HRI Reading Group
@ Instituto Superior Técnico
Spring 2019

Meeting #1 (8 Feb 2019)

Welcome!

Announcements

Organizers:
Kim Baraka: baraka.kim@gmail.com
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Group website: https://gaips.inesc-id.pt/hri-reading-group/ (updated on a weekly basis)

To join the mailing list, add your name on the Shared Sheets.

Scope: In this group, HRI will be thought of "in the broad sense". Papers may also include HAI, and generally anything related to the relation between humans and intelligent technologies.

RG format: Alternate between "Big Picture" / general resources, and specific
Typical structure: Round table discussion with the support of slides; end with individual/group exercise.
You are expected to have read the paper(s).

Please add any paper/resource suggestions on the Shared Sheets (tab 2), or by email.

Coffee machine/water boiler available (BYOD: Bring your own drug); Feel free to bring any snacks

Papers

Rodney Brooks. 2018. **"A Brave, Creative, and Happy HRI."** ACM Trans. Hum.-Robot Interact. 7, 1, Article 1 (May 2018)

Kerstin Dautenhahn. 2018. **"Some Brief Thoughts on the Past and Future of Human-Robot Interaction."** ACM Trans. Hum.-Robot Interact. 7, 1, Article 4 (May 2018)

Maja Matarić. 2018. **"On Relevance: Balancing Theory and Practice in HRI."** ACM Trans. Hum.-Robot Interact. 7, 1, Article 8 (May 2018)

What are the goals of HRI as a field?

- **Studying** human perception of robots and their interactions with them
Why? To inform the design of future technology

- **Design** new technological tools

Which comes first?

- More generally:
Augment human intelligence
- Enable cooperation with machines for better society

"A Brave, Creative, and Happy HRI" (Rodney Brooks)

Focus of this piece: HRI is expected to be a field of expert researchers about robots. However, when developing robots as products, i.e., for the real world, companies to not rely on HRI knowledge.

- Is HRI doing relevant work? Is HRI too conservative in terms of risk and innovation?

- Are we facing a paradox in HRI research between research for "theoretical knowledge" and "applied/experimental knowledge"?

Are industry and research goals disjoint? Are they both optimizing the same thing in their design? Should they?

"Some Brief Thoughts on the Past and Future of Human-Robot Interaction" (Kerstin Dautenhahn)

- Review process of HRI: how to provide fair reviews given the multidisciplinary nature of HRI?

- The very definition of robot is a "moving target" → HRI is a field that is rapidly changing
  How can we make the knowledge generated by this community to not become obsolete? How can we generate knowledge that can be recycled regardless of changes in HRI?
  How can we establish reference points in HRI?

- Long term HRI: what is the benefit and how can we make it happen? It is hard to study (due to what it entails), and hard to publish (sometimes lead to no result)

"On Relevance: Balancing Theory and Practice in HRI" (Maja Mataric)

The piece by Maja seems to include both views of Rodney (we need more informative studies in HRI) and Kerstin (we need to go beyond short-term studies)

(1) Read broadly about human behavior, not only within convenient, "vetted," narrow subfields.

(2) Help to create data sets of messy real-world human behavior.

(3) Use real-world data in our HRI, ML, and AI classes and research, instead of convenient datasets.

(4) Require fieldwork for HRI students in classes and research labs and personally commit to at least one day or one class per semester of being in the field.

(5) Talk to and collaborate with people in industry to learn what challenges they are really facing.

(6) Create venues (a new conference?) for "real-world HRI" or "use-inspired HRI," where researchers who tackle real-world messy problems are not in the "alt" category but can publish, exchange ideas, and be part of a welcoming community.

(7) Measure impact not just by references but also by aiding translation into the real world, toward improved quality of life for all, not just the well-off.

(8?) Encourage the publications of "negative" but useful results (e.g., they exist in other field, biology, etc.)

(9?) Create a common body of structured knowledge that includes non-published results

Individual exercise

Pick one positive and one negative aspect mentioned by 1 or more of the authors which relates to your own research (doesn't have to be HRI), and discuss how the negative aspect can be overcome.

General thoughts
From an ethical / legal point of view, definition of robot is unclear
Exchange between researchers and knowledge from other areas is as plus
Demos should be done more often (free from the lab setting)

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Meeting #2 (15 Feb 2018)