

# Narrating Science

The Power of Stories in the 21<sup>st</sup> Century

May 24 – 27, 2017

Marriott Bloor Yorkville Hotel

Toronto, Ontario Canada

*Fiction*  $\int$  *science*  
MEETS

[www.fictionmeetsscience.org](http://www.fictionmeetsscience.org)



# Narrating Science

## The Power of Stories in the 21<sup>st</sup> Century

Toronto, May 24 – 27, 2017

### Contents

Author Reading May 24, 2017 .....	Page 1
Background .....	Page 2
Program.....	Page 3
Abstracts.....	Page 7
Participant Biographies.....	Page 22
Practical Information.....	Page 30

# NARRATING SCIENCE:

The Power of Stories in the 21<sup>st</sup> Century

Readings and conversation with novelists

**KAREN JOY FOWLER & ALLEGRA GOODMAN**



and literary scholar Anna Auguscik

**WEDNESDAY MAY 24<sup>TH</sup> 7PM - 9PM**

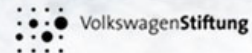
TRINITY-ST. PAUL'S CENTRE 427 Bloor St. West, Toronto

Pay parking lots are within a few blocks of Trinity-St. Paul's Centre. For TTC exit at the Bloor Spadina Station.

**FREE ADMISSION**



*Fiction* MEETS *science*



[www.fictionmeetsscience.org](http://www.fictionmeetsscience.org)



# Narrating Science

## The Power of Stories in the 21<sup>st</sup> Century

Toronto, May 24 – 27, 2017

### Background

In the latter decades of the twentieth century, discourses on science and technology spread beyond the professional communities of scientific experts involved in knowledge production. Narrative accounts, in both words and images, have played an increasingly important role in these discourses. In the cultural realm, we saw the rise of the “popular science” genre, of science series and documentaries on TV, and, around the turn of the millennium, an increase in the amount and quality of attention paid to science in fiction. **The Narrating Science** conference brings together scholars, writers, and scientists to discuss how and to what effect storytelling about science across a spectrum of genres and media--fiction and non-fiction, print and film—contributes to understandings of scientific processes and issues of societal concern such as climate change, genetic engineering, nuclear physics, evolution, concepts of cognition, pharmaceuticals, and nuclear power.

**About Fiction Meets Science** [www.fictionmeetsscience.org](http://www.fictionmeetsscience.org)

Since 2013, the Fiction Meets Science Program has been bringing scholars, novelists and scientists together to analyse and contribute to the recent wave of literary fiction about science. The program is based at the Universities of Bremen and Oldenburg, and the Hanse-Wissenschaftskolleg in northwestern Germany, but most of the literature it is concerned with is written in English, and the FMS scholars and novelists come from around Europe, North America, and Australia. The University of Guelph’s College of Arts has been a partner in the program since its inception.

**Organized** by Donald Bruce (College of the Arts, University of Guelph), Susan M. Gaines (Fiction Meets Science, University of Bremen), and David A. Kirby (University of Manchester) and made possible by generous funding from the University of Guelph, the University of Bremen, and Volkswagen Foundation.

# Narrating Science

## The Power of Stories in the 21<sup>st</sup> Century

Toronto, May 24 – 27, 2017

### Program

Wednesday, May 24	
5:30 – 6:30 PM	<b>Welcome Reception</b> <i>Drinks, snacks, greetings, and logistics</i> Venue: Summerhill Room, Level H1, Toronto Marriott Bloor Yorkville Hotel
7:00 – 8:45	<b>Allegra Goodman and Karen Joy Fowler</b> <b>Reading and conversation with the authors of <i>Intuition</i> and <i>We Are All Completely Beside Ourselves</i></b> <i>Moderated by Anna Auguscik</i> Open to public, admission free Venue: Trinity St. Paul's Centre, 427 Bloor St. West

# Thursday, May 25

Venue: Hanlan McBride Room, Level H4, Toronto Marriott Bloor Yorkville Hotel

## Session I Chair: Donald Bruce

9:00 – 9:15 AM	<b>Introduction:</b> <b>Narrative Meets Science at the Turn of the Millennium</b> ( <i>Susan M. Gaines</i> )
9:20 – 9:45	<b>Between Mad Science and Paper Work: The Coexistence of Stereotypical and Realistic Representations of Science in Fiction</b> ( <i>Luz María Hernández Nieto, Peter Weingart</i> )
9:45 – 10:00	Questions & Discussion
10:00 – 10:25	<b>Narrating the History of Science from a Female Perspective: Women Scientists in Contemporary Historical Novels and Plays</b> ( <i>Christine Müller</i> )
10:25 – 10:40	Questions & Discussion
10:40 – 10:55	<b>Break</b>
10:55 – 12:00	<b>Fictional Science narratives and Their Global dimensions</b> <b>Scientist Characters in Transcultural Contexts</b> ( <i>Anton Kirchhofer</i> ) <b>Journalist Characters and the Mediation of Science in Environmental Justice Narratives</b> ( <i>Hanna Straß-Senol</i> ) <b>Media Spheres of the ‘Transcultural Science Novel’</b> ( <i>Anna Auguscik</i> )
12:00 – 12:30	Questions & Discussion
12:30 – 1:45 PM	<b>Lunch – Buffet</b>
<b>Session II Chair: Ingrid Ocket</b>	
1:45 – 2:10	<b>Meaning-Making between Dissent and Complementarity: The Discursive Reception of Science Narratives in Reading Groups</b> ( <i>Sonja Fücker</i> )
2:10 – 2:25	Questions & Discussion
2:25 – 2:50	<b>Alternative Facts: Michael Crichton and Mass Market Fictions of Science</b> ( <i>Joanna Radin</i> )
2:50 – 3:05	Questions & Discussion
3:05 – 3:25	<b>Break</b>
3:25 – 3:45	<b>What does Contemporary Literature Need: Climate Science/Climate Culture?</b> ( <i>Catherine Bush</i> )
3:50 – 4:50	<b>Writing Stories about Science: Panel Discussion</b> ( <i>Susan M. Gaines, Karen Joy Fowler, Jaspreet Singh, Allegra Goodman, Catherine Bush</i> )
4:50 – 5:20	Questions & Discussion
5:30	<b>Cocktail Hour</b> Venue: Rosedale Room, Level H1, Toronto Marriott Bloor Yorkville Hotel

## Friday, May 26

Venue: Hanlan McBride Room, Level H4, Toronto Marriott Bloor Yorkville Hotel

### Session III Chair: Peter Weingart

8:45 – 9:10 AM	<b>Pandemic stories: Narrative Roles in the Media and the Shaping of Health Information</b> ( <i>Tess Laidlaw</i> )
9:15 – 9:40	<b>Jonah Lehrer and the “Brain Behaviour” Bubble</b> ( <i>Lauren Kilian</i> )
9:40 – 10:05	Questions & Discussion
10:05 – 10:30	<b>Narrative and Humour: Constructing Science as Common Sense in <i>South Park</i></b> ( <i>Edward Bankes</i> )
10:30 – 10:45	Questions & Discussion
10:45 – 11:05	<b>Break</b>
11:05 – 12:05	<b>Stories, Entertainment, and Science Communication: Panel Discussion</b> ( <i>David A. Kirby, Aquiles Negrete Yankelevich, Ingrid Ocket, Joanna Radin</i> )
12:05 – 12:35	Questions & Discussion
12:35 – 1:55 PM	<b>Lunch – Buffet</b>
<b>Session IV Chair: Luz Maria Hernández Nieto</b>	
1:55 – 2:20	<b>New Narrations about Empowerment, the Case of the TV show <i>Westworld</i></b> ( <i>Adrian Perez</i> )
2:20 – 2:35	Questions & Discussion
2:35 – 3:00	<b>Graphic Bombs: Scientific Knowledge and the Manhattan Project in Comic Books</b> ( <i>Lindsey Michael Banco</i> )
3:05 – 3:30	<b>The Potential of Visual Narratives for Science Communication</b> ( <i>Matteo Farinella</i> )
3:30 – 3:55	Questions & Discussion
3:55 – 4:15	<b>Break</b>
4:15 – 4:45	<b>Cells, Genes, and Stories: HeLa’s Journey from Labs to Literature</b> ( <i>Priscilla Wald</i> )
4:45 – 5:10	Questions & Discussion
5:30	<b>Cocktail Hour</b> Venue: Rosedale Room, Level H1

