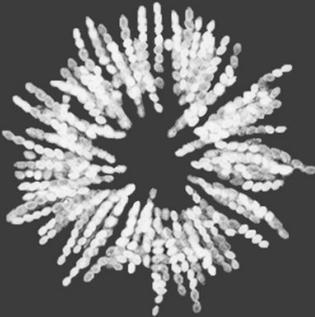


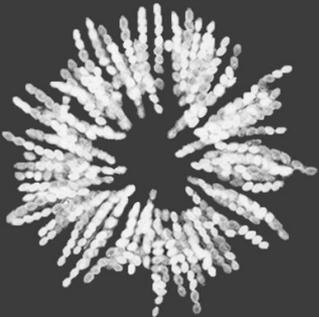
Dr. James Howie

Beyond Academia:
a life in art & science



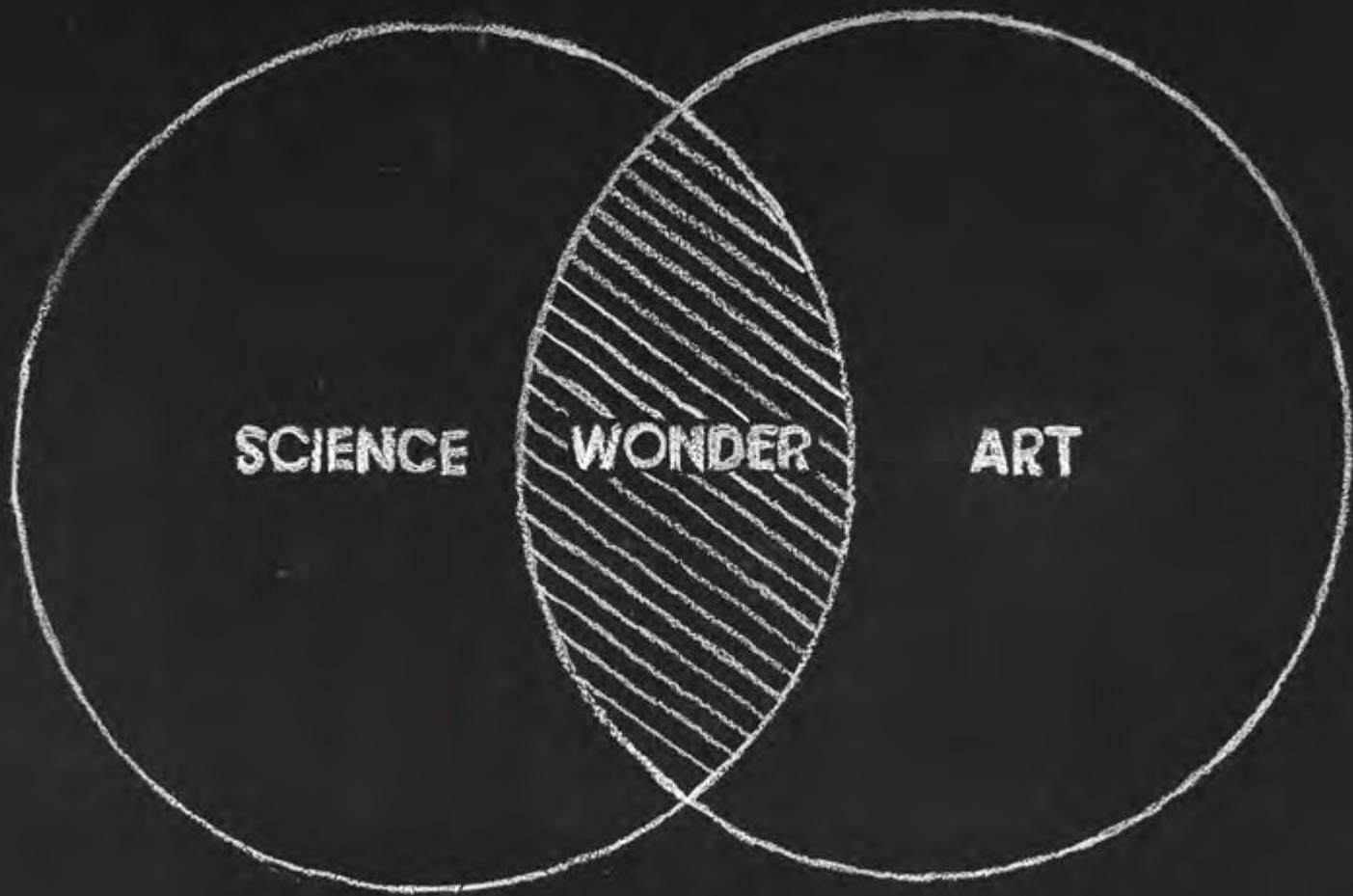
ASCUS
ART & SCIENCE

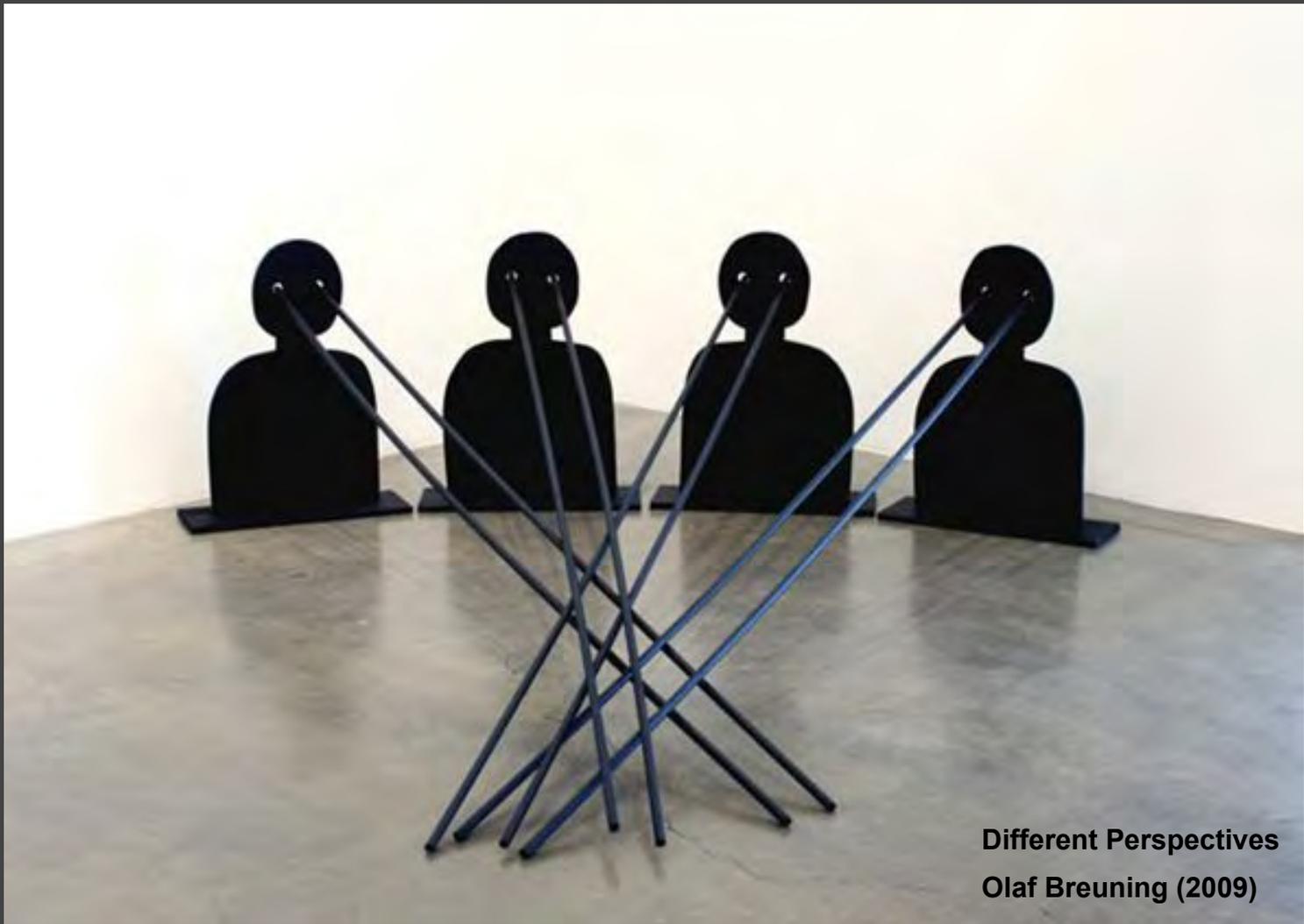
1. Why (and what is) ASCUS



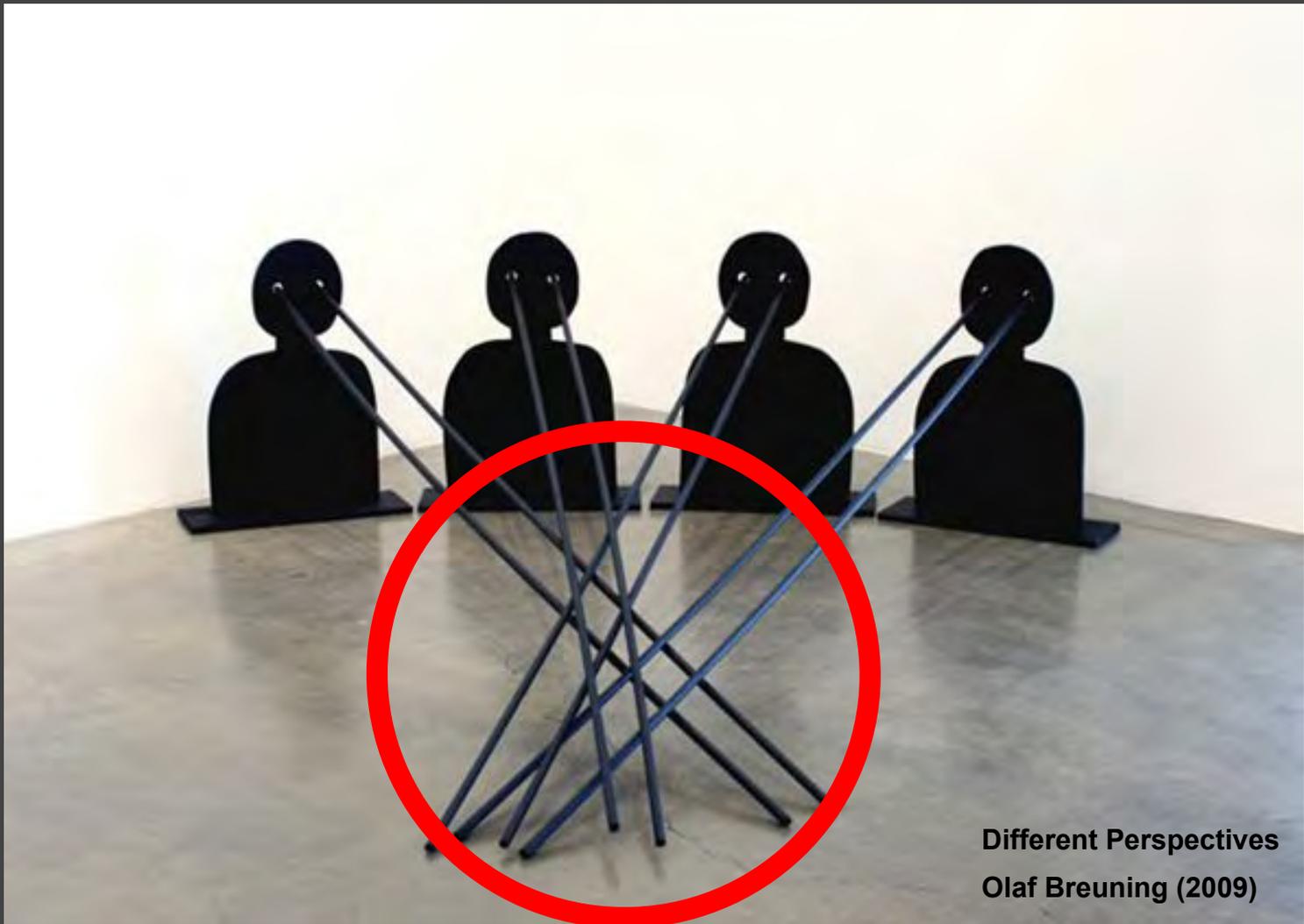
ASCUS
ART & SCIENCE







Different Perspectives
Olaf Breuning (2009)



Different Perspectives
Olaf Breuning (2009)



ASCUS

ART & SCIENCE

Bridging the gap between the arts and sciences

