

## LMC 3314 Technologies of Representation

Spring 2021

Pre-requisites ENGL1102

Mo + Wed 12 :30-1 :45

Online

3 credit hours

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### Outline

This course explores historical, cultural, and theoretical issues related by technologies of representation in media formats that use material performance. This specific course will look into object performance as a form of representation. How can our expressions materialize in a material performance form? And how can our designs support such a manifestation? To answer this question, we will lean on two key references: puppetry and tangible/ physical interaction design. We will explore the field of puppetry and its various means to create expression through performance from classic formats to digital puppetry, from shadow puppets to robots, from object performance to tangible interaction.

The second half will provide an introduction into the field of tangible interaction design and issues of digital performance. We will discuss readings from Performance Studies, Media Studies, HCI, and Critical Craft/ Making.

This class will combine practice and theory. We will discuss readings, students will present examples and critical analyze them, but we will also design possible responses and students will ultimately form groups to create videos of mock up performances that address some of the challenges we discuss in class.

Readings will be provided online but relevant texts include:

Bell, J (2008). *American Puppet Modernism. Essays on the Material World in Performance*. Palgrave, Macmillan, New York, NY.

Benford, Steve, and Gabriella Giannachi (2011) *Performing Mixed Reality*. The MIT Press, Cambridge, MA.

Posner, D. N., Orenstein, C., & Bell, J. (Eds.). (2014). *Routledge Companion to Puppetry and Material Performance*. Florence, KY: Routledge.

Tillis, S. (1992). *Towards an aesthetics of the puppet: puppetry as a theatrical art*. London, UK: Greenwood Press.

Wiberg, Mikael (2018) *The Materiality of Interaction. Notes on the Materials of Interaction Design*. The MIT Press, Cambridge, MA; London.

### Projected Learning Goals

The projected learning goals of this course are that students

- learn to read, analyze, and interpret physical and digital media artifacts
- become familiar with theories and practices of mediation
- design and create digital artifacts with an awareness of history, audience, and context
- work effectively in teams

- develop and communicate critical concepts effectively and in an engaging way

### Learning Outcomes for STaC/ LMC

Textual/Visual Analysis: Students will learn to read, analyze, and interpret not only cultural projects such as film, literature, art, and new media, but also scientific and technical documents.

Interpretive Frameworks: Students will become familiar with a variety of social, political, and philosophical theories and be able to apply those theories to creative and scientific texts, as well as to their own cultural observations.

Communication Skills: Students will be able to gather, organize, and express information clearly and accurately, with sensitivity to will be able to do so both by using traditional media and by tapping the potential of new digital media.

### Learning Outcomes for CM

- Students understand and apply the mathematical principles and computational affordances appropriate to creative digital expression.
- Students can create digital artifacts with an awareness of history, audience, and context.
- Students can appreciate and evaluate future trends in the development of digital media.
- Students can work effectively in teams to accomplish a common goal.

### Workload

Students are expected to work not only in class but also outside regular class meeting times on projects. This includes work on physical artifacts, as well as on digital/ hybrid ones. Students should expect some extra expenses (e.g. for building materials). The course will ask students to develop digitally mediated hybrid performing objects for the final project. There is no pre-set technology for those artifacts but technical skills (e.g. in the use of game engines, software and/ or hardware prototyping) will be helpful. The performance itself should be documented in a video, so basic video recording and editing work will be necessary.

Participating students will have to deliver a puppet performance analysis and will work on practical projects that lead up to a final group project. All students are expected to participate actively in the course discussions. Knowledge of programs such as Photoshop and other image processing programs as well as MS Office products is expected or has to be acquired out of course.

### Course Expectations

Students are expected to have a working video camera and microphone to be able to engage in the synchronous lectures and in group meetings with instructors and teammates. Unless technical issues prevent a student from participating via video, the course will ask all students to share their video during discussion, supervision, and collaboration segments.

The course materials, assignments, and deliverables will be on canvas but we will assess which scheduling format works best for our needs.

This is an online only course with synchronous meeting times.