# Saturday, May 27

Venue: Hanlan McBride Room, Level H4, Toronto Marriott Bloor Yorkville Hotel

## Session V Chair: Hanna Straß-Senol

9:00 – 9:25 AM	<b>The Roots of African Eve: Science Writing on Human Origins and Alex Haley's <i>Roots</i></b> ( <i>Josie Gill</i> )
9:25 – 9:40	Questions & Discussion
9:40 – 10:05	<b>Politics of Science Narratives in Colonial and Postcolonial India</b> ( <i>Rajive Tiwari</i> )
10:05 – 10:20	Questions & Discussion
10:20 – 10:35	<b>Break</b>
10:35 – 11:00	<b>Accident and Agency in the Nuclear World</b> ( <i>David K. Hecht</i> )
11:00 – 11:15	Questions & Discussion
11:15 – 11:40	<b><i>The Speed of Dark, Speculation and Ethnography</i></b> ( <i>Joan Haran</i> )
11:40 – 11:55	Questions & Discussion
11:55 – 1:00 PM	<b>Lunch – Buffet</b>

## Session VI Chair: David Kirby

1:00 – 1:25	<b>The Ambiguous Utopia of „Planetary Stewardship“. Possible Futures in the Anthropocene Debate</b>
1:30 – 1:55	( <i>Emanuel Herold</i> )
1:55 – 2:20	<b>Unsettling Scientific Stories: Fictional Futures and Sociological Speculation</b>
	( <i>Lisa Garforth and Amy C. Chambers</i> )
	Questions & Discussion
2:20 – 3:00	<b>Round Robin Summation</b>



# Narrating Science

## The Power of Stories in the 21<sup>st</sup> Century

Toronto, May 24 – 27, 2017

### Abstracts

Thursday, May 25

#### **Between Mad Science and Paper Work: The Coexistence of Stereotypical and Realistic Representations of Science in Fiction**

*Luz María Hernández Nieto, Peter Weingart*

Research shows that throughout most of the 20th century scientists were represented stereotypically in fiction films and literature, children's television programs, and superhero comics. Viktor Frankenstein, Dr. Emmett Brown and Indiana Jones are perhaps some of the most emblematic personifications of those stereotypes, but there are countless examples of evil mad scientists, chaotic socially awkward geniuses, and noble heroic researchers across the wide palette of fictional media. Such stereotypical representations are frequently criticized for being simplistic and inaccurate in their portrayal of the reality of science and scientists. Recently, new representations of science have begun to emerge, in which the world of science is represented with greater detail and realism. What are the features of scientist characters in these new contexts? Are the old stereotypes disappearing or evolving, or do we still find personifications of the classic expectations and fears about science? What is the function of the stereotypes, and to what extent might they reflect the specific criteria and logics of different mass media?

## **Narrating the History of Science from a Female Perspective: Women Scientists in Contemporary Historical Novels and Plays**

*Christine Müller, Faculty of Languages and Literature, University of Bremen*

In recent decades, authors of realistic fiction and drama about science have shown an increasing interest in depicting the professional and private lives of women scientists (e.g. Gaines 2001, Goldschmidt 2013, and Patchett 2011). Interestingly, many contemporary novelists and playwrights explore the relations between gender, science, and society against the backdrop of a historical setting. By imaginatively reconstructing the lives of actual historic female scientists, modern-day writers emphasize women's participation in the production of scientific knowledge and offer female counter-narratives to the male-dominated history of science in which women's contributions are often undervalued or discounted.

While providing insights into the historical situation of women in science and society, contemporary historical fiction and drama contain a dual temporality that also offers commentary on women's current experiences in the sciences. In this talk I will undertake a feminist reading of Amy Brill's historical novel *The Movement of Stars* (2013) and Lauren Gunderson's historical play *Silent Sky* (2015) to show how contemporary authors use the genre of historical fiction and drama not only to rewrite the history of science from a female perspective, but also to reflect upon topical issues of gender and science in the 21<sup>st</sup> century.

## **Fictional Science Narratives and their Global Dimensions: Scientist Characters in Transcultural Contexts**

*Anton Kirchhofer*

The complex and differentiated representation of scientist characters is one of the key features of contemporary science novels. It is also one of the key textual strategies for producing cognitive and emotional engagement on the part of readers with particular issues integral to science and scientific practice and to the relationship between science and society. In this contribution, the focus is on the ways in which contemporary science novels represent scientist characters as parts of international or global networks. This international dimension may be represented and may impact the stories in a variety of ways, and it may or may not be tied to an explicit concern with transcultural perspectives on science. Using Ian McEwan's *Solar*, Michael Ondaatje's *Anil's Ghost* and Manu Joseph's *Serious Men* as examples, this contribution examines the depiction of scientist characters and character constellations; the portrayal of scientific issues as well as descriptions of settings and places, the locations, dislocations and

trajectories of scientific work and scientific practice, in order to undertake an exemplary probing into the ways in which contemporary science novels reflect or embody the specifically global nature of the scientific enterprise.

### **Fictional Science Narratives and their Global Dimensions: Journalist Characters and the Mediation of Science in Environmental Justice Narratives**

*Hanna Straß-Senol*

Fictional literature contributes to the public discourse about science in several ways. It has the potential, for example, to draw attention to issues that might otherwise go unexamined. Its imaginative stories can provide a vehicle for bearing witness to the ramifications of scientific and technological advancements—ramifications that are often overlooked or ignored, particularly when they affect people of lower social status in less developed countries. Examples of the latter include the environmental contamination produced by waste from military applications of nuclear science in Hawaii, or the developments in the agro-industrial sector and petrochemical industry in India and Nigeria.

In this presentation, I analyse how the novels *Animal's People* by Indian author Indra Sinha, *Oil on Water* by Nigerian Helon Habila, and Hawaiian writer Kiana Davenport's *House of Many Gods* employ journalist (activist) characters to bring into view and mediate information about toxic pollution and its long-term environmental repercussions and health risks. I will show how the novels allocate the role of informant to their journalist characters in order to contribute to the making of an environmental public – within as well as outside the text—and examine their structural function and narrative roles in making the urgency and violence of environmental contamination apprehensible.

### **Fictional Science Narratives and their Global Dimensions: Media Spheres of the 'Transcultural Science Novel'**

*Anna Auguscik*

This contribution presents a comparative analysis of the 'attention profiles' of the novels dealt with in the two previous papers. An attention profile comprises the chronological course of a novel's public reception from the moment of its publication, including its distinction with prizes and accolades, and discussions about it in public media. Attention profiles vary in both quantity and quality: some novels receive attention in a broad spectrum of contexts and media,

whereas others are mentioned in a limited range of contexts and specialist media. It is characteristic of science novels to be reviewed in the books and arts sections of general and literary periodicals as well as in science journals and magazines.

This paper will touch on the difficulties of locating contemporary novelists within national boundaries as well as on issues raised by an international publishing industry (cf. Graham Huggan's *The Postcolonial Exotic. Marketing the Margins* (2001)), but its focus is on analysis of the public reception of contemporary novels in which science and scientists are explicitly placed in transcultural contexts. Where are these novels reviewed, how extensively, and with which particular emphasis? What role do their global dimensions play in the discussions in general and literary periodicals as well as in scientific journals, and in specifically international contexts? Based on the selected examples, I will locate the particular centres of discussion for these novels and examine how these novels' representations of scientists and scientific knowledge and practice are mediated for different media-specific publics.

## **Meaning Making between Dissent and Complementarity: The Discursive Reception of Science Narratives in Reading Groups**

*Sonja Fücker*

Literary works can be understood as an important source of knowledge about the world in which we live. Research on reception processes focusses on understanding how knowledge that is mediated through literary narratives is interpreted by readers and what knowledge is relevant for different audiences. The ability of literature to mediate knowledge takes on particular significance when scientific knowledge and facts are central to the narrative, as in many of the realist science novels that have emerged in the past couple of decades. These texts allow us to investigate the extent to which storytelling about scientific themes has an effect on lay audiences.

We present results from a reception study of a corpus of science novels in English-speaking reading groups in Germany and Great Britain that shows how scientific knowledge is acquired, transformed or consolidated from literature through group specific communication dynamics. In our analysis, we trace the ways that the negotiation of meanings within the group influences the text interpretations of the readers. At the interface of the sociology of literature and interaction research, our study indicates that group reception, in contrast to individual reception processes, consolidates individual readers' interpretations by producing socially shared meanings. Practices of questioning, persuasion and argumentation facilitate such modes of intersubjectivity.

