

## **NEXTcast 2.12: Mark Rector on his Canadian Inventions Book**

*In this episode of NEXTcast, Nathan sits down with Applied Technology professor Mark Rector to discuss the inspiration behind his new book about Canadian inventions*

[Nathan Whitlock:](#) Welcome to *NEXTcast*, a podcast about teaching and learning at Humber College. I'm Nathan Whitlock, an editor at Humber Press. On *NEXTcast*, we talk to some of the faculty and staff who are leading innovation at Humber, both inside and outside the classroom.

[Nathan Whitlock:](#) In this episode, we talk to Professor Mark Rector about his first book, which is based on course content he created at Humber.

[Nathan Whitlock:](#) Welcome to *NEXTcast*, Mark.

[Mark Rector:](#) Thank you, glad to be here.

[Nathan Whitlock:](#) Oh, it's great to have you here.

[Nathan Whitlock:](#) We're here talking today because you have published a book, fairly recently.

[Mark Rector:](#) Yeah.

[Nathan Whitlock:](#) Congratulations.

[Mark Rector:](#) Thank you.

[Nathan Whitlock:](#) The book is called, *Oh Canada! Our Home and Inventive Land!* I'm holding a copy here right now.

[Mark Rector:](#) That's it.

[Nathan Whitlock:](#) This is audio, you can't see it.

[Mark Rector:](#) The cover looks really good though.

[Nathan Whitlock:](#) It does look really good.

[Nathan Whitlock:](#) The book is about the history of Canadian invention, in history, technology, in our society. I'm sort of curious about the origin story for this book. What started it all?

[Mark Rector:](#) It's one of those things where things come full circle. I originally started this idea, it comes from the fact that I had a growing stack of 10 or 20 handouts I use for my students in my courses. I mean, when I started to teach electronics engineering 17-18 years ago, I thought, man, this stuff is dry as toast, or sawdust. It's not interesting, it's not exciting, unless

you're a real uber geek like I am. So I wanted a way to inspire the students and interest them.

[Mark Rector:](#) I had known from, as a little kid, I had read a story about Alexander Graham Bell, a Canadian that invented the telephone, and I was fascinated, and I'm sure that played into my electronics interest. So I thought when I got the telephone course, "Hey, I'm going to mention that," so I put together some handouts about Bell.

[Mark Rector:](#) From that, I then had a couple of others. Reginald Fessenden, who was the guy that invented radio, as we know. A lot of people think it's Marconi. Marconi invented wireless Morse code, and did it in Canada, even though he was an Italian. Fessenden was the first guy to envision putting a voice or music on a radio wave, and he's a Canadian, he did that.

[Mark Rector:](#) I knew of those two, and my primary specialty is telecom. So hence, I had those two handouts, and then I had a few more, and a few more. It got to the point where I had about 20 or 30, and I used them to inspire the students. Like, "Hey, this was done in Canada, you guys are going to work in Canada," and it really seemed to take off with a lot of them. They really got some fun out of it, and it was nice to know stuff.

[Mark Rector:](#) It wasn't technical, it wasn't important, but I sometimes feel to understand the bleeding edge, you kind of got to know how we started and where we came from. Understanding the 100-year-old technology, makes it easy to understand the more recent stuff. So that was the genesis.

[Mark Rector:](#) Well, four students who I inspired, really inspired, they put Humber College on the front page of every newspaper in the world when we pulled off a world's first, and talked to the space station, and they wanted to do that. They said to me, their first initial thing was, "We want to do something really cool and groundbreaking, like Fessenden and Bell," and that's how they came up with the idea. So that kind of inspired them.

[Mark Rector:](#) Well, we ended up being honored at the Canadian Telecom Hall of Fame, and I met a guy there who wrote a biography about one of the guys in my book, Frederic Gisborne, who did the trans-Atlantic cable. He was asking me how did I get there, and I said, "Oh, I inspired these students," and told him, "Yeah, I have handouts about Gisborne in my class." He said, "Wow, you should write a book about that," and I went, "Hmm."