/ choroid plexus





ASCUS 2017

Image by Miriam Walsh, from Anger Art Workshop in ASCUS Lab



ASCUS 2016

Image by Miriam Walsh, from Anger Art Workshop in ASCUS Lab



ASCUS 2015

Image by Julia Maly, from How The Light Gets In, EDSF 2015



ASCUS 2014

Image from Biological Sciences Department



ASCUS 2013

Image from Georgia and Architect Inspiring New Art



ASCUS 2012

Image from Welcome to the South



ASCUS 2011

Image from Drawing Clinic in King's Building



ASCUS 2010

Image from Science Trust Exhibition



ASCUS 2009

Image from Sever Plot



ASCUS 2008

Image from Gardens of Course, Speculation Field Trip



CONNECT ARTISTS, SCIENTISTS & PUBLIC



ENGAGE NEW AND WIDER AUDIENCES



FOSTER UNCONVENTIONAL & CREATIVE THINKING



FACILITATE EXCHANGE OF IDEAS



SUPPORT COLLABORATION



ENCOURAGE DISCUSSION & DEBATE



PROVIDE ACCESS TO RESEARCH FOR NON-SCIENTISTS



ART-SCIENCE RESIDENCIES



ART-SCIENCE EXHIBITIONS



ART-SCIENCE EVENTS



'ARTISTS ARE PRESENT'