## **Alternative Facts: Michael Crichton and Mass Market Fictions of Science**

*Joanna Radin*

This talk will interpret the work of science fiction writer, Michael Crichton (often hailed as “father of the technothriller”) as an under-appreciated figure in the history of postwar science. Crichton was an avid reader of cutting-edge science as well as history of science and his work served to popularize anxieties in both fields about the nature of truth and the status of fact. Rather than a close reading of the texts themselves, I will examine how two especially controversial books—*Andromeda Strain* (1969) and *State of Fear* (2004)—were taken up by policy makers and scientists with consequences for public understandings of science. I will conclude with reflections on the (at this point still to come) Scientists March in Washington event and the role of scientists in a democratic society.

## **What does Contemporary Literature Need: Climate Science/Climate Culture?**

*Catharine Bush*

Contemporary fiction’s failure to address our climate crisis has repeatedly been noted. In *The Great Derangement*, his recent nonfiction response to climate change, Indo-American novelist Amitav Ghosh asks: “If the urgency of a subject were indeed a criterion of its seriousness, then, considering what climate change actually portends for the future of the earth it should surely follow that this would be the principal preoccupation of writers the world over – and this I think is very far from being the case.”

I’ll begin by asking: What exactly is perceived to be missing in contemporary fiction? I’ll consider how contemporary literary fiction might represent climate science itself in part by touching on my own attempts to represent both climate science and climate scientists in my current novel-in-progress.

I’ll then argue for fiction’s more radical possibility as a way to embody what I’ll call climate culture: a perceptual awareness of the world beyond the human, particularly the climatic world of air, wind, cloud, weather, storm. When the weather is re-perceived as climate culture, a constantly shaping medium of which we are a part even as it extends far beyond the human, then weather is no longer backdrop or narrative device but part of a story’s or novel’s larger consciousness and way of seeing. Fiction’s possibilities for representing climate culture, and doing so in a participatory way for the reader, offer a radical shift in perspective away from a focus on human problems, which has been the principle preoccupation of Western literature since the 18<sup>th</sup> century. Narratives that recalibrate the balance between human, non-

human and climate may also offer a challenge to contemporary science, with its emphasis on the primacy of human perception and evidence-based knowledge, inviting science to shift the narrative of its own authority and renegotiate its relationship to the world.

### **Writing Stories about Science: Panel Discussion**

*Susan M. Gaines, Karen Joy Fowler, Jaspreet Singh, Allegra Goodman, Catherine Bush*

Five science novel authors will pick up some of the issues raised by the scholars over the course of the day and discuss the different ways they have thought about science in their fiction. They will talk about if and how writing about scientific issues differs from how they work with other sorts of facts or knowledge, special tensions that may arise between dealing with scientific issues and telling a good story, balancing and interweaving emotional and intellectual stories, what they expect from their readers, and what role they see for their fiction in a culture where memoir and reality TV are prime entertainments, and journalists see fit to conflate science fiction with “alternative facts.”

**Friday, May 26**

### **Pandemic Stories: Narrative Roles in the Media and the Shaping of Health Information**

*Tess Laidlaw*

An outbreak is not a static context, but one that arises with urgency. During the early days of the 2009 H1N1 (‘swine flu’) outbreak, individual journalists were required to become conversant with a new topic marked by unknowns even among experts in infectious disease. Journalists also faced conditions of unusual urgency as media outlets competed to provide content both necessary in terms of its public health significance, and naturally attractive in terms of potential boosts in circulation. As noted by Aristotle, ‘we give our judgments in different ways under the influence of pain and of joy, of liking and of hatred’ (*Rhetoric* 1356a5). Consequently, as a case study this period offers artefacts rich in drama. This paper argues that narrative roles influence the delivery of health information by the media in the context of a

pandemic, an additional dimension to what Priscilla Wald has identified as the ‘outbreak narrative.’

Via the study of rhetorical strategies, I identified four distinct narrative roles influencing the reportage of health information in the early days of the H1N1 outbreak. For journalists featuring a particular health official and offering the statements of such an official as a mechanism of reassurance for audiences, I assign the role of apprentice. For journalists emphasizing the importance of the transparency of health officials, I assign the role of watchdog. An additional—though infrequent—role apparent in the coverage analyzed is that of journalist as critic. This journalist is ambivalent about information provided by ostensibly credible and socially-sanctioned sources. Finally, journalists may treat the subject matter of stories in a highly symbolic manner, enacting a more subtle role of oracle. An oracle is one who truly ‘sees’ and aims to convey what is seen. When the journalist participates in mythologizing the outbreak to the exclusion of other functions of the text (e.g., conveying who is at risk, protective behaviours, symptoms, the ‘appropriate’ stance toward the outbreak), I assign the role of oracle.

## **Jonah Lehrer and the “Brain Behavior” Bubble**

*Lauren Kilian*

The writer of popular science has conflicting allegiances. For non-scientists, she must spin the straw of academic research into the gold of compelling story. If that story-spinning veers toward misrepresentation, she risks losing the trust of scientists. A background in science can go a long way toward fostering such trust; in a 2004 study, Geller et al. found that “scientists have a greater trust in journalists . . . trained in science,” quoting one participant as saying that writers who are “ ‘reasonably knowledgeable about the subject . . . don’t ask naïve things.’ ” Science writer Jonah Lehrer is one author who came to journalism by way of neuroscience, and who went on to earn and lose the trust of the scientific community and the general public after committing acts of journalistic heresy, including fabrication. In this paper, I trace the arc of Lehrer’s career against the new media landscape that allowed for his success, celebrated his downfall, and is still negotiating the terms of his return. I turn to Lehrer’s first work *Proust Was a Neuroscientist* and his 2015 collaboration with behavioral economist Shlomo Benartzi as case studies, to explore the extent to which Lehrer contributes to a “participatory model” of popular science writing—which seeks to produce an inclusive public science discourse that challenges the one-sided, didactic approach of the “deficit model.” Ultimately I show how Lehrer’s work emerges as representative of both the possibilities and limitations of what happens when scientific subject matters pass into the parlance of popular science writing.

## **Narrative and Humour: Constructing Science as Common-Sense in *South Park***

*Edward Bankes*

Increasing interest is being paid to the role of comedy as a potential means of science communication and engagement, in part based on the mainstream success of *The Big Bang Theory* and the popularity of science in British stand-up comedy. However, scholarly work has for the most part been restricted to assessing the accuracy of scientific knowledge as a gauge of its suitability, neglecting the ways that scientific knowledge is produced through the stories it is used to tell. A focus on narrative can provide both a corrective to this approach and a means for understanding the construction of ideas within comedy. Rather than seeing scientific knowledge as external to production of media texts, narrative allows an exploration of the use of scientific knowledges in comedy and the constraints that the demands of narrative building place on the presentation of scientific knowledge.

The satirical animated comedy *South Park* offers an illuminating example of this approach. Though not aiming to 'communicate' science, scientific ideas and images abound, with stem-cell research, climate change and evolution debates just some of the themes explored. Crucially though, the interest of the show lies far beyond simply what scientific ideas *are*. Analysing episodes from the first 18 seasons pertaining to science using discourse and narrative analysis, my paper argues that science is evoked to illuminate a perceived moral hypocrisy among the American public central to the show's satire. The town frequently engages with scientific ideas, but are continually shown to misunderstand, or to deliberately manipulate scientific knowledges to pursue selfish ends. The question for science communicators would then be not just whether the science in *South Park* is accurate, but whether the presentation of science as a means of dividing the public between the rational and irrational, the moral and immoral, is one that would sit comfortably within efforts to engage the public.

### **Stories, Entertainment, and Science Communication: Panel Discussion**

*David A. Kirby, Aquiles Negrete Yankelevich, Ingrid Ocket, Joanna Radin*

Science and entertainment represent two of the most powerful cultural institutions that humans have developed to understand and explain their world. Most people are not scientists and their encounters with science generally come through media especially entertainment media. This panel brings together experts from Science Communication Studies and the



History of Science to explore the relationship between science communication and narrative. We will explore how science shapes the stories that are told through entertainment, but we will also examine the ways in which entertainment influences science.

