Fall 2019

CS6501: Topics in Human-Computer Interaction

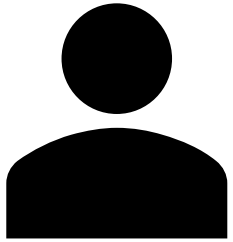
http://seongkookheo.com/cs6501_fall2019

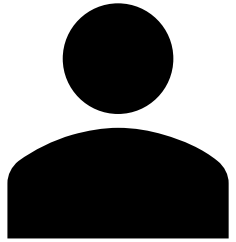
Collaborative UI

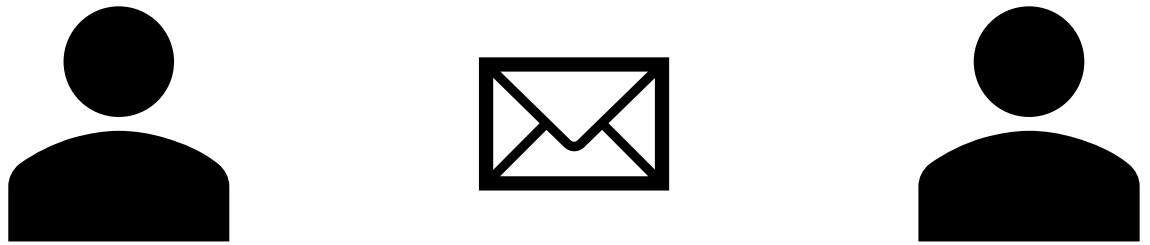
Seongkook Heo

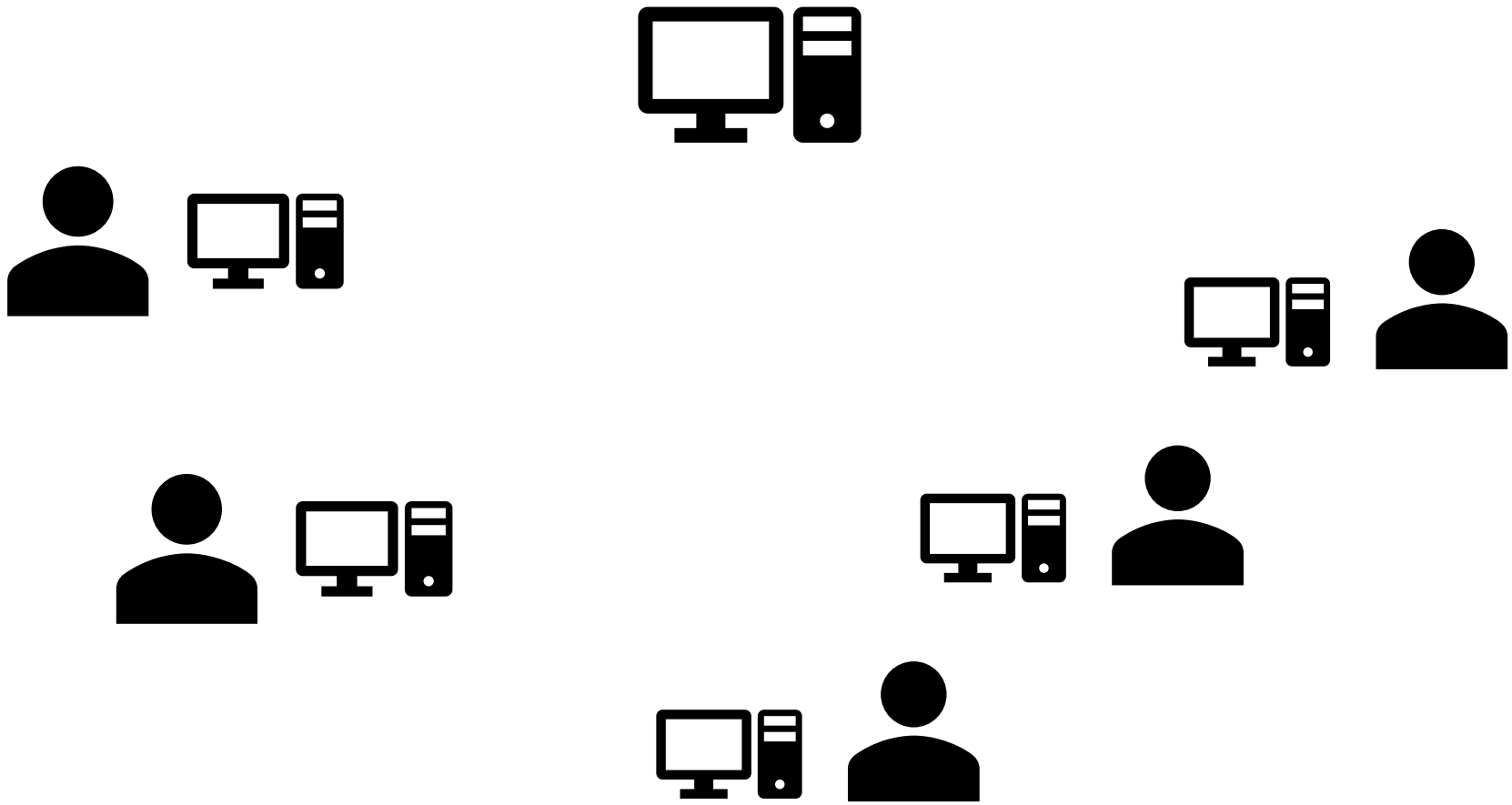
Nov 19, 2019

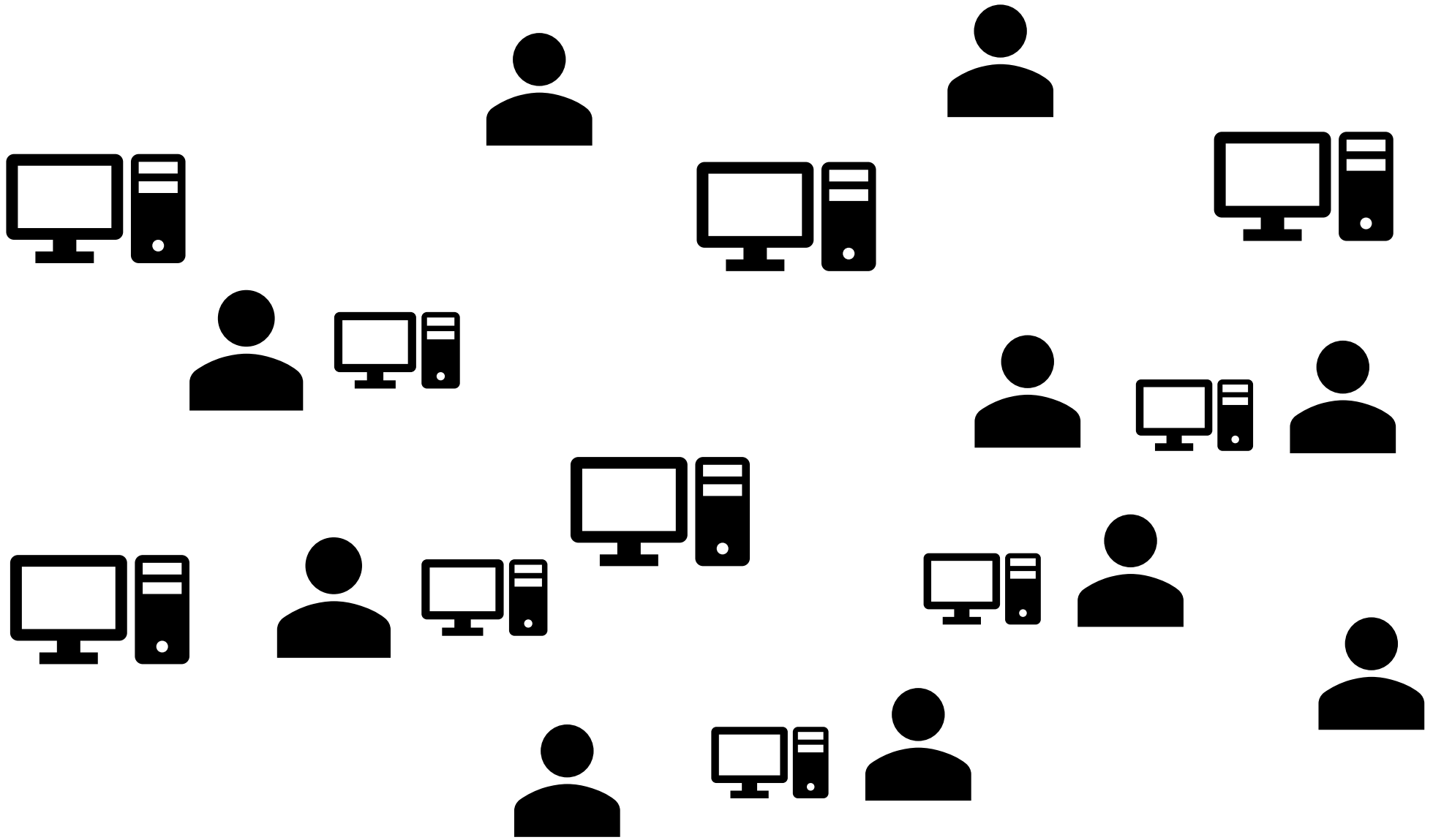
University of Virginia | School of Engineering & Applied Science

