



# Troy Nachtigall

FASHION DESIGNER / DESIGN RESEARCHER

Socio-Technical Design Group  
Aarhus University  
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5612MB Eindhoven  
(+31) 6 11 39 14 82  
(+1) 307-222-9152  
troy@troykyo.net

Age // 42 years

Nationality // American

Languages // English, Italian

## TOP SKILLS

Fashion Design, Knitting, Shoemaking  
Digital Fabrication, Design Research

## LINKS

[www.troykyo.net](http://www.troykyo.net) (Portfolio)

[www.linkedin.com/in/troynachtigall](https://www.linkedin.com/in/troynachtigall)

<https://research.tue.nl/en/persons/troy-robert-nachtigall>

<https://www.clicknl.nl/en/clicknl-60/case-troy-nachtigall/>

<http://www.arcintextn.eu/about-us/phd-students/>

<https://arcintextn.com/author/troykyo/>

<http://stitchandsolder.com/>

<https://dl.acm.org/profile/99658636943>

## OBJECTIVES

I am seeking a position where I can continue to develop tools and methodologies for Design Research. My previous research explores textile thinking, data/material relationships, and Ultra-Personalized product-service systems. My research vision is to concentrate on using both scientific and artistic methods to create clothing that addresses what is to come. Combined with over ten years of experience in the fashion field, I want to realize a future where there is little difference between fashion and technology. Additionally, I would love to grow back into a position of leadership where I can build a world leading research cluster on embodied future ways of wearing.

## EDUCATION

2 Dec 2019

**PhD Industrial Design**  
TU/EINDHOVEN

"MATERIALIZING DATA: CRAFTSMANSHIP AND TECHNOLOGY FOR ULTRA PERSONALIZATION"

Practice based research into craft as a methodology for confronting emerging technology. Lead students in the Wearable Senses Lab

18 Oct 2017

**MSc Industrial Design**  
TU/EINDHOVEN

"MAKING MULTI MATERIAL 3D PRINTING"

Interaction Design takes on new meanings when electronics are embedded in soft wearables; with Philips, TNO, DoMicro and PWC.

4 Aug 2015

**Digital Fabrication**  
FAB FOUNDATION

CONDUCTIVE SPINNING FRAME

Completed the course on digital fabrication by MIT at distributed at FabLabs all over the world. Final Project on fashion fiber recycling.

15 Apr 2015

**Hons Masters in Shoe Innovation**  
SLEM

SPIKE SHOES WITH 3D PRINTED SENSORS

Honorary masters awarded for spending countless hours 3D printing shoes and travelling the world for Shoe Innovation.

6 June 2006

**AAS Fashion Design**  
FASHION INSTITUTE OF TECHNOLOGY

HERITAGE CRAFT FOR FASHION

Undergraduate studies at the State University of New York with a graduation project on combining heritage craft technique with cutting edge tools techniques such as wearable technology.

## EXPERIENCE

Aug 2019 - June 2020

**Postdoctoral Researcher**  
AARHUS UNIVERSITY

COURSES ON HUMAN-CENTERED DESIGN AND SHAPE-CHANGE

Currently working on building a research project for the Socio-Technical Design group on aesthetics and style of Design using Machine Learning and Material Sciences.

Aug 2015 - Dec 2019

**Designer and Design Researcher**  
TU/EINDHOVEN

MARIE SKŁODOWSKA-CURIE ACTIONS RESEARCH FELLOWSHIP

Completed research into future forms of living using adaptive and responsive environments connecting the scales of the body, the interior and the building, focus on Fashion Design and the body.

July 2011 - Sept 2015

**Technical Director and Lecturer**  
SLEM

COURSES ON WEARABLE TECHNOLOGY AND DIGITAL FABRICATION, TECHNICAL DIRECTOR

Responsible for fashion and digital prototyping labs. Travelled extensively and create projects with state of the art Industry.

