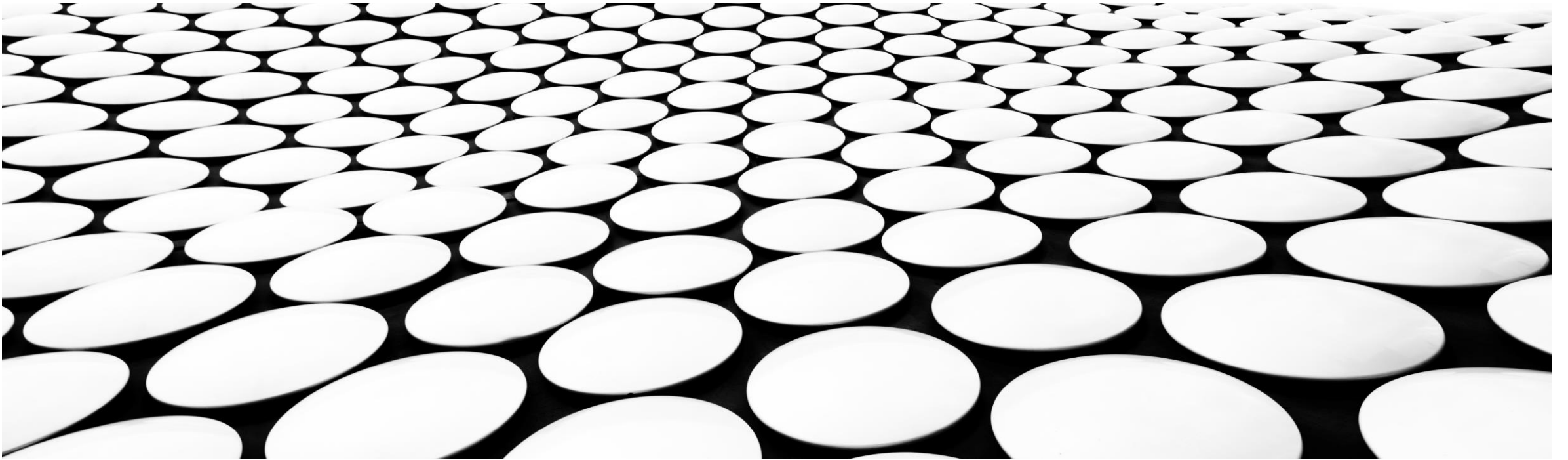


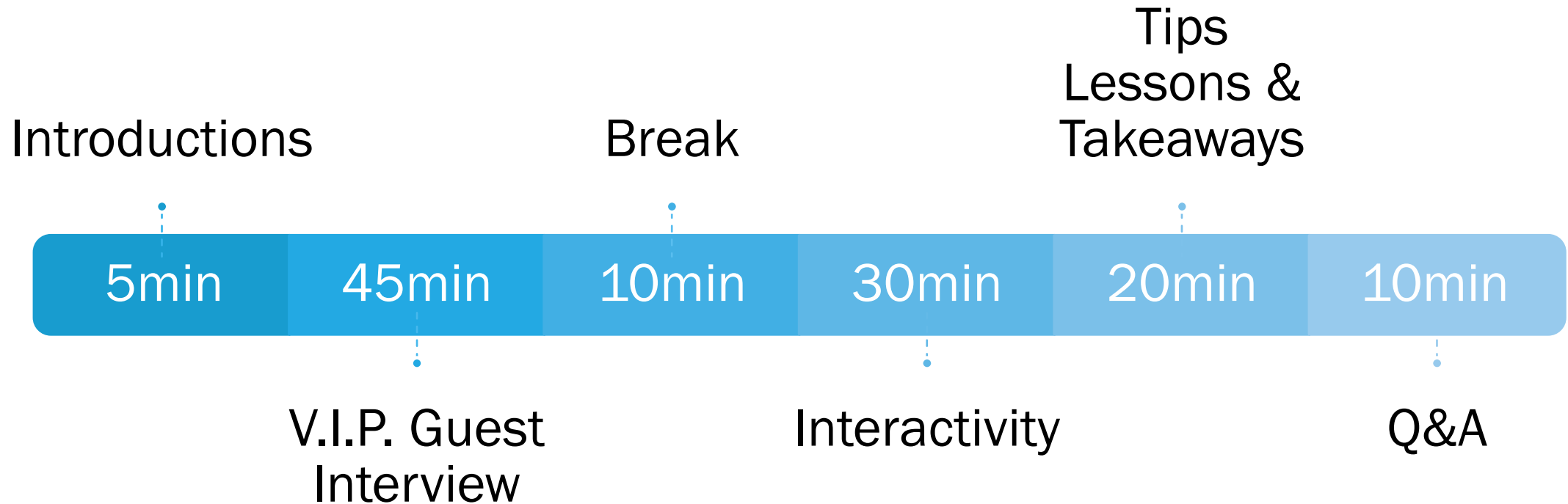
---

# CREATIVITY & INNOVATION

COMPUTATIONAL THINKING AND 21ST CENTURY SKILLS (CTCS)