### Schedule

(note that changes are bound to happen)

1/18	MLK day	
1/20	Intro to the course How did we get here?	
1/25	Puppet history – A fragment <b>Assignment:</b> groups for presentations	Blumenthal
1/27	Puppet history – A fragment II	Blumenthal; Currell
2/1	Puppets: voices I (historic perspectives)	Bell
2/3	<b>DUE:</b> Puppet text presentations: voices II ( <b>student groups 1 + 2 + 3</b> )	
2/8	<b>DUE:</b> Puppet text presentations: voices III ( <b>student groups 4 + 5</b> )	
2/10	Guest talk: African American puppetry (Paulette Richards)	Williams
2/15	What makes performance?	Schechner
2/17	Animation = Performance?	Silvio
2/22	Digital Performance	Cameron/ Carroll (Benford/ Giannachi)
2/24	<b>DUE:</b> your Puppet Performance analysis presentation	
3/1	<b>DUE:</b> your Puppet Performance analysis presentation <b>Assignment:</b> Translator Object	
3/3	On Interaction and materials	Wiberg
3/8	Tangibles and Material Hybrids	Ullmer/ Ishii; Devendorf/ Rosner
3/10	<b>DUE:</b> Translator Object Presentations	
3/15	<b>DUE:</b> Translator Object Presentations	
3/17	What are problems of “digital” performance?	Auslander; Kaplin
3/22	<b>Assignment:</b> Final project GROUP DISCUSSIONS for final project <b>DUE:</b> Puppet Performance paper	
3/24	Midterm “break”	
3/29	Response to project ideas from MN	
3/31	Catch up day	
4/5	Work on project + feedback MN	
4/7	Work on project + feedback MN	

4/12	<b>DUE:</b> Prototype presentation in class	
4/14	<b>DUE:</b> Prototype presentation in class	
4/19	Work on project + feedback MN	
4/21	Work on project + feedback MN	
4/26	<b>DUE:</b> final project presentation	
4/28	Work on project (no meeting/ reading period)	

## Main Assignments

Critical analysis: Text presentation: students will form small groups and present a reading (with visual materials where feasible) in class; the groups are chosen up by the course instructor; this presentation should cover and explain the key terms and arguments of the text(s) at hand but those texts should be mainly entry points to introduce the class to this specific form/ performance; exemplify them (each reading is associated with a particular puppetry style/ performer/ group / period) – for example they should include a short video clip of that particular performance style; they should include your own perspective toward that text and puppetry format, what counts is that you make clear that you have understood the text, covered the core components of the designated puppetry format and illustrated them with an example piece; you should have developed and presented an own opinion; each presentation should finish with a list of questions you collected from the material and that you want to open to the class.

*you hand in:* you deliver that presentation as a powerpoint in class and submit the slides on Canvas before class on the day it is due

Critical Analysis: Puppet performance analysis – a critical analysis of an existing puppetry piece (from online or other source – but it needs to be an existing piece); break down the nature of the puppet work, the puppet operations; particular media qualities; what media strategies are applied? Where do they work? Where not? Why? To what other media does it relate e.g. is this an adaptation, does it use TV or cinematic techniques? If so: what does it change or adapt? Note that there will be an online sign up sheet to avoid doubling or repetition

*you hand in:* your .ppt for the presentation on Canvas (deadline: 5pm of the due day)

Making: Translator Object – pick a digital technology (e.g. cell phone, laptop, Fitbit, digital clock ...) and a particular use of it (e.g. an app, a function); then build a material performance that will tell/ perform that particular use; to enact that function you can use any kind of material but not the original digital technology; you should build a simple customized “puppet object” for this performance that embodies through its style and appearance this function; you have to address the control mechanisms, the personality, the means of expression - and be able to explain your choices; why did you chose this design? Who is your puppet? How does it operate technically? And how is it reflected in the design and functionality?

You will present your “Translator Object” in class; your presentation should reflect the nature of the object: What is the history of that design in terms of digital and mechanical technology? What are the particular qualities of it? How do they operate? What is this performance’s

“language”? In the past it has been very useful for students to have a mini-scene to perform with their hybrid object to give it context

*you hand in:* 10 pictures of your translator object, 10 pictures of the assembly process, the; a 60 seconds (or longer) video of your object in action (deadline: 5pm of the due day)

Critical Analysis: Puppet performance analysis paper – based on your presentation and feedback to it you will write a 3 page critical analysis paper of the chosen piece; find the specific ways in which the piece applies expressive means as a form of puppetry; apply texts we have discussed; google your topic and section; contextualize the analysis in the framework of this course

*you hand in:* you submit your analysis on Canvas as .pdf of the 3 pages using the ACM template (deadline: 5pm of the due day)

Making: group project – we will form groups of ~3 students working on final group projects; the project will consist of a performance video; you will create at least one puppet object that will perform a short scene which combines digital media affordances with physical ones and that is a practical reflection of the themes discussed in the class

*first* you will present your project idea in a powerpoint presentation to the class; this will clarify: who does what on the project? What is the project about? What is its name? How will it look and feel and work?