## LINKS

[http://www.agds.it/portfolio/panerai-time-and-space\\_shangai/](http://www.agds.it/portfolio/panerai-time-and-space_shangai/)

<http://www.agds.it/portfolio/calvin-klein-ex-3-11/>

<http://www.agds.it/portfolio/biagioli-pitti-filati-fw1213/>

<http://www.agds.it/portfolio/nolita-pitti-bimbo-fw11/>

<https://www.youtube.com/watch?v=IFihudmgMkQ>

<https://scholar.google.com/citations?user=oCvY9msAAAAJ&hl=en&oi=ao>  
<https://research.tue.nl/en/publications/materializing-data-craftsmanship-and-technology-for-ultra-persona>

<https://dl.acm.org/doi/10.1145/3341163.3346943>

[https://www.researchgate.net/publication/324660035\\_Towards\\_Ultra\\_Personalized\\_4D\\_Printed\\_Shoes](https://www.researchgate.net/publication/324660035_Towards_Ultra_Personalized_4D_Printed_Shoes)

<https://dl.acm.org/doi/10.1145/3290605.3300749>

[https://figshare.com/articles/Unpacking\\_Solemaker\\_into\\_a\\_model\\_for\\_UPPSS/7855817](https://figshare.com/articles/Unpacking_Solemaker_into_a_model_for_UPPSS/7855817)

<https://dl.acm.org/doi/10.1145/3328939.3329001>

<https://dl.acm.org/doi/10.1145/3267242.3267272>

<https://dl.acm.org/doi/abs/10.1145/3123021.3123077>

<https://dl.acm.org/doi/abs/10.1145/3170427.3188611>

Oct 2000 - Sept 2015

**Freelance Designer / Private Studio**  
TROYKYO DESIGN / WE ASSOCIATES

Jun 2009 - Jan 2015

**Lecturer and Research Coordinator**  
IED INSTITUTE OF EUROPEAN DESIGN

Oct 2011 - Sept 2015

**Adjunct Professor**  
ISIA FIRENZE, FLORENCE

Sept 2007 - Sept 2009

**Lecturer**  
SAPIENZA, ROME

Aug 2007 - Sept 2009

**Lecturer and Assistant Professor**  
IUAV OF VENICE

Aug 2003 - Sept 2006

**Designer and Ass. Creative Director**  
EMILIO CAVALLINI

FASHION DESIGN AND RELATED PROJECTS AS FREELANCE

Design solutions for clients such as DANWARD, Panerai, Nolita, Apple, Adidas, Marco Corona, Beyonce, Armani, Ducati, Hermes, Jean Paul Gaultier Jeans, Hugo Boss, ICR Deth Killers, Plug & Wear, Press Office, Filati Biagioli, Flats of Napa Valley and Calvin Klein

COURSES IN FASHION DESIGN, NEW MEDIA DESIGN, DIGITAL CRAFT, PRODUCT DESIGN, RESEARCH AND LAB COORDINATOR

Lecturer and Research Coordinator working with several companies in product innovation and communication. Also responsible for Digital Labs, Textile Innovation, and Leather Design program.

COURSE OF ECO-DESIGN IN MASTER'S OF PRODUCT DESIGN AND COMMUNICATION DESIGN.

Lecturer in Eco-Design course with a focus on sustainability. Chair for the conference Less is Next and Less is Next: Reloaded.

COURSE OF STUDIO PROJECT 2 IN INTERACTION DESIGN

Lecturer of physical computing in interaction design and digital design for in the bachelor's degree.

COURSE OF DIGITAL TECHNOLOGY FOR FASHION DESIGN AND HISTORY OF FASHION TECHNOLOGY.

Started as an assistant and was given my own course in using IT technology in Fashion design for the bachelors course

JUNIOR DESIGNER TO ASSISTANT CREATIVE DIRECTOR.

Started as an assistant fashion designer and worked my way up to Associate Creative Director managing the design studio. Included projects for Max Mara, Agent Provocateur, and the mens collection.

## PUBLICATIONS

'MATERIALIZING DATA: CRAFTSMANSHIP AND TECHNOLOGY FOR ULTRA-PERSONALIZATION.  
Nachtigall, Troy Robert. 2019. PhD Thesis Dissertation

DIGITAL CRAFTSMANSHIP IN THE WEARABLE SENSES LAB.

Andersen, Kristina, Bruna Goveia, Oscar Tomico, Marina Toeters, Angella Mackey, and Troy Nachtigall. 2019. Proceedings of the 2019 ACM International Symposium on Wearable Computers - ISWC '19. New York, New York, USA: ACM Press.

FROM PERSONAL TO ULTRA-PERSONALIZED.

Nachtigall, Troy, Svetlana Mironcika, Loe Feijs, and Oscar Tomico. 2019 In Proceedings of Eksig '19

ENCODING MATERIALS AND DATA FOR ITERATIVE PERSONALIZATION.

Nachtigall, Troy, Oscar Tomico, Ron Wakkary, and Pauline Van Dongen. 2019. in Proceedings of the 2019 Conference on Human Factors in Computing Systems - CHI '19. ACM.