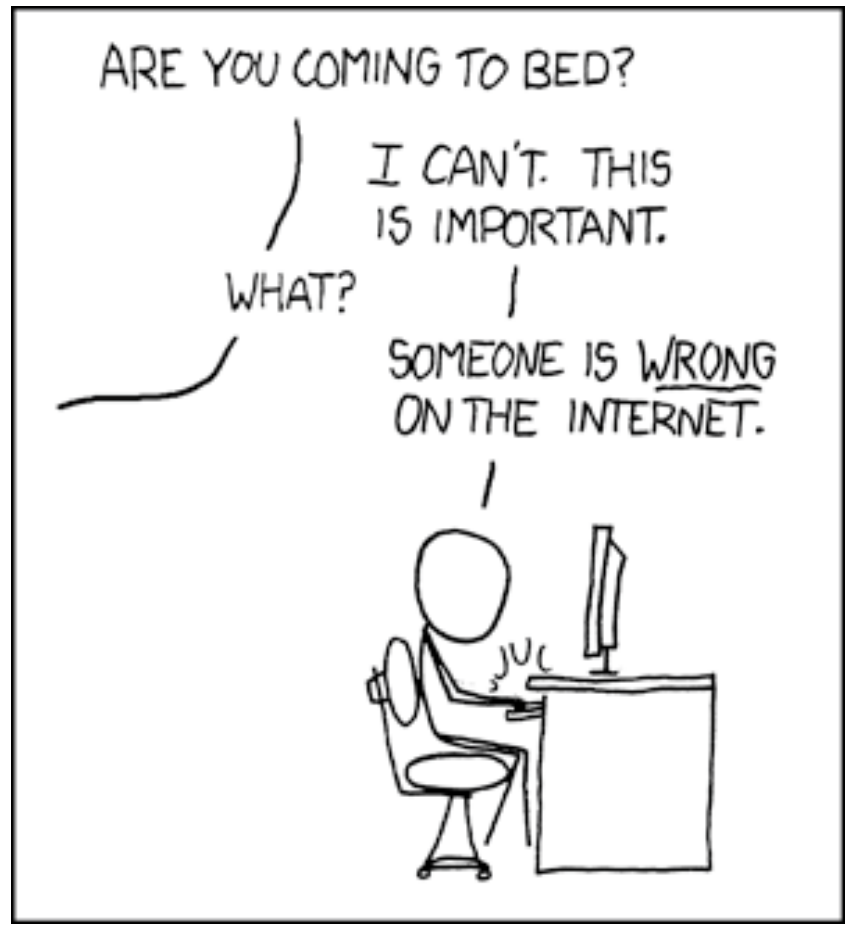












https://xkcd.com/386/

CHI 2019 Changes

Posted on 11th September 2018.

We're making some changes to the papers reviewing and submission process this year, and thought it would be useful to communicate this and the reasons for these changes to the community. There are a few differences to the ways that we'll be handling things this year that we want to highlight – use of an all-virtual meeting, use of quick rejects, use of a new version of PCS, and an update to the paper templates. We'll document these changes below, and we feel strongly that these are necessary for sustaining the conference over the long term, ensuring the quality of the research presented, providing an equitable playing field for authors, and helping us – the CHI community – to work more effectively.

All-virtual PC

This year, the PC meeting held in December will be almost all-virtual. The general chairs, technical program chairs, paper chairs, subcommittee chairs and some student volunteers will be present at a meeting in Glasgow. But, ***ALL*** the Associate Chairs (ACs) will be virtual. In past years, we have experimented with virtual subcommittees, starting with one subcommittee for CHI 2016, three for CHI 2017 and six for CHI 2018. This year, all 12 subcommittees will be running virtually. The ACs will all be remote, and participating electronically in a synchronously held PC meeting. The decision to go completely virtual was not taken lightly, and was

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https://twitter.com/albrechtschmidt/status/324880397005631489

- Communication
- Collaboration
- Peer Production
- Collective Action
- Social Networks
- Crowdsourcing

Are these HCI?