# LESSON PLAN



# INTRODUCTION TO LECTURER

**Shyam Reyal – Senior Lecturer (HG), Department of IT, FOC, SLIIT**

- **1<sup>st</sup> year** – IT1010, Algothon Workshop
- **3<sup>rd</sup> year** – IT (IT3060) | Curtin (COMP3003) | Internships
- **4<sup>th</sup> year** – DS (IT4031) | CDAP Project
- **MSc** – IT (IT5030) | EAD (SE5010) | MSc Project
- **Beyond** – MPhil Project, SLIIT-Innovate



---

# LEARNING OUTCOMES

- ON COMPLETION OF THIS SESSION, STUDENTS SHOULD BE ABLE TO:
  - Identify the building blocks of innovation
  - Identify the processes and methods of creative problem solving
  - Adopt creative and innovative thinking styles

# INTRODUCTION – V. I. P. GUEST

- **Prof. Koliya Pulasinghe** is a Professor of Computational Linguistics and Robotics at the Faculty of Computing, at SLIIT.
- He obtained his B.Sc. In Computer Systems and Engineering, in 1996, from the University of Moratuwa, and his PhD in Robotics and Intelligent Systems in 2003 from Saga University, Japan.
- He joined SLIIT in 2003 as a Senior Lecturer (Higher Grade), and held numerous positions such as Head, Department of Information Technology, Postgraduate Course Coordinator, Dean/Academic Affairs, Dean/Postgraduate Studies & Research.
- He was the first Chairman of the Curriculum and Academic Quality Committee and chaired the Internal Quality Assurance Unit. He served SLIIT as a member of the Board of Directors from 2007 to 2017.
- He is now a successful researcher and entrepreneur, having his own startup company DigitalPulz Ltd., and is currently the Faculty Research Chair of Faculty of Computing at SLIIT.



---

# IN YOUR EXPERIENCE, WHAT IS INNOVATION?

IF YOU CAN TELL US, WHAT IS INNOVATION, IN YOUR OWN WORDS?



# DOES INNOVATION ALWAYS MEAN CREATING SOMETHING NEW?

IS ALWAYS CREATING SOMETHING NEW NECESSARY?

OR CAN SOMEONE BE INNOVATIVE IN A DIFFERENT WAY?

IS THERE A WAY SOMEONE CAN BE INNOVATIVE WITHOUT INVENTING SOMETHING ENTIRELY NOVEL?





# EXISTING SOLUTION, NEW DOMAIN

IS THIS INNOVATION?

WHAT ARE THE MAIN MISCONCEPTIONS ABOUT THIS APPROACH?





---

# CREATIVITY AND ENTREPRENEURSHIP

WHO IS AN ENTREPRENEUR?

WE KNOW THAT EVERYONE WHO IS CREATIVE CANNOT BE CALLED AN ENTREPRENEUR.  
WHAT MAKES AN ENTREPRENEUR STAND OUT FROM SIMPLY “CREATIVE PEOPLE”?



# RISK

ONE KEY FACTOR OF DIFFERENTIATING AN ENTREPRENEUR FROM A CREATIVE PERSON IS TAKING RISK.

HOW DO WE EMPOWER OUR STUDENTS / STAFF TO REDUCE THEIR RISK? OR MAKE THEM LESS AFRAID OF RISK?





# A SUCCESS STORY

PLEASE TELL US ABOUT YOUR STARTUP, HOW IT BEGAN, AND HOW IT REACHED THE STATUS IT IS AT NOW



---

# THANK YOU TO PROF KOLIYA

FOR YOUR QUERIES, PLEASE CONTACT [KOLIYA.P@SLIT.LK](mailto:koliya.p@slit.lk)





**BREAK**

---

10 MINS

---

# WHAT DID WE LEARN IN THE LAST HOUR?

- **BUILDING BLOCKS OF INNOVATION**

- Risk Taking
- Entrepreneurial Thinking
- Ability to Learn
- Enhancing Creativity
- Success Stories

# INTERACTIVITY

- Students should draw an imaginative animal
- They can add any characteristics they want
- Give a name to this new species
- Present this animal profile to the class



It is a nine tailed beast.