## **New Narrations about Empowerment: the Case of the TV Show *Westworld***

*Adrian Perez*

My presentation will examine the way that the TV show *Westworld* reflects two apparently opposing aspects of the relationship between consciousness and empowerment. First, *Westworld* connects empowerment and liberation with the increase of consciousness and emergence of individuality that result when cognitive processes are enhanced by technological and biological tools. This narrative is a restatement of traditional narratives of emancipation in which education is substituted by technology and biology. The second set of problems deals with the opposite situation: when technology is part of an alienating structure which blocks the appearance of individuality and consciousness. In *Westworld*, the result of this alienation is the loop: a ritualized behavior realized without conscience. The show constructs a narrative which connects the appearance of individuality and freedom with both the constraints and the opportunities of technology. Thinking about these narratives enables us to understand how new discourses in popular culture are connecting technology and empowerment, and providing new frames for emancipation narratives.

## **Graphic Bombs: Scientific Knowledge and the Manhattan Project in Comic Books**

*Lindsey Michael Banco*

When the Manhattan Project began in 1942 with the aim of developing a nuclear bomb for use in the Second World War, the theoretical physicists involved were working largely in the abstract, invisible realm of subatomic particles. After the United States dropped the bomb on Japan and the war came to an end, however, this work suddenly became discernable on a massive scale. It acquired a global hyper-visibility and came to have concrete effects on military, political, ecological, and psychological realms. In recent years, the complex relationship between words and images that characterizes comics has become fertile ground for exploring the privileged (in)visibility of nuclear physics. This presentation will examine several comic book narrations of the Manhattan Project in order to discern ways in which

representing the atomic bomb and its creators visually and textually shed light on the process of seeking knowledge in these rarified realms and applying that knowledge to war.

Jim Ottaviani's *Fallout: J. Robert Oppenheimer, Leo Szilard, and the Political Science of the Atomic Bomb* (2001), Jonathan Fetter-Vorm's *Trinity: A Graphic History of the First Atomic Bomb* (2012), and Jonathan Hickman and Nick Pitarra's *The Manhattan Projects* (2012-ongoing) offer examples of some of the different ways comic books depict the construction and deployment of the atomic bomb. Together, they help create a contemporary form deeply interested in the problems and limits of representing scientific knowledge in the nuclear age. My exploration of these texts will reveal some of the ways this scientific knowledge has been applied to war, to the discourses of winning and losing wars, and to the fraught process of remembering, memorializing, and forgetting wars. It will likewise trace some of the continuities and disjunctions between fictional comics ("graphic novels") and non-fictional ones ("graphic histories").

## **The Potential of Visual Narratives for Science Communication**

*Matteo Farinella*

Despite the early setback of the anti-comics crusade of the 1940s and 1950s, the potential of visual narratives to engage readers has always been recognized by writers and educators around the world. In fact, over the past 50 years comics have become increasingly popular amongst both public and critics, and successfully tackled complex topics such as a history and politics. More recently, many authors started to produce science-themed comics and animation, with more or less explicit educational intents. From the perspective of science communication visual narratives offer many advantages.

First of all, comics and animations are perceived as an extremely approachable format, suitable for readers of all ages and cultural backgrounds, and may be particularly useful to reach new audiences for science. Moreover, visualizations (such as diagrams and maps) have always played a major role in scientific texts. The complex interaction between text and pictures in comics can build upon this tradition, visualizing nonlinear scientific concepts that may be difficult to convey with words alone. Finally, visual narratives make extensive use of metaphors and anthropomorphic characters, which allow them to translate abstract or inanimate concepts into familiar objects, helping the reader to emotionally engage with phenomena that go beyond the human scale of understanding. Studying examples from existing comics and animations will allow us to identify common strategies, as well as pitfalls, of using visual narratives to communicate science.

## Cells, Genes, and Stories: HeLa's Journey from Labs to Literature

*Priscilla Wald*

In early 1951, an African American woman named Henrietta Lacks consulted a doctor at the Johns Hopkins Medical Center. She had no idea that the symptoms that had led her there were the result of a remarkably aggressive cervical cancer, which would ultimately prove fatal. Nor could she have guessed that the proliferating cells that were killing her would allow researchers at Johns Hopkins to develop the first immortal cell line later that same year. The HeLa cell line (named for Henrietta Lacks) revolutionized cell biology, leading to new opportunities for research as well as important medical advances, including the development of the polio vaccine within the decade. It also produced a new entity for which there was no precedent.

Henrietta Lacks gave the story of the creation of the cell line a human face; it added an element of tragedy that makes for a good story, and it has been told numerous times. But those stories have characteristically conflated the person and the cells and in so doing have obscured important unresolved questions, such as what exactly is a cell line, what is its relation to the human donor, and why does it produce so much legal and political confusion? The efforts to make sense of this and other new entities in the broader context of the emergence of biotechnology as big business—against the backdrop of geopolitical transformation--will be the subject of this talk. This talk will address the simultaneous emergence of a narrative surrounding biotechnology with attention to its consequences: how the narrative has continued to shape policy and funding decisions and how it has occluded some of the most important ethical questions currently facing medical research.

**Saturday, May 27**

## The Roots of African Eve: Science Writing on Human Origins and Alex Haley's *Roots*

Josie Gill, University of Bristol

'Don't care where you come from, as long as you're a black man, you're an African' sang Peter Tosh in the refrain of his 1977 reggae hit 'African', capturing the cultural mood of an era in which African Americans, Black British and Caribbean writers and artists turned toward Africa as the ultimate source of ancestry, kinship and pride. Yet by the mid-1980s geneticists

had made a discovery which re-positioned Africa as the ancestral origin not only of communities of the black diaspora, but of all humanity. The African Eve hypothesis, which suggested that all living humans could be traced back to one common ancestor or population in Africa between 100,000 and 200,000 years ago, sparked widespread interest in humanity's African roots but also intense debate.

Despite threatening to unsettle racialised assumptions and hierarchies, the hypothesis became the academically accepted, dominant theory of human origins, resulting in a new wave of popular science writing on human origins by genetic anthropologists keen to promote the theory. However recent developments, including the discovery of a third hominin previously unknown to science –Denisovans-- have called into question the validity of the hypothesis and led scientists and sociologists of science to revisit the circumstances and context in which the theory took hold. While some have suggested that it was the biblical allusion which was both comforting and compelling to scientists and the public alike, in this paper I want to suggest that there was another familiar origin story upon which popularisers of this new tale of human ancestry were able to draw: Alex Haley's novel, *Roots*. I argue that Haley's novel, TV show, and the search for African ancestors that it inspired among black populations, provided science writers with a pre-existing narrative of African origins which shaped their own narratives, despite their overt attempts to distinguish scientific approaches to African ancestry from literary storytelling about African ancestors.

## **Politics of Science Narratives in Colonial and Postcolonial India**

*Rajive Tiwari*

In Indian history, narratives of science have been used towards political ends on two significant occasions – first, in the service of nationalist movement opposing colonial rule in 19<sup>th</sup>- 20<sup>th</sup> centuries, and then in the service of Hindu nationalism in the 21<sup>st</sup> century. British imperialism in India facilitated the spread of European science in the subcontinent. This science was deployed as an example of intellectual superiority of the West which was supposed to legitimize the colonial project. The nationalist movement which was taking root in the 19<sup>th</sup> century tried to counter this narrative by pointing to India's own scientific tradition dating back to the ancient times. Hindi-language magazines and newspapers carried articles that attempted to show that indigenous science was at par with, if not better than, modern science. In order to establish a right to nationhood, it was found necessary to point to a history of the land, including a history of homegrown science. This projection of indigenous science, mediated by the print media, on the popular imagination became a means for challenging imperialism and was deployed for the cause of liberation and self-determination.

In postcolonial India, policy-level emphasis on education in modern science and technology led to industrialization, and, indigenous space and nuclear programs. Late 20<sup>th</sup>-century India witnessed the cultural and political ascendancy of Hindu nationalists. This culminated in the Bharatiya Janata Party (BJP) forming the current central government. Through pronouncements by political leaders and papers read at science conferences, an effort has been made to depict Hindu mythology as science and history. Over two centuries the discourse on science has shifted from portrayals of indigenous science as a basis for inclusion in the global scientific community to presenting of mythology as science as a basis for the exclusionary ideology of the Hindu right.

## **Accident and Agency in the Nuclear World**

*David K. Hecht*

In March of 1979, American audiences witnessed two nuclear accidents. The first clocked in at just over two hours, and was safely contained within the fictional world of the film *The China Syndrome*. Twelve days after the movie premiered, a malfunction at the Three Mile Island nuclear power plant in Pennsylvania kept the nation (and world) on edge for days as officials scrambled to understand and control the situation. Science studies scholars have duly noted this bizarre confluence of fictional and historical accidents. However, its implications for how we understand the role of technology in our society have gone largely unexplored.