ART & SCIENCE WORKSHOPS



SKILLS TRAINING & COURSES



PUBLIC LAB OPEN SESSIONS



INDEPENDENT LAB PROJECTS



2. Who is this guy



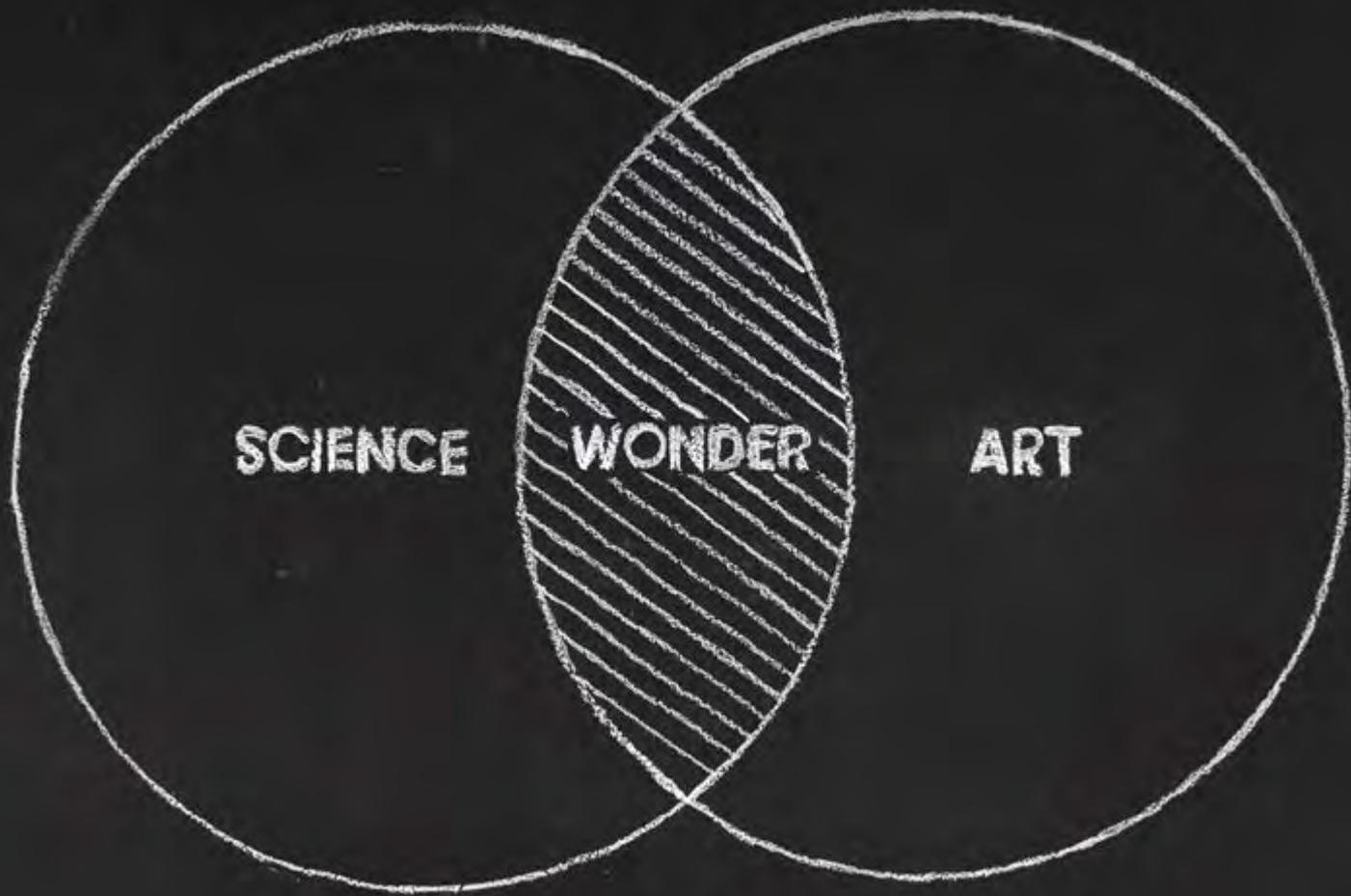
ASCUS
ART & SCIENCE



**BOOTHAM
SCHOOL**
AGES 3-18

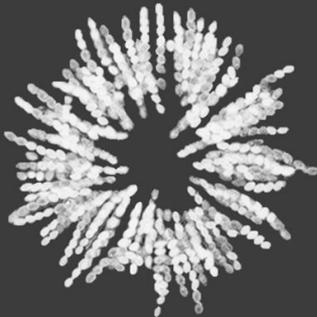


BOOTHAM
SCHOOL
AGES 3-18





3. The University years



ASCUS
ART & SCIENCE





THE UNIVERSITY
of EDINBURGH





THE UNIVERSITY
of EDINBURGH

NERC

SCIENCE OF THE
ENVIRONMENT





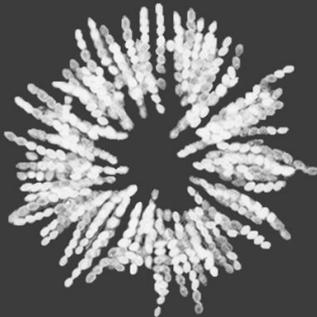








4. ASCUS is born



ASCUS
ART & SCIENCE



MAYBE YOU AREN'T

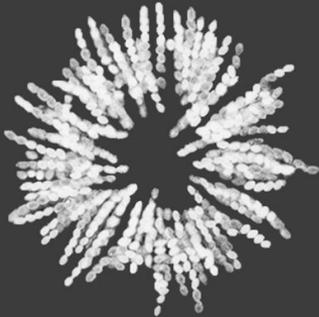


**A COMPLETE WHACKEROO
AFTER ALL**

... MAYBE YOU JUST LIKE TO THINK ABOUT ART AND SCIENCE
AND ARE INSPIRED BY HOW THEY MIGHT INTERSECT IN STRANGE,
BEAUTIFUL, AND THOUGHT-PROVOKING WAYS
EXPLORE THE ART-SCIENCE INTERSECTION