[Nathan Whitlock:](#) A little light went off.

[Mark Rector:](#) That was nine years ago, I finally got to it a year and a half ago.

[Nathan Whitlock:](#) Sometimes the light goes off, but it takes a little while to-

[Mark Rector:](#) I was a little busy.

[Nathan Whitlock](#): Sure.

[Mark Rector](#): You know, timetables, schedules, yeah.

[Mark Rector](#): The genesis rolled along, and I got some more ideas. Then it really came to fruition, thanks to my previous Associate Dean, Vincent Shaikh, a phenomenal guy. He said to me, when I wanted to go on my sabbatical, I said, "What am I going to do?" Because we have to do a research project for our sabbatical, and I said, "I don't know what I want to research. I don't want to invent another transistor or laser beam."

[Mark Rector](#): He said, "Well, why don't you go and investigate and research that Canadian inventor stuff you're always talking about?" And I went, "You'll let me do that?" He goes, "Yeah, go and dig deep, and maybe produce something, do some presentations for the rest of our faculty, or maybe a handout or two." I said, "Well, funny you should say that. I've been thinking about writing a book," and he goes, "That's great."

[Nathan Whitlock](#): This has been a process of discovery for you as well, as anything else?

[Mark Rector](#): Yeah.

[Nathan Whitlock](#): It wasn't just about, oh, I've done all these handouts for course content, you actually went deeper into it and discovered this whole thing, just unearthed this thing that was sitting there waiting?

[Mark Rector](#): The worst thing was last summer, as I'm coming down to the end, to my deadline, I kept finding more and more of them. I'm like, "Oh my God, now I've got to write that," and I was trying to squeeze these all in before the deadline. I just kept discovering more and more stuff.

[Mark Rector](#): Post-publication, I found five or six really big ones. We invented peanut butter, we invented the Zero-G flight suit that's now the basis for all air forces in the world, and NASA based the design of the space suits for the Apollo missions and stuff, on our flight suit developed right here in Toronto, by none other than Sir Frederick Banting.

[Mark Rector](#): Most people that are a little bit familiar with Canadian inventions, or in medical, they know Frederick Banting, "Isn't that the guy that invented insulin?" Yep. He also helped a guy named Wilbur Franks do the testing to come up with the Zero-G flight suit to keep the pilots from blacking out in these high speed, multi-G turns in a jet fighter. That was all done right here in Toronto. Just more and more of those had come to light.

[Mark Rector](#): My third printing, I've now sold out my entire first and second print run, I did a couple of revisions and managed to squeeze in six or seven more inventions that I missed. But I did a pretty comprehensive go-through. There was almost nothing left that I didn't find that isn't in the book. I think

it tops out, I think I'm well into 160 some odd inventions, and some pretty big stuff.

[Nathan Whitlock:](#) There's probably a sequel in the works, or is there a sequel on the horizon?

[Mark Rector:](#) Depending on, I've been getting more and more requests to speak. I've got gigs lined up all the way into 2020 to speak all across the country about the book, and then more coming in by the day, so it's been fantastic for that.

[Mark Rector:](#) I think I'm going to ride this one for a few years, but I did have in the back of my mind, a couple of ideas.

[Nathan Whitlock:](#) Well, one of the things about when you publish a book, especially one that you've been working on for a while and you've been finding out all this stuff, and this is your first book?

[Mark Rector:](#) Yes. I've published numerous, numerous magazine articles on cars, and whatnot, and I wrote car reviews for a small local paper, and I did contribute to a couple of textbooks, national published textbooks.

[Nathan Whitlock:](#) Okay.

[Mark Rector:](#) But this is my first book, completely.

[Nathan Whitlock:](#) Right.

[Nathan Whitlock:](#) One of the things that happens when you publish a book is, you've been working so long on your own, you've been living with all this material, you've been obsessed with it. You've been-

[Mark Rector:](#) Breathing it night and day.

[Nathan Whitlock:](#) You've been buried by it, probably.