The events surrounding each accident have a number of eerie similarities, but there is at least one major difference: the origin story. Official analyses of the Three Mile Island accident blamed the operators, using a virtually minute-by-minute retelling of events to conclude that, “except for human failures, the major accident at Three Mile Island would have been a minor incident.” This is a common theme in postmortems of industrial accidents, which often labor to save the image of technological systems by blaming the human beings who run them when things go wrong. But it is very different from how *The China Syndrome* envisioned the causality. In the filmmakers’ vision – as well as that of most authors of nuclear fictions – the “accident” is deliberate, the inevitable result of decisions made by individual people who are variously evil, crazy, or greedy. This paper explores the different narrative emphases of the two kinds of stories, one focused on agency and one beholden to accident. Science and fiction mix freely in both cases, and in mostly unacknowledged ways. And this, I argue, is entirely typical of nuclear history more broadly, which has always existed at the conjunction of the rhetorical and the real.

## ***The Speed of Dark, Speculation and Ethnography***

*Dr Joan Haran, Marie Skłodowska-Curie Global Fellow, Center for the Study of Women in Society, University of Oregon*

The plot of Elizabeth Moon's novel, *The Speed of Dark*, revolves around a 'cure' for autism that combines genetic engineering and nanotechnology. Lou, the novel's protagonist-narrator, is autistic and his deliberations over whether to take part in the first clinical trial on humans are entangled with thick descriptions of his daily life. In this presentation, I demonstrate that in *The Speed of Dark* the narrative modes of ethnography and speculative fiction are overlaid upon each other to model an ethical approach to the representation of emergent science and technology. This ethical rigour is further emphasised in the character of Lou, to whose mental deliberations and social interactions the novel gives us access.

Before Lou makes his decision, he educates himself in neurology, and reads scientific research papers published about trials of the procedure on primates. He also engages in debates about his knowledge and its implications with friends and colleagues with autism, as well as friends with scientific expertise. Lou's narration of this process, which includes his robust interrogation of the scientists conducting the trial, demonstrates both a method for increasing scientific literacy and the necessity of mapping the interests of those engaged in communicating science.

Speculative claims about emergent science, such as those made in news stories about the potential cures offered by stem cell science, invite us to imagine the future denouement of research programs whose outcome is, by definition, unknown. They resonate with popular histories of scientific breakthrough which present heroic individuals battling against, for example, a dread disease and discovering the necessary vaccine. In doing so, they elide the uncertainty of any particular outcomes. In this paper, I argue that Moon's novel offers its readers a primer in critical scientific literacy and demonstrate that the specific modes of narration deployed are key to this offer.

## **The Ambiguous Utopia of „Planetary Stewardship“. Possible Futures in the Anthropocene Debate**

*Emanuel Herold*

Since its popularization by Paul J. Crutzen und Eugene Stroemer, the concept of the "Anthropocene" has made its way into a variety of disciplinary discourses. Scientists, social scientists, and humanities scholars debate what it means to claim that humanity has become a

geological force and what the “Anthropocene futures” will look like. Which geological traces will remain of human activities in the coming millennia? Will humanity be able to intentionally alter the Earth system? Is it enough to think of geo-engineering projects in this regard or should there be a larger focus on social transformations? Discussions of Anthropocene futures make use of various temporalities and epistemologies of futurity. In this contribution, I map the transdisciplinary elements of these discussions about possible futures and, tracking the notion of the Anthropocene into non-academic discourses, examine the way that speculative fiction—particularly climate change fiction—integrates different disciplinary notions of futurity into coherent literary narratives. I will address the following overarching questions: How can Anthropocene futures be narrated at all, and why is it important to reflect on the way this is done in different discursive contexts?

### **Unsettling Scientific Stories: Fictional Futures and Sociological Speculation**

*Lisa Garforth and Amy C. Chambers*

Science has opened up new hopes and fears for the future, and science fiction (SF) articulates those hopes and fears by imagining the social and human consequences of scientific developments. SF also acts back on science by critically responding to its confident pronouncements. ‘Unsettling Scientific Stories: Expertise, Narrative, and Future Histories’ is an AHRC-funded project exploring how people have thought about and envisioned their futures at different points over the course of the long technological twentieth-century. Our project frames science/fiction as a partner in the imagination and exploration of alternative futures, and explores new ways of using fiction as a relevant mode of socio-historical analysis.

As part of our fieldwork, under the title ‘Prospecting Futures’, we will be working with texts, readers and reading groups to explore how contemporary science futures are being created, interpreted and navigated by SF writers and their audiences. In particular, we are interested in collaborating with active SF readers as lay experts in envisioning and exploring social-scientific alternatives and in exploring how fictional narratives shape their engagement with collective futures. In anticipation of focus groups with readers to be held across 2017, we will work through some of the theoretical and epistemological resources that can help us understand SF readers as lay futurologists and asks how thinking about practices of reading and writing fiction might contribute a much-needed speculative strand to contemporary sociological analysis.

# Narrating Science

## The Power of Stories in the 21<sup>st</sup> Century

Toronto, May 24 – 27, 2017

### Participant Biographies\*

1. **Anna Auguscik** is a lecturer at the Institute of English and American Studies at the University of Oldenburg. For her PhD she researched the role of literary prizes and book reviewing for the literary marketplace (*Prizing Debate*, transcript 2017). As an FMS research fellow, she is working on the critical and public reception of contemporary science novels, and is recently embarked on a new project on narratives about scientific expeditions. [anna.auguscik@uni-oldenburg.de](mailto:anna.auguscik@uni-oldenburg.de)
2. Victoria Bailey recently graduated from the Bachelor's of Arts and Sciences program at the University of Guelph with degrees in English literature and Zoology. She worked as a summer research intern with the Fiction Meets Science program in 2016. She is currently employed as a Junior Environmental Scientist at Amec Foster Wheeler where she is tasked with writing environmental reports, conducting fieldwork such as groundwater monitoring and sampling, and performing environmental site assessments. [toribailey@gmail.com](mailto:toribailey@gmail.com)
3. **Lindsey Michael Banco** is an associate professor of English at the University of Saskatchewan, where he specializes in American literature and in popular forms such as film and television. He is the author of two books: *Travel and Drugs in Twentieth-Century Literature* (Routledge, 2009) and *The Meanings of J. Robert Oppenheimer* (University of Iowa Press, 2016). [lmb222@mail.usask.ca](mailto:lmb222@mail.usask.ca)
4. **Edward Bankes** is a student in the Department of Science and Technology Studies, University College London. His PhD Project, funded by the Economic and Social Research Council, examines the use of scientific ideas and images in mainstream American and British scripted comedy, particularly the function of narrative absence in constructing scientific knowledges. This paper is based on a Masters' thesis project in the UCL STS Department, which is currently being prepared for publication. [edward.bankes.09@ucl.ac.uk](mailto:edward.bankes.09@ucl.ac.uk)
5. **Donald Bruce** is Dean of the College of Arts at the University of Guelph. His research interests are focused on the interface between 19<sup>th</sup> century literature

---

\* Presenters names are in **bold type**.



and science, digital applications in the humanities, and cultural theory. He has been a consultant and partner with the Fiction Meets Science program since its inception. [don.bruce@uoguelph.ca](mailto:don.bruce@uoguelph.ca)