5. PhD Life + ASCUS



ASCUS
ART & SCIENCE

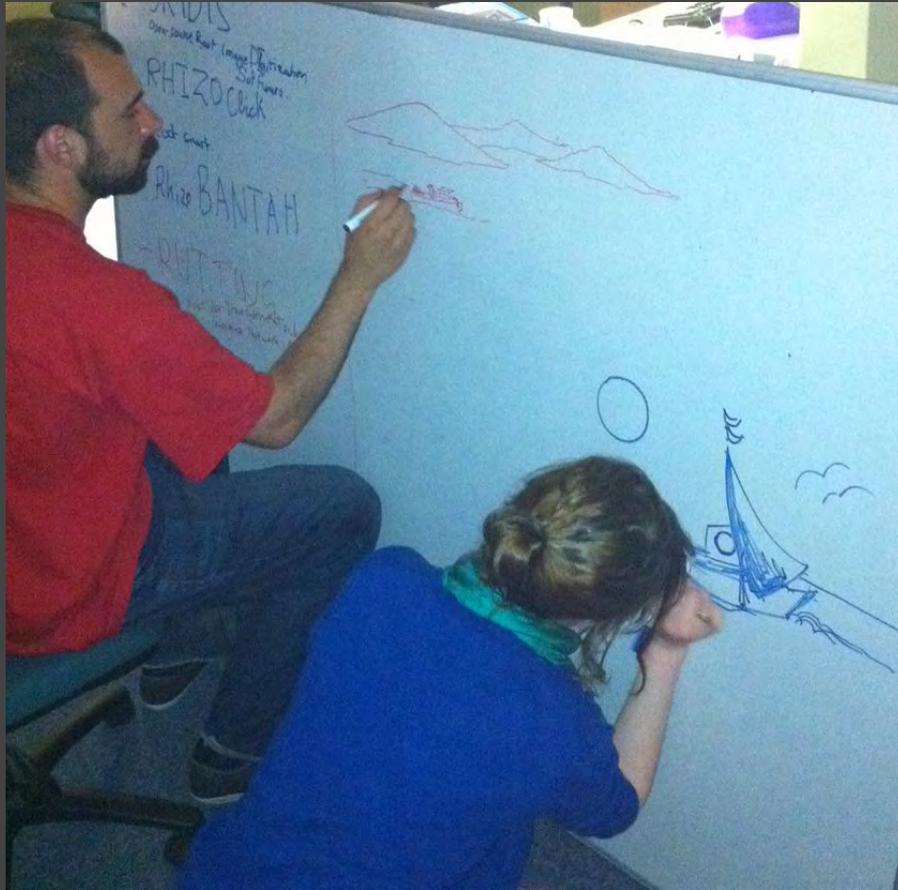


5. More than just scientists?



ASCUS
ART & SCIENCE







6. PhD + ASCUS checkin



ASCUS
ART & SCIENCE









7. Final results (PhD.)



ASCUS
ART & SCIENCE

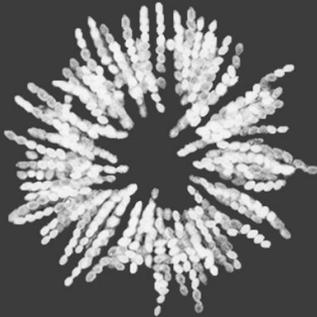






8. After the PhD?

? ? ? ? ?



ASCUS
ART & SCIENCE



...ale Com... Methanogenesis Inferred
...om Me... and Grav... Spaceborne Data
A. Anthony Bloom, et al.
Science 322 (2010);
DOI: 10.1126/science.11751

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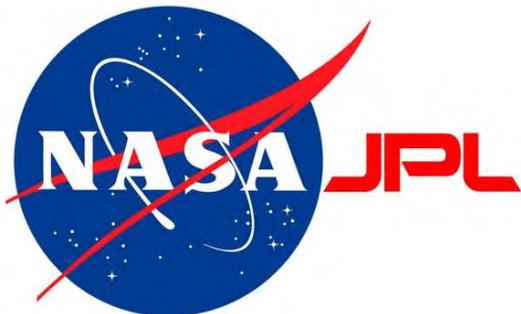
The following resources related to this article are available online at www.sciencemag.org (this information is current as of January 26, 2010):

Updated information and services, including high-resolution figures, can be found in the online version of this article at:
<http://www.sciencemag.org/cgi/content/full/327/5963/322>

Supporting Online Material can be found at:
<http://www.sciencemag.org/cgi/content/full/327/5963/322/DC1>