*second* you will show a running technical prototype that shows your basic concept operational (informal in-class presentation)

*third* you will present your full-blown performance video; include explanations and reflections on your project in the final presentation – what worked, what did not? Which readings were applicable? How does your piece relate to them?

*you hand in:* submit the whole project on Canvas; what you submit: a simple web site (NO FLASH!) that contains all the material of your project such as: design documents, sketches, code, 10 images of the project and its development; 2 min (or longer) video of the project in action (with titles and credits); your powerpoint presentation;

## Grading

	%	Criteria
<b>Participation</b>	20%	<ul style="list-style-type: none"> <li>• attendance and punctuality</li> <li>• active in discussions</li> </ul>
<b>Critical Analysis: Text Presentation</b>	15%	<ul style="list-style-type: none"> <li>• clarity of the presentation               <ul style="list-style-type: none"> <li>○ introduction (where is this text coming from? Who wrote it?)</li> <li>○ main topic in text</li> <li>○ main argument in text</li> <li>○ use of examples and extra material</li> <li>○ provide examples (use of videos; images)</li> <li>○ critical reflect (what do you think about this topic and why?)</li> </ul> </li> <li>• quality of presentation (slides, visual and verbal presentation)</li> <li>• ability to engage in q&amp;a afterwards</li> <li>• format: ppt on Canvas + presentation in class</li> </ul>
<b>Critical Analysis:</b>	12%	<ul style="list-style-type: none"> <li>• covering the piece and its context (who performed? What is remarkable about this performer? When was it</li> </ul>

<b>Puppet Performance Analysis</b> (presentation)		<p>performed? Where? Any particular context, impact, responses?)</p> <ul style="list-style-type: none"> <li>• connection to topics and themes discussed during the course (must reference at least 2 texts read in class)</li> <li>• clarity of your argument (how do you apply textual references and build your own perspective on top of them?)</li> <li>• use of examples and extra material (videos, images, objects)</li> <li>• quality of presentation (slides, visual and verbal presentation)</li> <li>• clarity of own position (what do you think about this topic and why? Note this is not an art critique but an analysis)</li> <li>• ability to engage in q&amp;a afterwards</li> <li>• format: ppt on Canvas + presentation in class</li> </ul>
<b>Critical Analysis: Puppet Performance Analysis Paper</b>	12%	<ul style="list-style-type: none"> <li>• logic and structure of own argument</li> <li>○ intro (context of piece, content, performer and their history)</li> <li>○ main part (key points clearly outlined, referenced to text in class and possibly beyond, analytical clarity)</li> <li>○ conclusion (what do you deduct from this analysis?)</li> <li>• readability (language)</li> <li>• use of course texts and texts beyond this course (must reference at least 2 texts read in class)</li> <li>• effective use of images</li> <li>• format: 3 pages in ACM format on Canvas</li> </ul>
<b>Making: Translator Object</b>	15%	<ul style="list-style-type: none"> <li>• design should show your clear logic of how you relate the digital to the material parts</li> <li>• clarity of presentation</li> <li>○ introduction (how did your design reflect and reference an existing puppetry style? How did you alter or apply it? why?)</li> <li>○ actual object (present in a “scene” or mini performance)</li> <li>○ connection to topics discussed (does your idea relate to some theme from our readings?)</li> <li>○ reflection (what did work, what not and why?)</li> <li>○ engagement in q&amp;a</li> <li>• format of submission: 10 images; 60 sec or more rough video of performative action; ppt of presentation + presentation in class</li> </ul>
<b>Making: Final project</b>	26%	<ul style="list-style-type: none"> <li>• Participation in group effort (attendance, contribution to group work and discussions)</li> <li>• effective development during design and implementation (work with compromises but adjust designs to move forward)</li> <li>• video production (titles? Credits? Visual quality?)</li> <li>• technical realization of the performing pieces</li> <li>• final presentation</li> <li>○ slides</li> </ul>

		<ul style="list-style-type: none"> <li>○ structure</li> <li>○ reflection</li> <li>○ connection to at least 2 texts used in class and/ or beyond</li> <li>● format: ~15 min presentation in class; Canvas submission: ppt, video, 10 images, design documents and whatever other development documents</li> </ul>
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No use of cell phones (including texting) in class.

100-90% = A

89-80% = B

79-70% = C

63- = D

Grading of individual pieces will be in percentage

For all assignments: Late submissions lead to automatic reductions of the grade unless a valid excuse is provided. Any 1 day delay, meaning anything after 5pm of the due day, will have 10% reduced from the grade; any 2 day delay will have 20% reduced, 3 day delays will not be accepted.