6. **Catherine Bush** is the author of four novels, including *Accusation* (2013), the Trillium Award shortlisted *Claire's Head* (2004), and the national bestselling *The Rules of Engagement* (2000), also a New York Times Notable Book. She has spoken about fiction and climate change at the Climate Engineering Conference (2013) in Berlin and elsewhere. For the past eight years she has been the Coordinator of the University of Guelph's Creative Writing MFA, based in Toronto. [cbush@uoguelph.ca](mailto:cbush@uoguelph.ca)
7. **Amy C. Chambers** is a postdoctoral researcher in sociology at Newcastle University. She is working on the Arts and Humanities Research Council-funded project 'Unsettling Scientific Stories' ([unsettlingscientificstories.co.uk](http://unsettlingscientificstories.co.uk)) that seeks to map the history of imagined futures in speculative fiction. Her current book project explores post-classical Hollywood science-based cinema and how mainline religious groups have influenced, responded to, or appropriated cinematic science. She also researches and publishes on science fiction cinema (1967-1977), women of STEM in film and TV, participatory cinema, transmedia storytelling, film as history, and domestic horror. [Amy.Chambers@newcastle.ac.uk](mailto:Amy.Chambers@newcastle.ac.uk)
8. **Matteo Farinella** holds a PhD in neuroscience from University College London. He currently works as a cartoonist and illustrator, collaborating with universities and educational institutions to visualize academic research and to make science accessible to a wider audience. Farinella's scientific graphic novel *Neurocomic* (2013) was published with support from the Wellcome Trust. As a Presidential Scholar in Society and Neuroscience at Columbia University, he works with science journalists, educators and cognitive neuroscientists to investigate how 'visual narratives' may affect the public perception of science and promote scientific literacy. [mf3094@columbia.edu](mailto:mf3094@columbia.edu)
9. **Karen Joy Fowler** is the award-winning author of six novels and three short story collections. Her novel *We Are All Completely Beside Ourselves*, which is infused with knowledge from the cognitive sciences, experimental psychology and primate biology, won the PEN/Faulkner Award, was shortlisted for the Booker, and was a New York Times Notable Book choice. Other recent novels include *Wit's End* and *The Jane Austen Book Club*, which spent thirteen weeks on the New York Times bestsellers list and was a New York Times Notable Book. [kjfowler@aol.com](mailto:kjfowler@aol.com)
10. **Sonja Fückler** is a research fellow in the Fiction Meets Science Program at the University of Bremen. Her interests include qualitative research in cultural sociology, sociology of knowledge, and sociology of science. She has a degree

in sociology and is currently completing her dissertation at the Free University Berlin on the social dimensions of “forgiveness” in contemporary culture.

[sonja.fuecker@uni-bremen.de](mailto:sonja.fuecker@uni-bremen.de)

11. **Susan M. Gaines** did graduate work in organic chemistry and oceanography, before abandoning the laboratory for literary pursuits. Her novel *Carbon Dreams* was an experiment with science in literary fiction, and her book *Echoes of Life: What Fossil Molecules Reveal about Earth History* was an experiment with narrative in the presentation of scientific results. Gaines is currently "Writer in Residence" at the University of Bremen, where she co-directs the Fiction Meets Science program and has just completed her novel *The Last Naturalist and the Terrorists' Daughter*. [smgaines@uni-bremen.de](mailto:smgaines@uni-bremen.de)
12. **Lisa Garforth** is a lecturer in sociology in the School of Geography, Politics, and Sociology at Newcastle University. She is a PI on the AHRC-funded 'Unsettling Scientific Stories' project with a specific focus on contemporary SF literature/fiction readers and the recent history of environmental science in relation to science fiction. Her forthcoming book, *Green Utopias*, explores a range of imaginaries of ecological societies in relation to post-war environmental discourse and culture. She has also published extensively with Anne Kerr on issues relating to gender, organisation and epistemic community. [lisa.garforth@newcastle.ac.uk](mailto:lisa.garforth@newcastle.ac.uk)
13. **Josie Gill** is a Lecturer in Black British Writing at the University of Bristol. Her research focuses on intersections between contemporary literature, science and race. She is Principal Investigator of the AHRC funded project 'Literary Archaeology': Exploring the Lived Environment of the Slave. [josie.gill@bristol.ac.uk](mailto:josie.gill@bristol.ac.uk)
14. **Allegra Goodman** is a prolific short story writer and author of six critically acclaimed novels. She studied English and philosophy at Harvard and received a PhD in English literature from Stanford, but has long been surrounded by scientists and curious about their world. Goodman's novel *Intuition* explores the politics and psychology of life in a cancer research laboratory, and *The Cookbook Collector*, follows a creative band of computer scientists in the technology start-ups of the early 2000s. Her new novel *Chalk* will be released this summer. [allegra@csail.mit.edu](mailto:allegra@csail.mit.edu)
15. **Joan Haran** is co-author of *Human Cloning in the Media: From Science Fiction to Science Practice*. Since December 2015 she has been a Marie Skłodowska-Curie Global Research Fellow based at the Center for the Study of Women in Society at the University of Oregon; she will spend the final year of the three-year fellowship at Cardiff School of Journalism, Media & Cultural Studies, Cardiff University. Her research interests revolve around gender, representation and

techno-science, and she is particularly interested in the policing of the fact / fiction boundary. [jharan@uoregon.edu](mailto:jharan@uoregon.edu)

16. **David K. Hecht** is an Associate Professor in the History Department at Bowdoin College. He specializes in the history of science, with a particular focus on science and culture in modern America. His first book, *Storytelling and Science: Rewriting Oppenheimer in the Nuclear Age*, was published by the University of Massachusetts Press in 2015. His current research interests include public perceptions of science and the history of energy. [dhecht@bowdoin.edu](mailto:dhecht@bowdoin.edu)
17. **Luz María Hernández Nieto** studied visual communication and Interdisciplinary Media Studies in Mexico and Germany. She completed her Ph.D. on the representation of science in animated series for children at the University of Bielefeld and is currently an affiliated researcher with the Fiction Meets Science Program and a lecturer at the Universidad Autónoma de San Luis Potosí. Her research interests include depictions of science in popular culture, public perceptions of science, scientific communication, mass media genres, animation, comic, film, television series and publicity. [luzma@rioverde.org.mx](mailto:luzma@rioverde.org.mx)
18. **Emanuel Herold** finished his M.A. studies in social theory at the University of Jena and is currently working on his Ph.D. at the University of Bremen in the Fiction Meets Science project group “Interpretation: Societal Context.” His interests include science and technology studies, sociology of time, and sociological theory. He is currently focused on utopian and dystopian narratives, especially climate change fiction. [emherold@uni-bremen.de](mailto:emherold@uni-bremen.de)
19. Vicki Isotamm is the College of Arts and Atrium Events Coordinator at the University of Guelph where she programs, plans, promotes and delivers more than 40 on- and off-campus keynote lectures, music concerts and special events annually. She also manages the Summerlee Science Complex Atrium facility. Vicki has a Master of Arts in Leadership Studies and a Bachelors of Arts in Computing and Information Sciences from the University of Guelph. [visotamm@uoguelph.ca](mailto:visotamm@uoguelph.ca)
20. **Lauren Kilian** is a doctoral candidate in English at Stony Brook University and an adjunct instructor of literature and English composition at Brooklyn College. Her dissertation explores the relationship between the public and the scientific community as reflected in contemporary fiction with laboratory settings, as well as the evolving nature of popular science writing in the 21st century. [lauren.kilian@stonybrook.edu](mailto:lauren.kilian@stonybrook.edu)
21. **David A. Kirby** was a practicing evolutionary geneticist before leaving bench science to become Senior Lecturer in Science Communication Studies at the University of Manchester. His experiences as a member of the scientific

community have informed his internationally recognized studies into the interactions between science, entertainment, and cultural meanings. His book *Lab Coats in Hollywood: Science, Scientists and Cinema* examines the historic collaborations between scientists and the entertainment industry. His current book project, *Indecent Science: Religion, Science and Movie Censorship*, explores how movies served as a battleground over science and morality.

[David.Kirby@manchester.ac.uk](mailto:David.Kirby@manchester.ac.uk)

22. **Anton Kirchhofer** is Professor of English Literature at the University of Oldenburg, and one of the founding directors of FMS. His research and publications address the cultural settings and discursive environments of literature; literary theory; as well as the connections between modernity, literature and secularity, and between literature and science. His doctoral thesis was on 'sex and the passions' in eighteenth-century English fiction, and his Habilitation thesis dealt with literary criticism in the nineteenth-century periodical market. He is joint series editor of "Explorations in Science and Literature" with Bloomsbury Academic. [anton.kirchhofer@uni-oldenburg.de](mailto:anton.kirchhofer@uni-oldenburg.de)
23. Kira Lussier is a PhD candidate in history of science at the University of Toronto. Her dissertation research is on the history of personality testing in corporate spaces, an interdisciplinary project that draws on science studies, history of capitalism, and history of subjectivity. She is particularly interested in thinking about the cultural power of science as it travels in spaces outside of the laboratory or the university. [kira.lussier@utoronto.ca](mailto:kira.lussier@utoronto.ca)
24. **Tess Laidlaw** studies the practical communication of health information using primarily rhetorical approaches. She is a past coordinator of the Science Communication program at MSVU and now teaches science communication. Prior to completing her PhD in Rhetoric & Media Studies, she earned a degree in journalism and worked professionally in the sciences, and in science and health communication. [Tess.Laidlaw@MSVU.CA](mailto:Tess.Laidlaw@MSVU.CA)
25. John Lewis – [lewissubhas@gmail.com](mailto:lewissubhas@gmail.com)
26. **Christine Müller** holds a Bachelor's degree in English and French and a master's degree in Transnational Literary Studies from the University of Bremen. She is now a research assistant in the Faculty of Linguistics and Literary Studies at the University of Bremen, where she is writing her PhD thesis on the representation of female scientists in contemporary literature. [christine.mueller@uni-bremen.de](mailto:christine.mueller@uni-bremen.de)
27. Akhil Nair is a graduate student in epigenetics at the University of Toronto. [jidsaaku@gmail.com](mailto:jidsaaku@gmail.com)
28. **Aquiles Negrete Yankelevich** is a researcher in the Center for Interdisciplinary Research in the Sciences and Humanities at the Universidad Nacional

Autónoma de México. His research focuses on the use of narrative in communicating scientific ideas to a general public and on the communication of science in cultural media. He holds a Ph.D. in science communication from the University of Bath, as well as degrees in biology and natural resources.