Social Computing

- Communication
- Collaboration
- Peer Production
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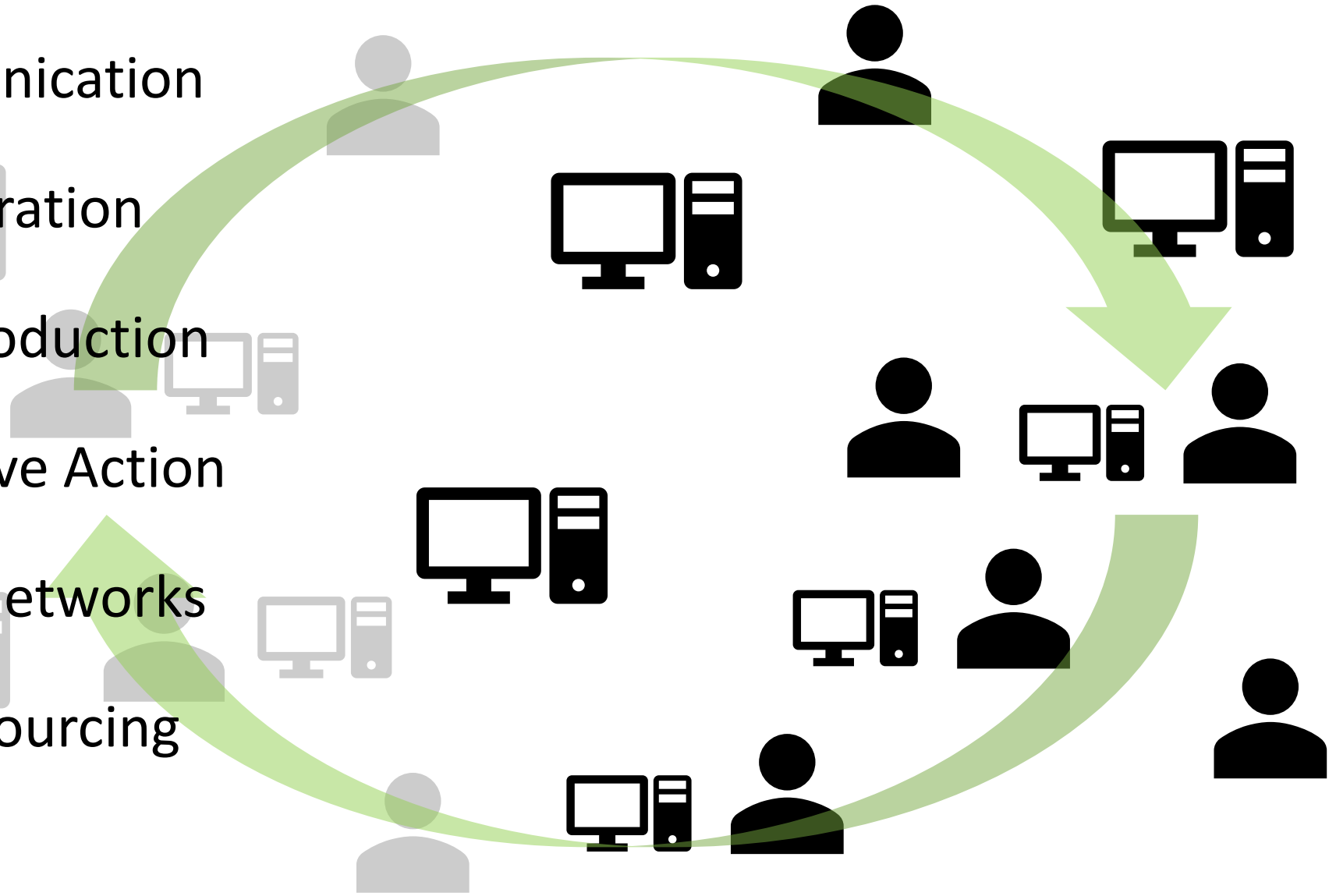