It is a mindless monster and used as a weapon by ninjas.

It has red-orange fur with black fur around its eyes that stretches to its ears.

## Example - Kurama

Kurama has massive reserves of powerful energy.

Kurama is very cunning and can formulate strategies in the midst of battle.

Kurama can create a Tailed Beast Bombs from its mouth and is able to fire at enemies.

# SLIIT INNOVATION CENTRE

## SLIITInnovate

[innovate.sliit.lk](http://innovate.sliit.lk) | [innovate@sliit.lk](mailto:innovate@sliit.lk)

Empowering Sri Lankan Innovation in the 21st Century

### Education and Empowerment

Orientation, Research Showcase, Project Modules, Periodic SLIIT-NOTICES, Website, MIS, Seminars & Workshops

### BWB Facilitation

Facilitation of custom revenue sharing BWB models for internal staff

### Incubator and Startup Facilitation

Continuous incubator feed from BSc, MSc, MPhil, PhD, and staff projects. Allocation, Extension, and Spin-off of Incubator Startups. Facilitating Investment, Equity, IP, Patenting, Legal.

### Industry Engagement

Agreements between SLIIT and Industry, SafetyNet, IP, Patenting, Legal facilitation for engagements, and fair resource allocation.



# TECHNIQUE - BRAINSTORMING

- A good technique to use the creative abilities of a group over a single individual
  - Using the phrase “two heads are better than one”
- You can try this for your future projects and ventures!



---

# TECHNIQUE – WORST POSSIBLE IDEA

- Worst Possible Idea is an ideation method where team members purposefully seek the worst solutions in ideation sessions. The “inverted” search process relaxes them, boosts their confidence and stokes their creativity so they can examine these ideas, challenge their assumptions and gain insights towards great ideas.

# TIPS \*\*\* STAYING OPEN MINDED

## Part 1: Adjusting Your Perspective

- Embrace the unknown.
- Don't knock anything before you try it.
- Just say "yes" instead of "no."
- Learn to examine every situation from multiple angles.
- Think of three positive things for every negative one.
- Pick up a completely new hobby.
- Mix up your routine.

## Part 2: Broadening Your Horizons

- Educate yourself.
- Read more
- Travel as much as you can.
- Learn a foreign language.
- Get out of your comfort zone.
- Educate yourself when you watch TV.
- Eat food from a cuisine you've never heard of.
- Have dinner with your friend's family.
- If your friend's family have different political or religious opinions, take it as an opportunity for an intellectually exchange, as long as it stays friendly.
- If you desperately need your music fix, try something new!
- You can also download podcasts on a variety of topics on the iTunes or Android stores.

## Part 3: Being More Open-Minded with Others

- Don't judge a person until you know his story.
- Ask people lots of questions.
- Be friends with people from different walks of life.
- Let a friend introduce you to his favorite hobby.
- Accept more invitations.
- Engage in friendly debates.
- Befriend a person you don't think you would ever like.

# TIPS – STAYING ORGANISED

## Method 1 Organizing Your Thinking

- Create a to-do list.
- Create a running list that you add to constantly.
- Take notes when you are talking to people.
- De-clutter your brain.

## Method 2 Organizing at Home

- Throw away unnecessary items.
- Create binders for important items in your life.
- Put hooks and shelves on the walls.
- Invest in storage bins.

## Method 3 Improving Your Organization at the Workplace

- Purchase organization bins.
- Purchase a labelling machine.
- File your information by “how you will use it”
- Create an outline or “Table of Contents” of your organized office.
- Create “to do” and “done” spaces on your desk.
- Throw away things you do not need.
- Organize your computer.

## Method 4 Staying Organized

- Spend ten minutes a day doing a quick pick-up.
- If you are adding a new item to your life, dispose of an old item.
- Keep a “Donate” box out at all times.
- When you see an open drawer, close it.
- Harness technology to help you stay organized.



# A CHALLENGE (OPTIONAL)



# > Solve the world's greatest challenges.

Harness the power of our global community of 500,000 problem solvers, our global reach to millions more, all combined with our Challenge Driven Innovation™ methodology.

[View Challenges →](#)

[Become a Solver →](#)



Over

**78%**

Success rate



Over

**200K**

solutions captured



Over

**\$40M**

in awards

---

# Q&A

ANY QUESTIONS FROM THE AUDIENCE?

**THANK YOU!**  
**STAY SAFE!**  
**WELCOME TO SLIIT!**

For any  
questions or  
follow up

[shyam.r@sliit.lk](mailto:shyam.r@sliit.lk)