UNPACKING SOLEMAKER INTO A MODEL FOR UPPSS

Nachtigall, Troy Robert, Oscar Tomico, Stephan Wensveen, and Ron Wakkary. 2019. Pp. 1–16 in Proceedings of the Conference on Research Through Design. 2019 RTD'19.

EXPLORING MECHANICAL META-MATERIAL STRUCTURES THROUGH PERSONALISED SHOE SOLE DESIGN.

Amorim, Davide Jose Nogueira, Troy Nachtigall, and Miguel Bruns Alonso. 2019. Pp. 1–8 in Proc. of the ACM Symposium on Computational Fabrication - SCF '19. New York, New York, USA: ACM Press.

A FIVE-YEAR REVIEW OF METHODS, PURPOSES AND DOMAINS OF THE INTERNATIONAL SYMPOSIUM ON WEARABLE COMPUTING.

Nachtigall, Troy, Daniel Tetteroo, and Panos Markopoulos. 2018. Pp. 48–55 in Proceedings of the 2018 ACM International Symposium on Wearable Computers - ISWC '18. New York, New York, USA

EVA MOCCASIN: CREATING A RESEARCH ARCHETYPE TO EXPLORE SHOE USE.

Nachtigall, Troy. 2017. Pp. 197–202 in Proceedings of the 2017 ACM International Symposium on Wearable Computers - ISWC '17. New York, New York, USA: ACM Press.

MAKING SECRET POCKETS.

Nachtigall, Troy Robert and Kristina Andersen. 2018. Pp. 1–6 in Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems - CHI '18.

## LINKS

[https://disruptiveimprovisation.files.wordpress.com/2018/04/nachtigall\\_cr\\_040118.pdf](https://disruptiveimprovisation.files.wordpress.com/2018/04/nachtigall_cr_040118.pdf)

<https://dl.acm.org/doi/10.1145/3294109.3295637>

<https://dl.acm.org/doi/10.1145/3170427.3174369>

<https://dl.acm.org/doi/abs/10.1145/2968219.2979142>

<https://pure.tue.nl/ws/portalfiles/portal/41976954/1.pdf>

<https://dl.acm.org/citation.cfm?id=2641276>

<https://www.embassyofsustainabledesign.nl/>

<https://moulinsdepailard.wordpress.com/2017-2/etextiles/>

<https://www.facebook.com/events/udk-einsteinufer/future-ways-of-wearing/1851234088476900/>

<https://www.adi-design.org/blog/firenze-le-frontiere-tra-vero-e-falso.html>

### THE BOX OF GLORIOUS FAILURES

Nachtigall, Troy. 2018. in *Disruptive Improvisation: Making Use of Non-Deterministic Art Practices in HCI Workshop at the 2018 CHI Conference on Human Factors in Computing Systems - CHI '18*.

### ONEDAY SHOES : A MAKER TOOLKIT TO UNDERSTAND THE ROLE OF CO-MANUFACTURING IN PERSONALIZATION

Nachtigall, Troy, Oscar Tomico, and Ron Wakkary. 2019. Pp. 1–11 in *Proceedings of the Thirteenth International Conference on Tangible, Embedded, and Embodied Interaction - TEI '19*.

### TOWARDS ULTRA PERSONALIZED 4D PRINTED SHOES

Nachtigall, Troy Robert, Oscar Tomico, Ron Wakkary, Stephan Wensveen, Pauline van Dongen, and Leonie Tentoff van Norten. 2018. Pp. 1–9 in *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems - CHI '18*.

### ULTRA PERSONALIZATION AND TEXTILE THINKING IN INTERACTION DESIGN

Nachtigall, Troy. 2016. Pp. 958–61 in *Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct*. New York, New York, USA: ACM Press.

### SOLE MAKER: TOWARDS ULTRA-PERSONALISED SHOE DESIGN USING VORONOI DIAGRAMS AND 3D PRINTING

Feijs, Loe, Troy Robert Nachtigall, and Oscar Tomico. 2016. in *Proceedings of the 2016 Fabrication and Sculpting Event - FASE of the International Geometry Summit - IGS'16*. The International Society of Arts, Mathematics and Architecture.

### 2013 E-TEXTILE SWATCHBOOK EXCHANGE: THE IMPORTANCE OF SHARING PHYSICAL WORK.

Hertenberger, Anja, Barbro Scholz, Becky Stewart, Ebru Kurbak, Hannah Perner-Wilson, Irene Posch, Isabel Cabral, Jie Qi, Katharina Childs, Kristi Kuusk, and Troy Nachtigall. 2014. Pp. 77–81 in *Proceedings of the 2014 ACM International Symposium on Wearable Computers: Adjunct Program*.