Challenges in Collaborative UI

- Supporting variety types of media and interaction
- Motivating People to engage in the collaboration
- Understanding emergent behaviors from technical interventions

Challenges in Collaborative UI

- Supporting variety types of media and interaction
  - Wikipedia is a document people can easily read, edit, or comment in a nonlinear manner.
  - What about YouTube videos?
  - What about Livestreams?
  - What about VR/AR environments?
  - How to scale?
- Motivating People to engage in the collaboration
- Understanding emergent behaviors from technical interventions

Challenges in Collaborative UI

- Supporting variety types of media and interaction
- Motivating People to engage in the collaboration
  - How to make people make meaningful contribution? (and avoid trolls)
  - How to motivate people to fix errors?
  - How to make people to report abuse?
- Understanding emergent behaviors from technical interventions

Learnersourcing Subgoal Labels for How-to Videos

Sarah Weir[1] **Juho Kim**[1] **Krzysztof Z. Gajos**[2] **Robert C. Miller**[1]

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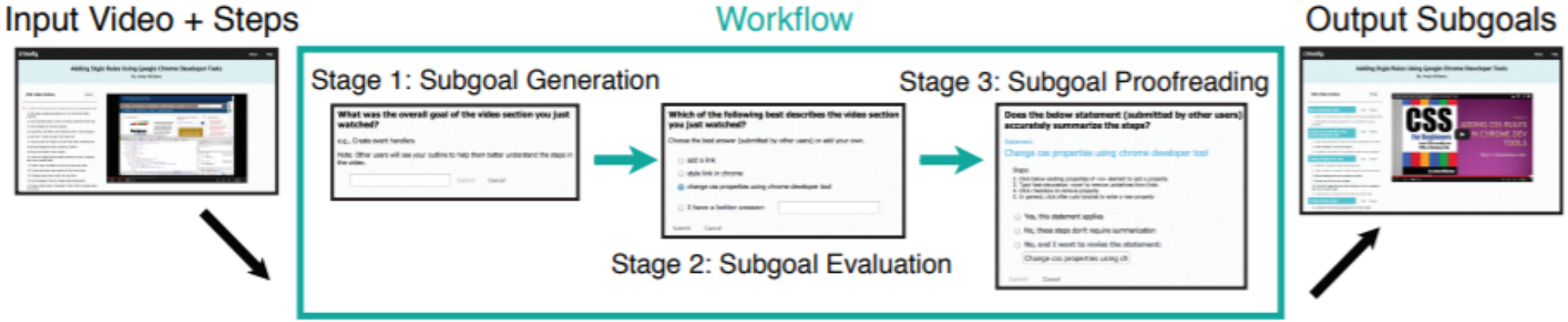

Figure 1. We present a three-stage workflow to generate labels for groups of steps (subgoal labels) for how-to videos. This workflow is designed to engage people actively trying to learn from the video to contribute the information.

ABSTRACT

Websites like YouTube host millions of how-to videos, but

INTRODUCTION

More and more people are turning to the web to learn. While

Challenges in Collaborative UI

- Supporting variety types of media and interaction
- Motivating People to engage in the collaboration
- Understanding emergent behaviors from technical interventions
  - Why and how do people use these systems?
  - How do people perceive certain contents or interactions?

StreamWiki: Enabling Viewers of Knowledge Sharing Live Streams to Collaboratively Generate Archival Documentation for Effective In-Stream and Post-Hoc Learning

ZHICONG LU, Computer Science, University of Toronto, Canada
SEONGKOOK HEO, Computer Science, University of Toronto, Canada
DANIEL WIGDOR, Computer Science, University of Toronto, Canada

Knowledge-sharing live streams are distinct from traditional educational videos, in part due to the large concurrently-viewing audience and the real-time discussions that are possible between viewers and the streamer. Though this medium creates unique opportunities for interactive learning, it also brings about the challenge of creating a useful archive for post-hoc learning. This paper presents the results of interviews with knowledge sharing streamers, their moderators, and viewers to understand current experiences and needs for sharing and learning knowledge through live streaming. Based on those findings, we built StreamWiki, a tool which leverages the availability of live stream viewers to produce useful archives of the interactive learning experience. On StreamWiki, moderators initiate high-level tasks that viewers complete by conducting microtasks, such as writing summaries, sending comments, and voting for informative comments. As a result, a summary document is built in real time. Through the tests of our prototype with streamers and viewers, we found that StreamWiki could help viewers understand the content and the context of the stream, during the stream and also later, for post-hoc learning.

