem was the lack of real-world applications that students could feel, see, hear, or touch," the ODU lecturer in computer science said last month.

Such applications, he believed, could not only make the work more engaging but also attract more young people to the computer science major, especially female and minority students.

So he and some colleagues launched an experiment with the help of a 2018 Faculty Innovator Grant from the Center for Learning and Teaching.Their technology of choice: a computer the size of a deck of cards.

Known as the Raspberry Pi, it was designed by a U.K. charity to promote the teaching of basic computer science in schools. It's essentially a motherboard with visible components and costs as little as $35.

The Pi enables people to learn how to write computer programs in a wide variety of programming languages. It can do everything a desktop computer can do, including controlling external devices.

What makes it different, besides its size, is that students can see and touch the components, El Mesalami said.

"Where is the computer memory?" He pointed. "Here is the memory. Where is the processor? Here is the processor."

In two different programming and problem-solving courses in 2018, Elmesalami and Lecturer Soad Ibrahim had students complete a hands-on laboratory project using the Raspberry Pi's GPIO (general purpose input/output) port as an output device.

In CS 150, students wrote a quiz program that prints a random number between 1 and 500 on the screen; the user is asked to guess whether the number is prime. For a correct answer, a green LED lights up "You Win!" on the screen. For a wrong answer students get a red LED and "You Lose!" This was a lesson about control flow and functions in the programming language C++.

In CS 250, students completed a project simulating a credit card company management software program in which customers' data is stored in a binary file. A customer can pay the total amount of the balance or part of it. The customer can also make a purchase using the credit card, and create, modify, and delete accounts. The objective was to learn about abstract data types in C++.

The active-learning projects gave students a good feeling about what they could do on the computer, Elmesalami said.

"If you are able to turn on and off lights, it means you can open and close a door, you can move a car or stop the car, or you can launch a rocket."

At the end of the lab sessions 37 of the students volunteered to take an anonymous survey. The results suggested an increased interest in computer science and computer programming, especially from female and minority students, Elmesalami said.

Among the findings:

- Grades improved by 25 percent for female students and 15 percent for minority students.
- 92 percent of the students said the use of the Raspberry Pi helped them retain the knowledge they gained from taking CS 150 or 250.
- 89 percent said the use of the Pi increased their appreciation of the computer science major.
- 92 percent said the use of the Pi increased their participation level in class or helped motivate them to participate.

The experiment was so successful that not only are the tiny computers still being used in the two courses, but Graduate Teaching Assistant Heramb Pendyala is helping to develop a new Raspberry Pi project for the coming semester.What's more, Elmesalami plans a series of further Pi projects.

His reaction to the results of the experiment?

"I was really happy," he said. "Especially with the big smiles on the faces of the students."

TRICK OR RESEARCH

Back in October, Dr. Sampath Jayarathna hosted a Department Research Open House with a Halloween Theme. With the help of the Undergraduate Research Committee and all our Research Group, Trick or Research was amazing event with a great turnout. Students were given the opportunity to speak with faculty members and research assistants about their specialization, and research, and funding opportunities. Those that participated were entered into a drawing for CS swag as the prizes and given tons from each lab.

The next Trick or Research will be held in the Fall 2020 Semester. Final date to be announced this August.

THANKS FOR SUPPORTING OUR STUDENTS

This year the Department hosted several Industry Speaker Series. With the support of the Advisory Board and alumni

Series have been hosted once month on a Wednesday at 4:00 PM with a small reception to follow.

The series was meant to target and engagement undergraduate students with the knowledge from people in the current CS industry. Seeing the benefits to all students this became an open event to all students, even those in the our graduate program.

Frank Bryum's "What is it like to be a Computer Scientist in today's world?" was scheduled for March 18, 2020 but due to COVID-19, the series has been reschedule to the Fall 2020 semester. We're hoping to continue the Series in September during the Fall 2020 semester. A special thanks to this academic year's speakers:

- **Bob Cherinka**- *"How Computer Science Can Help You Solve Problems for a Safer World"*
- **Michael Le** - *"Building a Potentially Profitable Idea Into a Thriving Startup"*
- **Kim Mahan** - *"Enriching Skill for A Future in the Technology Sector"*
- **Tom Valva** - *"Automatic Data Processing, ADP LLC.: Innovation & Talent"*
- **Jason Rich** - *"Data Engineering in the Debt Collection Industry"*
- **Tracy Gregorio** - *"The Critical Variable for Success in STEM"*

Thanks to our Systems Group their Speaker Series can be found on the Department's website at https://www.cs.odu.edu/vod.php.

If you would like to be speaker in our industy Speaker Series please contact Dr. Ravi Mukkamala at mukka@cs.odu.edu.

Alumni Lecture Series

MICHAEL LE '80
FOUNDER & CEO
ADVANTCO INTERNATIONAL LLC

Discussion: Practical advice from an IT entrepreneur on how to build potentially profitable idea into a thriving startup

Michael Le first came to the Norfolk area as a refugee from Vietnam in 1975. Working his way through school, and at the same time supporting his family back in Vietnam, Michael graduated from Old Dominion University in 1980 with a degree in Computer Science. He held his first position upon graduation as Junior Programmer at IBM. Then after 3 years he became a Senior Consultant and worked for the company for approximately 10 years before founding his company, LKSP Technologies. Since then he has started and sold several successful technology companies, including LKSP Technologies, Inc, MobileReach Technologies, Somotsoft International, Inc., and Advantco International LLC.