This article appears in the following subject collections:
Atmospheric Science
<http://www.sciencemag.org/cgi/collection/atmos>

ag.org on January 26, 2010



JPL Science

JPL Science Division Home

Planetary Science

Astrophysics & Space Sciences

Earth Science

Center for Climate Sciences (3292)

Earth Surface And Interior (329A)

Ocean Circulation And Air Sea Interaction (329B)

Sea Level And Ice (329C)

Stratosphere And Upper Troposphere (329D)

Atmospheric Physics And Weather (329E)

Terrestrial Hydrology (329F)

Carbon Cycle And Ecosystems (329G)

People

Projects

Laboratory Studies And Atmospheric Observations (329H)

Tropospheric Composition (329I)

Aerosols And Clouds (329J)

Directorate Science Affiliates

Open Postdoc Positions

Brochures

Carbon Cycle And Ecosystems (329G): People

Anthony Bloom

The terrestrial biosphere is a fascinating yet poorly resolved component of the Earth's carbon cycle. My primary interests are to resolve global-scale terrestrial carbon cycle processes and their influence on carbon exchanges between the atmosphere and the terrestrial biosphere. My PhD focus was to quantify biospheric CH₄ emissions based on satellite datasets of atmospheric CH₄, gravity and leaf area. In my current research I am using models of the carbon cycle and satellite datasets to quantify CO₂ and CH₄ emissions from wetlands and tropical fires, and the broader terrestrial biosphere.



Address:
Jet Propulsion Laboratory

700 Oak Grove Drive
Pasadena, CA 91106

Phone:
(818) 354-5952

Email Contact:
[Click here](#)

Current Vitae:
[Click here](#)

Education

- PhD, Satellite-Based Estimation of Global Biogenic Methane Emissions, University of Edinburgh (UK) (2011)
- MRes, Physics of the Earth and Atmosphere, University of Leeds (UK) (2007)
- MSci, Earth and Space Science, University College London (UK) (2006)

Research Interests

- Wetlands and the global CH₄ budget
- Biomass burning CH₄, CO and CO₂ emissions
- Terrestrial carbon cycling

Professional Experience

- Research Scientist at JPL, (2016 - present)
- Caltech Postdoctoral Scholar at JPL, (2014 - 2016)
- Post-Doctoral Research Associate in Terrestrial Carbon Cycling, University of Edinburgh (UK), (2011-2014)