CSS Concepts: • **Human-centered computing** → **Collaborative and social computing** → Collaborative and social computing systems and tools

```
<BODY>
 <canvas id=c></canvas>
 <script>
var ctx = c.getContext( '2d' ),
    width = c.width = window.innerWidth,
    height = c.height = window.innerHeight,

    particleCount = ( width / 2 ) |0,
    obstacleCount = ( ( width + height ) / 20 ) |0,
    obstacleRadius = 100,
    gravity = .1,

        particles = [],
    obstacles = [],
    frame = 0,
```

(1): 推结论 · 推第一宇宙速度; F向与F万; 动能定理, 动量守恒, 系统牛二律; $I = nes \cdot v$; 霍尔效应, 交流电产生

(2): 系统, 多物体!

$$\begin{cases} v = v_0 + at \\ a = F/m \end{cases}$$

$$mv - mv_0 = F \cdot t:$$

$$\left.\begin{aligned} m_1 v_1 - m_1 v_{10} &= F \cdot t \\ m_2 v_2 - m_2 v_{20} &= -F \cdot t \end{aligned}\right\} \text{加:}$$

$$m_1 v_1 + m_2 v_2 = m_1 v_{10} + m_2 v_{20}$$

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Random article
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Wikipedia store

Interaction
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Human–computer interaction