At one point during his ODU student career, Mr. Le had to work over 80 hours per week to support himself and his family, but through his perseverance and tenacity he became a very successful businessman in the IT industry. Mr. Le has tremendous practical experience related to establishing start-up companies and is a seasoned entrepreneur. He will share some of his insights with students, including answering questions, from 12 - 1 pm. Lunch and further discussion with interested students will follow from 1 - 2 pm.

Lecture: 12:00 PM | ECSB Auditorium

Lunch: 1:00 PM | ECSB Atrium

27TH SEPTEMBER 2019

Department of Computer Science

COMPUTER SCIENCE INDUSTRY SPEAKER SERIES

16th October 2019

TALK: 4PM | ECSB AUDITORIUM
RECEPTION: 5PM | ECSB ATRIUM

Speaker: KIM MAHAN
FOUNDER & PARTNER, MAXXPOTENTIA

Topic: ENRICHING SKILLS FOR A FUTURE IN TECHNOLOGY SECTOR

Department of Computer Science

UNDERGRADUATE INDUSTRY SPEAKER SERIES

18th September 2019

TALK: 4PM | ECSB AUDITORIUM
RECEPTION: 5PM | ECSB ATRIUM

Speaker:

TOM VALVA, CEO SENIOR LIVING RESOURCES LLC.

COMPUTER SCIENCE INDUSTRY SPEAKER SERIES

19th February 2020

TALK: 4PM | ECSB AUDITORIUM
RECEPTION: 5PM | ECSB ATRIUM

Speaker:

TRACY GREGORIO
PRESIDENT OF G2 OPS. INC.
M.S. COMPUTER SCIENCE

Topic: THE CRITICAL VARIABLE FOR SUCCESS IN STEM

COMPUTER SCIENCE INDUSTRY SPEAKER SERIES

15th January 2020

TALK: 4PM | ECSB AUDITORIUM
RECEPTION: 5PM | ECSB ATRIUM

Speaker:

JASON RICH
ASSISTANT VICE PRESIDENT, DATA ENGINEERING AT PRA GROUP

Topic: DATA ENGINEERING IN THE DEBT COLLECTION INDUSTRY

ALUMNI NEWS

CS ALUMNI KNOW HOW TO PARTY

The CS Alumni Hampton Roads Chapter kicked off the holiday season with toast at O'Connor's Brewing Company.

Looking to connect with those in the Hampton Roads area or attend an event. Like and follow the ODU Computer Science Alumni Chapter page on Facebook.

Hampton Roads Chapter Officers
- President: Sai Ratnakar Nidumolu, MS 2018
- Vice President: Tom Taylor, BS 2010
- Treasurer: Ajay Gupta, MS 1983
- Secretary: Jesse Wright, MS 2016
- Communications: Jessica Tate, MS 2018

Events: Dinesh Kumar Paladhi, MS 2017

Find us on **Facebook**

COMPUTER SCIENCE ALUMNI CHAPTER
OLD DOMINION UNIVERSITY

2019
VANDEVENTER BLACK
Award for Excellence
in
Business Strategy Recipient:

TRACY GREGORIO

G2OPS
Smarter Intelligence.®

Congratulations to CS Alumnus Mrs. Tracy Gregorio. Mrs. Gregorio is also a Vice Chairman of the Department's Advisory Board.
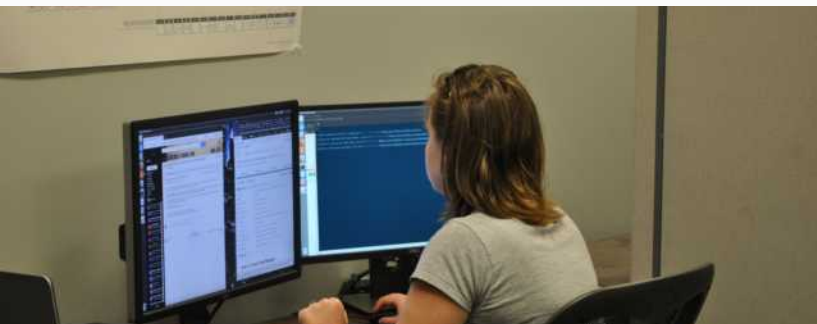
CONGRATULATIONS!

Vandeventer Black congratulates Tracy Gregorio, President of G2 Ops, Inc., for her innovative business thinking and successful execution.

KEEP MOVING FORWARD!

VANDEVENTER BLACK LLP
ATTORNEYS AT LAW

CONNECT WITH US

We are proud of your success and want you to stay in touch. If you're ever back in the Hampton Roads area, stop by campus for a visit.

Want to contribute to our newsletter? Email us at Newsletter@cs.odu.edu

Go Check Out Our Websites:
www.cs.odu
www.graduate.cs.odu.edu

Need Technical Support? Contact Our Systems Group at root@cs.odu.edu

Department of Computer Science Main Office Information:

Hours: M - F 8:00 AM - 5:00 PM
Phone: 757.683.7740
Email: Office@cs.odu.edu
Address: Engineering & Computational Science Bldg.
4700 Elkhorn Avenue, Suite 3300
Norfolk, Virginia 23529

CHIEF EDITOR

Ravi Mukkamala, PhD
Department Chair

DESIGN EDITOR

Ariel Sturtevant, M.P.A.
Program Assistant for Graduate Programs

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