## SELECTED EXHIBITIONS AND TALKS

### "DESIGNING FULLY CIRCULAR SYSTEM"

Troy Nachtigall, (19-27 Oct 2019) Embassy of Sustainable Design, Dutch Design Week, Eindhoven, NL

### "ADAPTIVE AND RESPONSIVE WEARABLES ON THE SCALE OF THE BODY"

Troy Nachtigall (4 Sep 2019) University of Washington Department of Art Design, Seattle, WA, US

### "ULTRA PERSONALIZED DIGITAL CRAFTSMANSHIP"

Troy Nachtigall (29 Aug 2019) Simon Fraser University, Vancouver, BC, CA

### "SYSTEMS FOR PERSONALIZED SHOE MAKING: SOLEMAKER.IO"

Troy Nachtigall and Erwin Hoogerword (30 Mar 2018) EU Wear Sustain Project, Brussels, BE

### "3D PRINTING FOR FASHION WITH FLEXIBLE MATERIALS"

Troy Nachtigall and Koen van Os (10 Nov 2017 and 7 Dec 2017)  
TU/e and Philips Lighting Research, Eindhoven, NL

### "PRESENCE AND PRESSURE SENSING FOR ON THE BODY"

Troy Nachtigall and Admar Schoonen (19 Feb 2016 and 10 Oct 2017)  
Wearable Senses Lab, TU/e, Eindhoven, NL

### "ULTRA-PERSONALISED PRODUCT SERVICE SYSTEMS" FEATURING "THE SPIKE SHOES"

Troy Nachtigall (21-22 July 2017) Paillard Arts Centre, Chartre sul Loir, FR

### "FUTURE WAYS OF WEARING"

Troy Nachtigall., Angella Mackey, Vidmina Stasiulyte, Mila Svectarova and Marion Bernin (9 Dec 2016) Design Research Lab Berlin, Berlin University of Arts, Berlin, DE

### "AHTI – A SPECULATIVE FILM ABOUT WHAT WE WILL WEAR."

Troy Nachtigall., Angella Mackey, Vidmina Stasiulyte, Mila Svectarova and Marion Bernin (9 Dec 2016), Featured Film of Future Ways of Wearing, Berlin, DE

### "SOLEMAKER.IO, ULTRA-PERSONALIZED SHOE CREATION"

Troy Nachtigall, B. Pruijboom, H. Lin . (21-30, Oct 2016),  
Mind the Steps, Dutch Design Week, Eindhoven, NL

### "NUOVE FRONTIERE"

Biago Cisotti, Troy Nachtigall, Salvatore Iaconesi, and Alessandro Baldi, (5 Oct 2016)  
ISIA Firenze, Florence, IT

## LINKS

<http://www.telstraperthfashionfestival.com.au/event/fashioning-technology/>

<https://www.rca.ac.uk/news-and-events/events/digital-fashion-3d-printing-designers/>

<http://fabtextiles.org/fab12-exhibition-shenzhen>

[https://www.textielmuseum.nl/en/vriendendag\\_2016/](https://www.textielmuseum.nl/en/vriendendag_2016/)

<http://mcbw.creativeholland.com/presentations-mcbw-circo-upps-workshops/>

<https://www.dezeen.com/2015/10/20/troy-nachtigall-pauline-van-dongen-leonie-tenthof-van-noorden-3d-printed-high-heels-more-comfortable-than-normal-shoes/>

<https://brinc.wordpress.com/2014/10/20/wear-it-design-expo>

<https://vimeo.com/142735987>

<http://ddp.yuntech.edu.tw/news/2015-09-15/1798>

<https://kazerne.com/design/past-exhibitions/dutch-design-week-2015/>

<https://www.youtube.com/watch?v=oBLEp0JVU8>

<https://www.sparkfun.com/news/512>  
<https://www.wearit-berlin.com/speaker/troy-nachtigall/>

### "FASHIONING TECHNOLOGY"

Troy Nachtigall, Oscar Tomico, Pauline van Dongen (5 Oct 2016)  
Fashion Week Exhibition, Perth, AU

### "DIGITAL FASHION: 3D PRINTING FOR DESIGNERS"

Filippo Nasseti, Troy Nachtigall, Fergal Coulter, and Oliver Smith (19 May 2016)  
Royal College of Art, London, UK