(818)
354-
5952



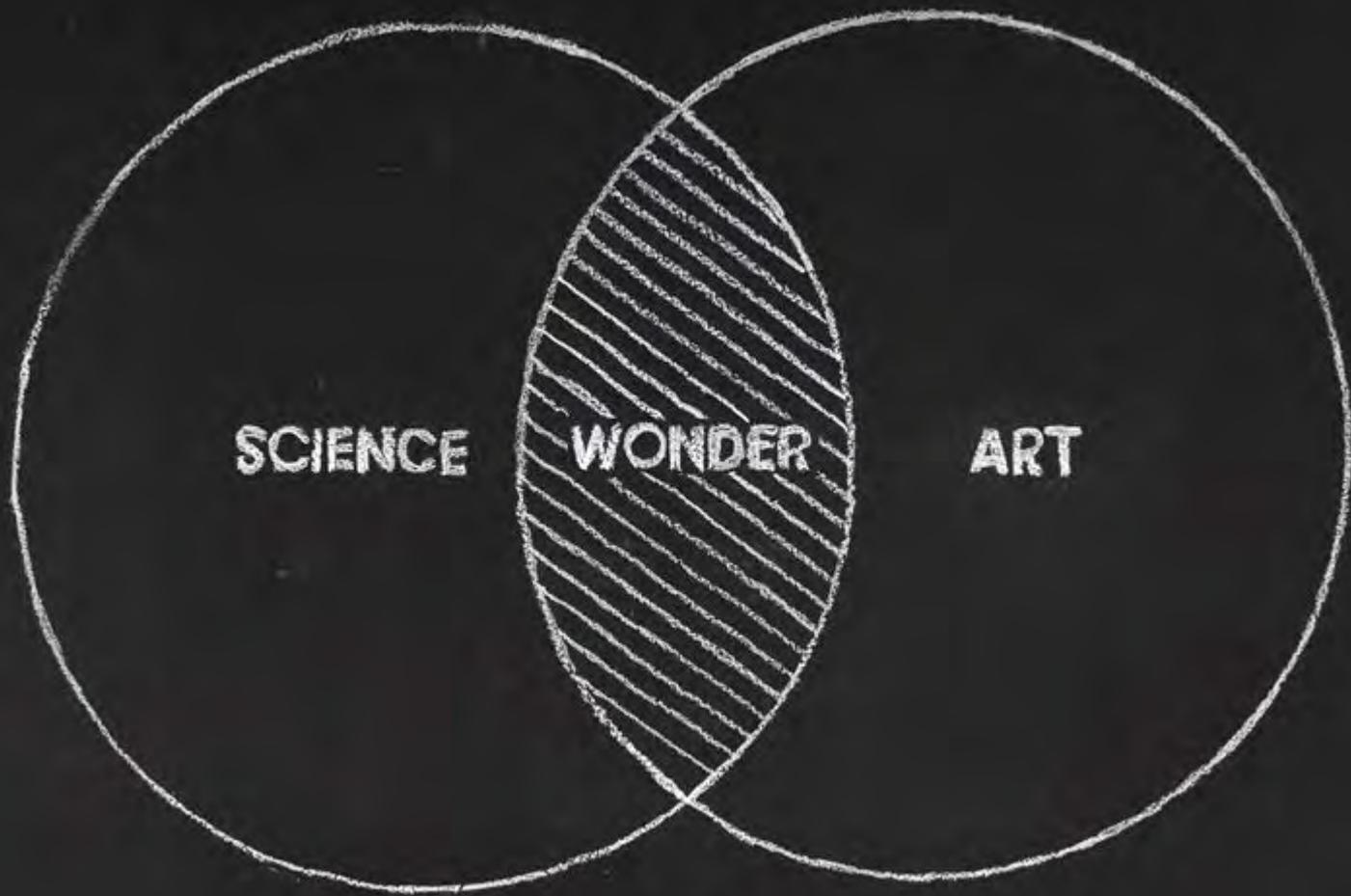
9. ASCUS

Art & Science



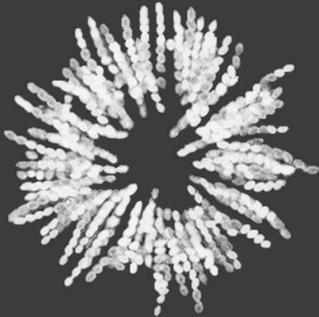
ASCUS
ART & SCIENCE







10. The Power of Ideas



ASCUS
ART & SCIENCE

TEDx

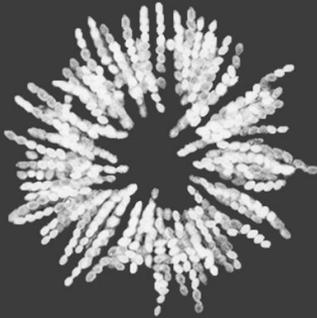
University of Edinburgh

x = independently organized TED event

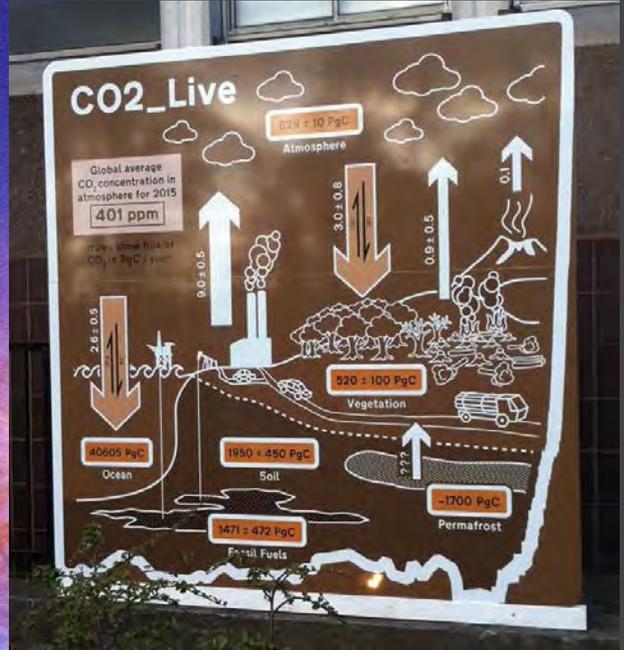


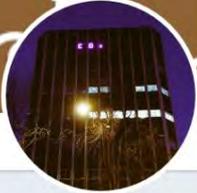


11. Personal development



ASCUS
ART & SCIENCE





Tweets **11.7K** Following 1,161 Followers 327 Likes 8

Follow

CO2_Live

@co2_live

Edinburgh's real-time CO2 levels displayed across the city from @Summerhallery @EdTechCube. By @_ASCUS et al

Edinburgh, Scotland

ascus.org.uk/co2_live

Joined March 2016

Tweets Tweets & replies

- 
CO2_Live @co2_live · 43m
 Current CO₂ level in Edinburgh: 381 ppm #viewco2
- 
CO2_Live @co2_live · 2h
 Current CO₂ level in Edinburgh: 382 ppm #viewco2
- 
CO2_Live @co2_live · 4h
 Current CO₂ level in Edinburgh: 388 ppm #viewco2

New to Twitter?

Sign up now to get your own personalized timeline!