[aqny@unam.mx](mailto:aqny@unam.mx)

29. **Ingrid Ockert** is a doctoral candidate at Princeton University in the History of Science Department. Her dissertation explores the history of science television programs in the United States. Originally from the West Coast, Ingrid has also researched the creation of scientific celebrity and atomic public relations. She has interviewed collaborators of several science television programs, including *Watch Mr. Wizard*, *NOVA*, *Scientific American Frontiers*, and *3-2-1 Contact*.

[ockert@Princeton.EDU](mailto:ockert@Princeton.EDU)

30. **Adrian Perez** is a student in the Erasmus Mundus Masters Programme Crossways in Cultural Narratives at the University of Guelph. He studied Political Science at the University of Santiago de Compostela and has a master's degree in Political Philosophy from the Pompeu Fabra University of Barcelona.

[aperezfe@uoguelph.ca](mailto:aperezfe@uoguelph.ca)

31. **Joanna Radin** is Assistant Professor of the History of Science and Medicine at Yale. Before receiving her PhD in History and Sociology of Science at UPenn she studied science communication at Cornell and worked as a risk communication specialist. She is the author of *Life on Ice: A History of New Uses for Cold Blood*, (University of Chicago Press, 2017) and a co-editor of *Cyropolitics: Frozen Life in a Melting World* (MIT Press, 2017). Radin is currently writing a book about how science fiction colonized the future of biomedicine. [joanna.radin@yale.edu](mailto:joanna.radin@yale.edu)

32. **Jaspreet Singh** is a fiction and essay writer, and a former research scientist with a Ph.D. in chemical engineering. His books include the story collection *Seventeen Tomatoes* (Quebec First Book Prize winner), and the novels *Chef* (finalist for the Commonwealth prize and winner of the George Bugnet Award), and the critically acclaimed *Helium*, about an expatriate Indian scientist confronting the demons of his past. Singh has been selected as the Fiction Meets Science Writer in Residence at the Hanse Wissenschaftskolleg (Institute for Advanced Study) for 2017-2018. [jaspreetsingh@me.com](mailto:jaspreetsingh@me.com)

33. **Frank Orrico** has a Ph.D. in molecular biology and leads a global scientific communications practice at Weber Shandwick, a large communications firm. His team works with universities, academic research institutions and other science-driven organizations to help them explain their research and bring their stories to a variety of audiences. [forrico@webershandwick.com](mailto:forrico@webershandwick.com)

34. **Laura Shackelford** is an associate professor in English at the Rochester Institute of Technology. Her research has focused on literary and narrative experiments

with digital technologies and systems thinking. Recent work is on topological modeling of space and how that impacts gendered, racialized, and colonialist spatial beliefs and practices. She is currently working with colleagues to launch a *Center for Engaged Storycraft*, and she teaches a summer NSF undergraduate workshop on the basics of narrative in which young scientists think about how they imagine, communicate, and disseminate their work. [lxsgla@rit.edu](mailto:lxsgla@rit.edu)

35. **Hanna Straß-Senol** is a lecturer in the Institute of English and American Studies at the University of Oldenburg and a post-doctoral research fellow in the Fiction Meets Science group. She was a member of the DFG research training group “Globalization and Literature: Representations, Transformations, Interventions” at the LMU Munich, where she completed a dissertation titled *Stories of Pollution: Narrating Toxicity in Postcolonial Context*. Her research interests are at the convergence of environmental humanities and postcolonial studies, with a focus on environmental justice. [hanna.strass-senol@uni-oldenburg.de](mailto:hanna.strass-senol@uni-oldenburg.de)
36. Kathleen Tarr is a UC Berkeley and Harvard Law School graduate, former Skadden Fellow, and Lecturer in Stanford University’s Program in Writing and Rhetoric. Author of several written texts, she also tells stories through motion pictures, providing scriptwriting and production services via Novel Approach, LLC. Kathleen’s short film *Early Aliens* was a 2015 Official Selection at ASTRONOMMO: SPECULATIVE FICTION ON FILM + BLACK WOMEN. She has guest starred on *House, M.D.* and NBC’s *Trauma*, worked with Sabrina Lloyd (*Sliders*) in the Sundance Award winning film, *Dopamine*, and performed the voiceover for numerous video games. [ktarr@stanford.edu](mailto:ktarr@stanford.edu)
37. **Rajive Tiwari** has a Ph.D. in physics and is author of a dictionary of physics. He teaches physics, mathematics, and philosophy at Belmont Abbey College. Recent multidisciplinary publications include “Anatomy of Reception: Science, Nation and Religion in Hindi-Language Print Media of Colonial South Asia” (in *Science and Empire: Knowledge and Networks of Science across the British Empire, 1800–1970*, eds., B. Bennett and J. Hodge 2011) and “A Transnarrative for the Colony: Astronomy Education and Religion in 19<sup>th</sup>-Century India” (*Economic and Political Weekly*, Vol 41, No 13, 2006) [RajiveTiwari@bac.edu](mailto:RajiveTiwari@bac.edu)
38. **Priscilla Wald** is R. Florence Brinkley Chair of English and Margaret Taylor Smith Director of the Program in Gender, Sexuality, and Feminist Studies at Duke University, where she co-edits *American Literature*. She is the author of *Contagious: Cultures, Carriers, and the Outbreak Narrative* (Duke, 2008) and *Constituting Americans: Cultural Anxiety and Narrative Form* (Duke, 1995). Wald is currently working on a monograph entitled *Human Being After Genocide*; she serves on the boards of *Literature and Medicine* and the Centre for the Humanities and Medicine at Hong Kong University. [pwald@duke.edu](mailto:pwald@duke.edu)

39. **Peter Weingart** is Professor Emeritus of Sociology, Sociology of Science and Science Policy at the University of Bielefeld and a Research Professor in the Fiction Meets Science program. He is a member of the Berlin-Brandenburg Academy of Sciences and the Academy of Engineering Sciences, managing editor of the Sociology of the Sciences Yearbook and editor-in-chief of *Minerva*. He has published widely on science policy, science advice in the political sphere, the interaction between science and the media, science communication, and cultural representations of science. [weingart@uni-bielefeld.de](mailto:weingart@uni-bielefeld.de)
40. Andrew Westoll's books include *The Riverbones*, a travelogue, *The Chimps of Fauna Sanctuary*, a work of popular science, and the novel, *The Jungle South of the Mountain*. A former primatologist-in-training, Andrew traded the real jungle for the concrete one a long time ago, but most of his writing explores one corner or another of our fraught, curious and ever-evolving relationship with the natural world. He is an Assistant Professor, Teaching Stream, of Creative Writing and English at the University of Toronto Scarborough.
41. **Julianne Yip** is working on her dissertation at McGill University. She is conducting an anthropological study of ice in which she seeks to understand what it means to adopt scientific knowledge about ice as a conceptual frame of reference for thinking about the world and, within it, human beings. Her fieldwork entailed two years following ice scientists in the laboratory and Alaskan Arctic as they worked to characterize the severely melted ice that appears at the end of summer. [julianne.yip@gmail.com](mailto:julianne.yip@gmail.com)