The Honor Code of Georgia Tech applies (see <http://www.honor.gatech.edu/> )

### Attendance

A student is allowed three excused absences. With the fourth absence, the student's total grade will be lowered by 8% points, with the fifth an additional 8%, six absences are an automatic failure of the class.

If a student needs to miss a class, contact the instructor at least 24 hours in advance. If Institute Approved Absences collide with class times please contact the instructor in advance to make sure the workload can be distributed.

Late submissions of any deliverable will receive a lowered grade (8% if up to 24 hour late, an additional 8% if up to 48 hours late, no submission is accepted beyond 2 days after the due date).

The use of cell phones during class is seen as a disturbance. If you have to use your cell phone for some reason, then inform the instructor ahead of a session.

### Technical skills to learn

This course combines practice with theory. Students will deliver analyses, designs, and practical work. They will also work on digital and material artifacts in the final project stage. This will include the use of additional technology (possible 3D or 2D animation but certainly video and image processing) – this technology will depend on the students' pre-existing skills and their designs.

### Inclusivity Statement

The Ivan Allen College of Liberal Arts supports the Georgia Institute of Technology's commitment to creating a campus free of discrimination on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. We further affirm the importance of cultivating an intellectual climate that allows us to better understand the similarities and differences of those who constitute the Georgia Tech community, as well as the necessity of working against inequalities that may also manifest here as they do in the broader society.

## References

(this is a selection)

- Bell, J. (Ed.). (2001). *Puppets, Masks, and Performing Objects*. Cambridge, MA; London, UK: The MIT Press.
- Bell, J (2008). *American Puppet Modernism. Essays on the Material World in Performance*. Palgrave, Macmillan, New York, NY.
- Benford, S., & Giannachi, G. (2011). *Performing Mixed Reality*. Cambridge, MA: The MIT Press.
- Burrill, D. A. (2005). Out of the Box: Performance, Drama, and Interactive Software. *Modern Drama*, 48(3), 492-513.
- Cameron, D., & Carroll, J. (2009). *Encoding Liveness: Performance and real-time rendering in Machinima*. Paper presented at the Breaking New Ground: Innovation in Games, Play, Practice and Theory. Proceedings of DiGRA 2009, London.
- Csikszentmihaly, M., & Rochberg-Halton, E. (1981). *The Meaning of Things. Domestic Symbols and the Self*. Cambridge, UK: Cambridge University Press.
- Devendorf, Laura, and Daniela K. Rosner (2017) *Beyond Hybrids: Metaphors and Margins in Design*. Paper presented at the DIS 2017, Edinburgh, UK.
- Gillespie, Tarleton, Pablo J. Boczkowski, and Kirsten A. Foot (editors) (2014) *Media Technologies. Essays on Communication, Materiality, and Society*. The MIT Press, Cambridge, MA; London.
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- Kaplin, S. (2001). A Puppet Tree. A Model for the Field of Puppet Theatre. In J. Bell (Ed.), *Puppets, Masks, and Performing Objects* (pp. 18-25). Cambridge, MA; London, UK: The MIT Press.
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- Long, G. A. (2007). *Transmedia Storytelling. Business, Aesthetics and Production at the Jim Henson Company*. (MS), MIT, Cambridge, MA.
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- Mazalek, Ali, and Elise Van der Hoven (2009) *Framing tangible interaction frameworks*. Artificial Intelligence for Engineering Design, Analysis and Manufacturing 23:225-235.
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- Ryu, S. (2008). *Redefining Puppet: Paradoxical Relationship between Human & Object*. Paper presented at the 9th International Research Conference, Consciousness Reframed: a transdisciplinary inquiry into art, science, technology and society, Vienna, AU.
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- Tillis, S. (1992). *Towards an aesthetics of the puppet: puppetry as a theatrical art*. London, UK: Greenwood Press.
- Ishii, Hiroshi, and Brygg Ullmer (1997) Tangible bits: towards seamless interfaces between people, bits and atoms. Paper presented at the ACM SIGCHI Conference on Human factors in computing systems, Atlanta, Georgia, USA.



- Westecott, E. (2009). *The Player Character as Performing Object*. Paper presented at the DiGRA 2009: Breaking New Ground: Innovation in Games, Play, Practice and Theory, London, UK.
- Wiberg, Mikael (2014) *Methodology for materiality: interaction design research through a material lens*. *Personal and Ubiquitous Computing* 18(3):625-636.
- Zoran, Amit, and Leah Buechley (2010) *Hybrid Reassemblage: An Exploration of Craft, Digital Fabrication and Artifact Uniqueness*. *Leonardo* 46(1):4-10.