### "FAB TEXTILES @ FAB 12"

Anastasia Pistofidou, Cristian Rizzuti, Troy Nachtigall, and Ricardo Nascimento (9 Aug 2016),  
Fab 12 Conference, Shenzhen, CN

### "TEXTILE THINKING FOR FUTURE FASHION"

Troy Nachtigall (2 Apr 2016), The Textile Museum, Tilburg, NL

### "ULTRA-PERSONALIZED PRODUCTS & SERVICES IN FASHION"

Stephan Wensveen and Troy Nachtigall (23 Feb 2016) Munich Creative Business Week, Munich, DE

### "SOFT WEARABLES AND TEXTILE THINKING"

Oscar Tomico, Troy Nachtigall and Petra Vonk (16-21 Nov 2015) CRTTT Textile Center, Barcelona, ES

### "TEXTILE AND TECHNOLOGY"

Oscar Tomico, Troy Nachtigall, Petra Vonk (27 Nov 2015) Wearable Senses Lab, TU/e, Eindhoven, NL

### "BETWEEN"

Pauline van Dongen and Troy Nachtigall (17-25 Oct 2015)  
Mind The Steps, Dutch Design Week, Eindhoven, NL

### "PROJECTS FOR ARCINTEX"

Oscar Tomico, Troy Nachtigall, Angella Mackey (23 Sep 2015) Wear-IT Conference, Berlin, DE

### "PROJECT J"

Troy Nachtigall, Pauline van Dongen (14 Sep 2015) Prinsjesdag, The Hague, NL

### "LOOKING FORWARD INTO THE FUTURE"

Troy Nachtigall, Boris Deackere, Flor Depla (6-12 Oct 2015),  
The National Fine Arts Museum, Taichung, TW

### "THE FUTURE OF 3D PRINTED SHOES"

Troy Nachtigall, Pauline van Dongen (17-25, Oct 2015),  
Kazerna Art Gallery, Dutch Design Week, Eindhoven, NL

### ETEXTILES FOR WEARABLE TECHNOLOGY

Troy Nachtigall (2 Mar 2015) Amsterdam Fashion Institute (AMFI), Amsterdam, NL

### "WEAR-IT"

Troy Nachtigall and Asta Roseway (22 - Apr to 15 Oct 2014)  
Curator, Microsoft Research Studio 99, Redmond, WA, US

### "MADE IN WASTE"

Moreno Ferrari and Troy Nachtigall (29 May 2014) Pitti Uomo, IED Firenze, Florence, IT

### "THE ROLE OF DESIGN IN CITIES"

Troy Nachtigall, (Oct 29 2013) Global Forum, Trieste, NL

### "LESS IS NEXT / LESS IS NEXT RELOADED"

Stefano Maria Bettega, Cesare Biagiotti, Troy Nachtigall and Andrea Spatari, (11, Sept 2011, 8 Sept 2012) ISIA Firenze, Florence, IT

### "WHERE ELECTRONICS MEET TEXTILES"

Troy Nachtigall, Lynne Brunning, and Nwanua Elumeze (15, Jan 2011) Spark Fun, Boulder, CO

### "OBJECTIFIED / PERSONIFIED"

Annalisa Franco and Troy Nachtigall (17, Jun, 2010) Spazio Arte e Mestiere, Florence, IT

## PROFESSIONAL ACTIVITIES

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### PROGRAM COMMITTEE MEMBER AND REVIEWER

Design Exhibition Chair 2015, Design Committee member 2014 to Present, ACM ISWC International Symposium on Wearable Computing,  
Pictorial AC ACM Tangible Embodied Embedded Interaction 2018

### REVIEWER

Interact, ISWC, CHI, DIS, RTD, and International Journal of Design.

## GRANTS AND FUNDING

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### "WEAR SUSTAIN EU INNOVATION ACTION AWARD"

50,000 Euros to further research into personalized fashion, sustainability, the integration of innovative technology and associated business models. (11 Aug, 2017)

### "DESIGN UNITED DESIGN GRANT"

9,000 Euros for the demonstration of Digitally fabricated production systems (12, July 2016)

### "FASHION INNOVATION AND ATOM LAB AUTOMATION RESEARCH GRANT"

45,000 Euros, SLEM, Partners: ATOM LAB, ( 9, February, 2015)

### "TEXTILE INNOVATION RESEARCH GRANT"

35,000 Euros, Institute of European Design, Partners: Stone Island, (15, June, 2012)