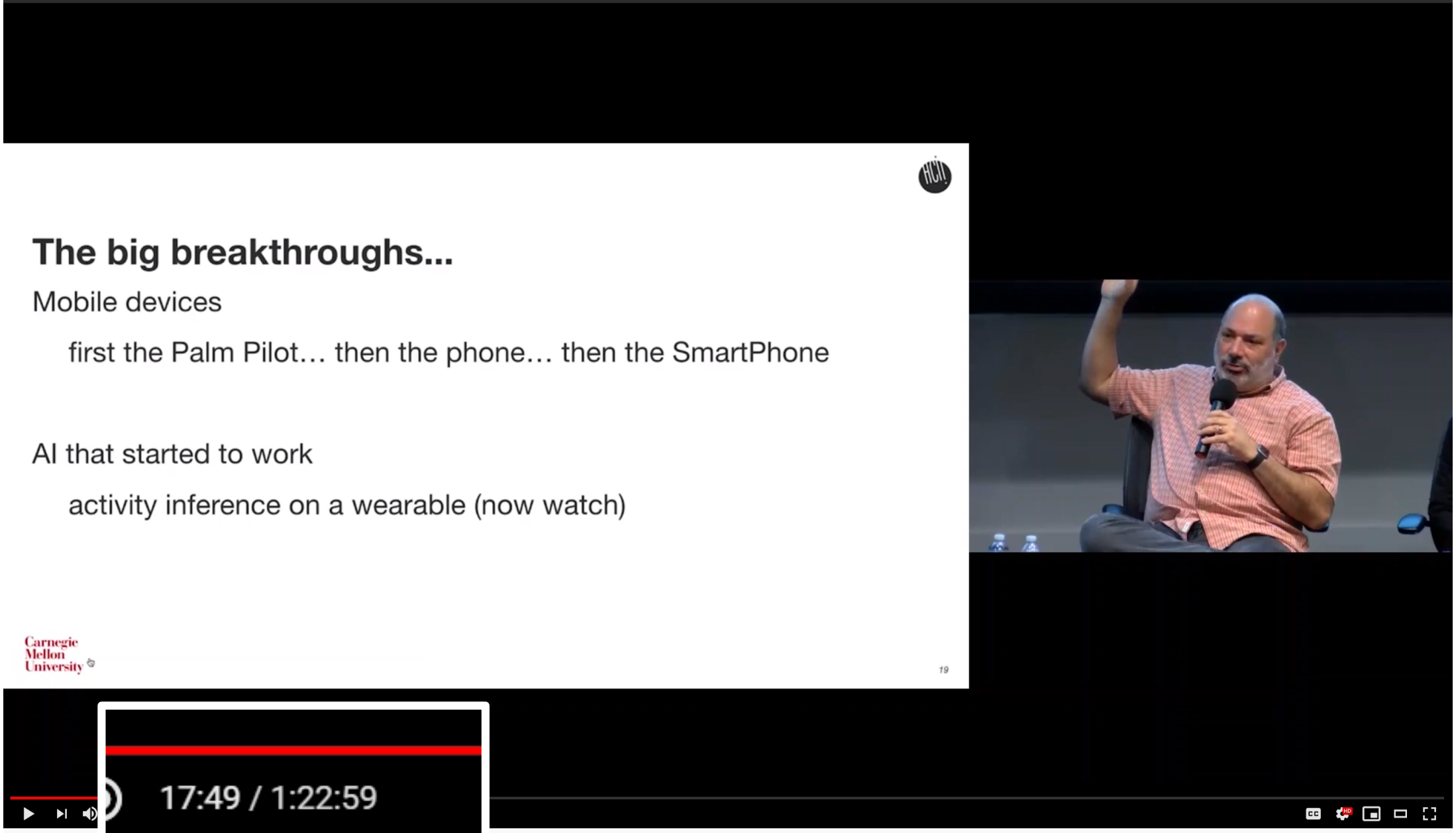
From Wikipedia, the free encyclopedia

Human–computer interaction (**HCI**) researches the design and use of computer technology, focused on the interfaces between people (users) and computers. Researchers in the field of HCI observe the ways in which humans interact with computers and design technologies that let humans interact with computers in novel ways. As a field of research, human–computer interaction is situated at the intersection of computer science, behavioural sciences, design, media studies, and several other fields of study. The term was popularized by Stuart K. Card, Allen Newell, and Thomas P. Moran in their seminal 1983 book, *The Psychology of Human–Computer Interaction*, although the authors first used the term in 1980[1] and the first known use was in 1975.[2] The term connotes that, unlike other tools with only limited uses (such as a hammer, useful for driving nails but not much else), a computer has many uses and this takes place as an open-ended dialog between the user and the computer. The notion of dialog likens human–computer interaction to human-to-human interaction, an analogy which is crucial to theoretical considerations in the field.[3][4]

Contents [hide]

Fig. 1
Earthquakes near Bucharest with moment magnitude ≥5 between 1900 and 2016. Data source: NEIP (2013)

The 4 March 1977 earthquake was responsible for 1424 casualties and the collapse 33 medium and large buildings in Bucharest; the 10 November 1940 earthqua the collapse of the Carlton building, to 140 deaths. In Fig. 2, a map of the mediu buildings that were completely or partially damaged during the 1940 and 1977 ea together with the locations of buildings individually evaluated by construction spe classified as being in the most endangered seismic risk class I (Bucharest General 2013), is presented, with the purpose of providing a glimpse of the scale of seismi Bucharest.



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WEB DEVELOPMENT 2020 - 2025
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Learnersourcing Subgoal Labels for How-to Videos

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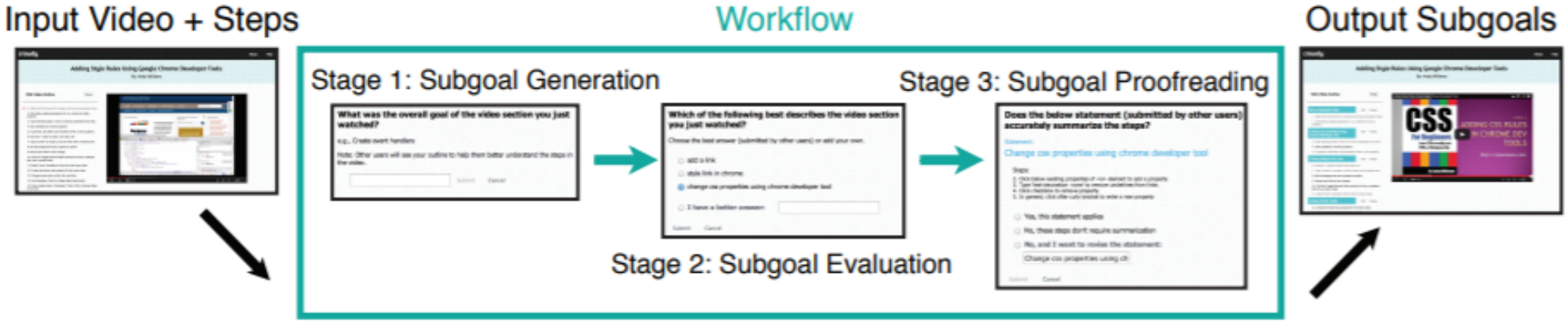

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Thank you!

Happy Thanksgiving!