[Mark Rector:](#) Twenty-two hour days in my office last July.

[Nathan Whitlock:](#) Sure.

[Mark Rector:](#) Yeah.

[Nathan Whitlock:](#) Then it goes out in the world, and suddenly it belongs to everyone else. I'm curious what the feedback has been like, in terms of people reading it, people encountering it?

[Mark Rector:](#) I was scared when I did my first print run. I wasn't sure I could sell 100 books. I thought, if I could sell 50, this'll be great. Maybe 100. I took the

risk, and I printed 150. I had them gone in less than two weeks, going to a few museums down east in Nova Scotia, where my family's from.

[Mark Rector:](#) Every museum I walked into and showed it to them, they went, "Oh my God, that's phenomenal. Can we buy 15?" It just snowballed from there, and I have been pleasantly shocked. The feedback has been phenomenal. I've had people come up at lectures I've given, and said, "Oh my God, I need seven for all of my relatives. I'm buying this for every one of my techie friends for Christmas."

[Mark Rector:](#) I've had people that were not into history, not into tech, not into gadgets, could care less about this stuff, they read it by accident, and said, "This was phenomenal. Have you got anything else?" That was extremely gratifying.

[Mark Rector:](#) Many of them said, "I can hear you speaking when I'm reading this because you're so enthusiastic about this stuff." They said, "I can just hear you, putting in all those exclamation marks, and railing on about this." And they said, "The enthusiasm and the fun really comes through."

[Mark Rector:](#) One person, the lady I'm thinking of that said, "I can't stand history. I'm not tech at all. I don't care about these old dead people." And she said, "I was just riveted." She finished it in a weekend. She said, "It was page after page after page." She said, "I laughed out loud so much reading it. It was phenomenal."

[Nathan Whitlock:](#) I'm curious, because this whole thing started, this whole project started as course handouts, as just a way to kind of get students into the concepts you're teaching. I'm curious about if there's been a full circle? Where it began as course content, you went off, you published a book, what are you bringing back to the class now? What are you bringing back into your teaching practice, having this written this book, having done all this research?

[Mark Rector:](#) A lot more inventions and a lot more courses that it's connected to, so that was good.

[Mark Rector:](#) It certainly, again, I figured the students, I mean, as many students who might be listening or faculty know, it's a challenge to get students to want to buy books. The textbooks, they're expensive, it costs a lot of money, I understand this. But they're very crucial. I thought there's not a chance in anything that students are going to want to buy this. I had no concept of selling it to students.

[Mark Rector:](#) My target audience was the techie colleagues, my friends in academia, my former colleagues in technical areas I worked. I had no concept the students would be interested in this. I happened to casually mention it one day in class, and they're like, "Can we get a copy, can we get a

copy?" And I'm like, "I can't get you to buy the textbook to save your life sometimes."

[Mark Rector:](#)

My God, I had one class, I said, "Well, I'll bring them the next day," and every single copy gone. It was like the entire class bought them. I was like, "Are you kidding me?" I was shocked, and again, pleasantly surprised that that happened, and something I really didn't expect. I've had a great response. I've had students show up at my lectures, they already got the book, they didn't have to come. Or paid money to go see me at a museum, and that was just so gratifying, very touching.

[Mark Rector:](#)

Many of my colleagues have come out too, really happy to see that. It's been just a phenomenally good experience. It just was so cool that this happened. I thought, "Man, if I sell 10 books, I'll be lucky."

[Mark Rector:](#)

Here we are, like I said, we're closing in on thousands.

[Nathan Whitlock:](#)

Thousands and thousands of copies later.

[Mark Rector:](#)

Yeah.

[Nathan Whitlock:](#)

Well, thanks so much Mark, this has been great. Thank you for coming in.

[Mark Rector:](#)

Thank you, this has been phenomenal. I really appreciate all your support.

[Nathan Whitlock:](#)

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[Nathan Whitlock:](#)

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[Nathan Whitlock:](#)

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[Nathan Whitlock:](#)

Thanks, and see you next time. That's still not a pun.