# Narrating Science

## The Power of Stories in the 21<sup>st</sup> Century

Toronto, May 24 – 27, 2017

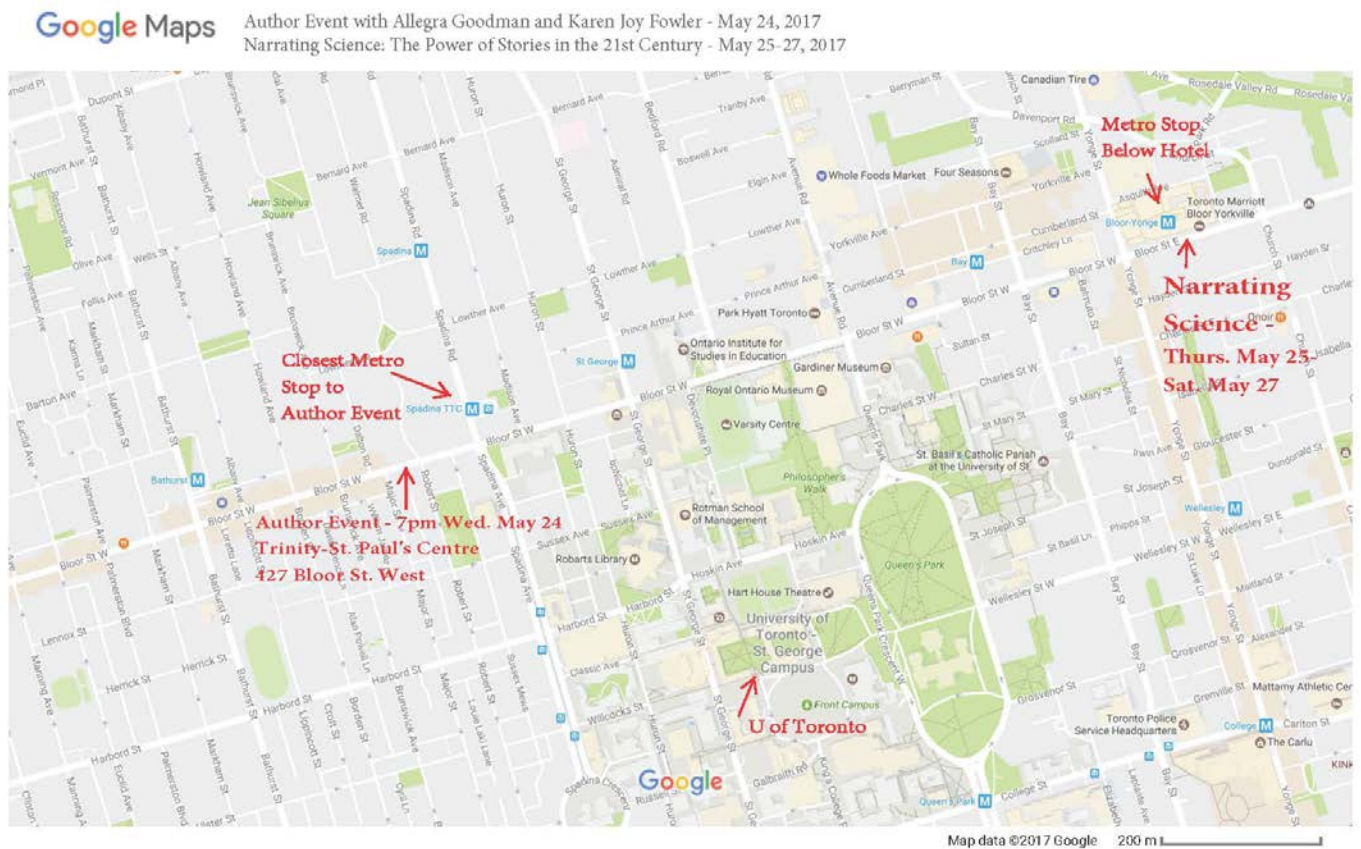
### Practical Information

Toronto Marriott Bloor Yorkville Hotel  
90 Bloor Street East, Toronto, ON M4W 1A7  
416-961-8000

<http://www.marriott.com/hotels/maps/travel/yyzmc-toronto-marriott-bloor-yorkville-hotel/>

4/7/2017

Google Maps



Options to travel from Toronto Marriott Bloor Yorkville Hotel to Trinity-St. Paul's Centre for May 24 Author Reading: walking distance: is 1.8 km or approx. 15 minutes; TTC, 3 stops west starting at Yonge/Bloor station, exit at Spadina/Bloor station, walk south on Spadina then west to 427 Bloor St. W; Taxi pick up at main lobby exit, approx.. 7 blocks west on Bloor.



## Transportation – Getting there from Toronto Pearson International Airport

*Union Pearson Express Train* ([www.upexpress.com/](http://www.upexpress.com/)) and subway: go to Pearson station in Terminal 1, directly adjacent to the Link Train service linking Terminals 1 and 3. Trains leave every 15 minutes and take 25 minutes to Union Station. From Union Station take subway Line 1 (Yonge-University) 6 stops to Bloor-Yonge TTC Station (10 min). Exit subway to the underground mall. There is a small entrance door to the Toronto Marriott Bloor Yorkville Hotel, open until 11:00 pm, directly across from the Shoppers Drug Mart marked by a very small sign. Total travel time is 50-65 mins, and tickets will cost ~C\$12. The hotel can also be accessed by going out onto Bloor St (South side of TTC Station) and walking 50 meters East to the external hotel entrance.

*Taxi* - If you are pressed for time, taxis are available outside the terminal exits and will take about 30 minutes and cost about C\$60.

*Car Rental at Toronto Pearson* - <https://torontopearson.com/en/toandfrom/carrentals/#>

*Driving* - get directions from your current location right to the hotel or author event:

<http://www.drivingdirectionsandmaps.com/route-planner/>

*Parking* - Self-parking at the Hudson Bay Centre that joins the Toronto Marriott Bloor Yorkville Hotel is \$27/day: <https://www.mybrookfield.ca/hbc-parking/>

[- Valet parking via hotel is \\$40/day.](#)

For more information on transportation see:

[www.marriott.com/hotels/maps/travel/yyzmc-toronto-marriott-bloor-yorkville-hotel/](http://www.marriott.com/hotels/maps/travel/yyzmc-toronto-marriott-bloor-yorkville-hotel/)

## Accommodation – Where to stay

The Toronto Marriott Bloor Yorkville Hotel is offering conference registrants a special group rate, including a continental breakfast, of C\$239 + taxes per night if booked by **Tuesday, April 25, 2017**. We cannot guarantee room availability after that and rates may increase.

[Book your group rate for the Narrating Science Conference at the Toronto Marriott Bloor Yorkville Hotel.](#)

## What's nearby

Restaurants in the neighbourhood: <http://www.marriott.com/hotels/hotel-information/restaurant/yyzmc-toronto-marriott-bloor-yorkville-hotel/>

Other restaurant listings apps: <https://www.opentable.com/toronto-restaurants>

[https://www.yelp.ca/search?find\\_desc=yonge+and+bloor&find\\_loc=Toronto%2C+ON](https://www.yelp.ca/search?find_desc=yonge+and+bloor&find_loc=Toronto%2C+ON)

<https://foursquare.com/missrogue/list/toronto-restaurants-to-check-out>

University of Toronto, largest public research university in Canada: <https://www.utoronto.ca/>

Royal Ontario Museum, art, world culture and history:  
<http://www.rom.on.ca/en#/gallery/recent>

Art Gallery of Ontario, 80,000 works spanning first century to present day:  
<https://www.ago.net/>

Gardiner Museum, ceramics museum: <https://www.gardinermuseum.on.ca/>

Hudson's Bay Centre attached to hotel, indoor shopping mall:  
<http://www.torontomalls.com/hudson-bay-centre/#stores>

Bloor-Yorkville area, high-end shopping and affluent neighborhood: <http://bloor-yorkville.com/>

Cineplex Odeon Varsity and VIP Cinema: <https://www.cineplex.com/Theatre/cineplex-odeon-varsity-and-vip-cinemas>

## Contacts

Conference Program – Susan M. Gaines – [smgaines@uni-bremen.de](mailto:smgaines@uni-bremen.de)

Conference Program – Donald Bruce – [don.bruce@uoguelph.ca](mailto:don.bruce@uoguelph.ca) – cell # 519-222-7261

Conference Registration and Travel – Vicki Isotamm – [visotamm@uoguelph.ca](mailto:visotamm@uoguelph.ca) – cell # 519-829-8382

Organized by the College of Arts, University of Guelph, Canada, and “Fiction Meets Science” at the Universities of Bremen and Oldenburg, Germany and supported by Volkswagen Siftung.