Sign up

Worldwide trends

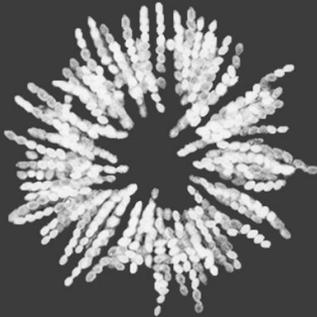
#CaptainMarvel
475K Tweets

#NationalCheeseburgerDay
15.5K Tweets

#FelixMartes



12. Staff and Community



ASCUS
ART & SCIENCE



FORMER ASCUS TEAM



Ryan Lewis
ASCUS Lab
Technician/



Cecile Menard
ASCUS Project
Development



Barbara Melville
ASCUS Literature
Co-ordinator



Marina Freijo
ASCUS Lab Technician
Synthetic Biology &
Biotechnology



Ksenija
Jackevica
Marketing and PR
Assistant Intern



Claire Waugh
Business
Development Intern



Patryk Zak
ASCUS Marketing and
Public Relations
Intern



Diego Almazán
ASCUS Audio Visual
Intern



Emily Grieve
ASCUS Events
Assistant



Bridget Steed
ASCUS Cabinets
Curator



Sara Frizzell
Former ASCUS Intern



Emily Workman
Former Assistant
Manager



Paul Parrish
ASCUS Co-Founder



Melanie Dutton



Christine
Ratcliffe



Stephan
Matthesen



Julia Malle



Betsy Davis



Inbal Drue



Andrew Ormston



Hamer Dodds



Chris Cottrell

FORMER CONTRIBUTORS



Erin Letovsky



Iain Woodhouse



Lynette
Robertson

Former Directors



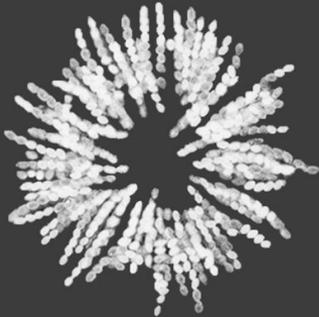
Sheona Burrow
Director
Scottish Solicitor
(non-practicing)



Mark Eischeid
Director
ESALA, Edinburgh
College of Art,



13. Artist Residencies



ASCUS
ART & SCIENCE



14. ASCUS Lab



ASCUS LAB
ART & SCIENCE





ASCUS LAB

ART & SCIENCE

...a shared space for researchers, artists and members of the public



W
wellcome



SUMMERHALL



BRITISH
SCIENCE
ASSOCIATION

“Science is too important, valuable and fascinating to be left to professional scientists alone. For the good of society, the public, and scientific progress itself, science needs a broader community,”

Imran Khan, Chief Executive of the BSA (December 2015):

Current: Head of Public

Engagement at the Wellcome Trust



EX-RESEARCH LAB EQUIPMENT FROM ACROSS EDINBURGH



CURRENT BOARD MEMBERS



Lucy Stewart
ASCUS Lab co-founder



Patrick Hickey
Independent Scientist
Summerhall



Mark Blaxter
Institute of
Evolutionary Biology,
University of
Edinburgh



Alistair Elfick
Chair of Synthetic
Biological Engineering,
University of
Edinburgh



Mar Carmena
Senior Research
Fellow, Wellcome Trust
Centre for Cell Biology,
University of
Edinburgh



Karen Halliday
Reader in Genetics,
University of
Edinburgh



Sarah Roberts
Independent Artist



John Mullins
University/BHF Centre
for Cardiovascular
Science, University of
Edinburgh



**Brian Cameron
MBE**
School of GeoSciences
technical support,
University of
Edinburgh



David Carmel
Lecturer in Psychology,
University of
Edinburgh



David Price
Developmental
Neurobiology,
University of
Edinburgh



Dean Hughes
Head of School of Art,
ECA, University of
Edinburgh



Jane Haley
Edinburgh
Neuroscience
Coordinator, University
of Edinburgh



Jane McKie
Lecturer in Creative
Writing, Poet,
University of
Edinburgh



Sophia Lycouris
Director of the
Graduate Research
School, ECA, University
of Edinburgh



Harry Whalley
Composer,
Department of Music,
University of
Edinburgh



Chris Speed
Chair in Design
Informatics



Johanna Holtan
Strategic Projects
Officer, IAD, University
of Edinburgh



Claire Hills
Talbot Rice Gallery
Assistant



Alistair Grant
Project Director, The
Number Shop



Gina Browne
Health and Safety
Manager, School of
BioMedical Sciences,
University of
Edinburgh



David Faithful
Lecturer Duncan of
Jordanstone College or
Art & Design,
Edinburgh Printmakers



Jim Scobbie
Professor of Speech
Science, Queen
Margaret University



Jane Calvert
Reader in Science,
Technology and
Innovation Studies,
University of
Edinburgh



Rory Duncan
Head of Institute of
Biological Chemistry,
Biophysics and
Bioengineering,
Heriot-Watt University



Oron Catts
Director of SymbioticA,
the Centre of
Excellence in Biological
Arts, The University of
Western Australia

FORMER BOARD MEMBERS



**Joyce Tait, CBE,
FRSE**
Director, Innogen
Institute, University of
Edinburgh



**Janine
Matheson**
Director Creative
Edinburgh

The main three areas of focus of our lab facility...

MICROSCOPY



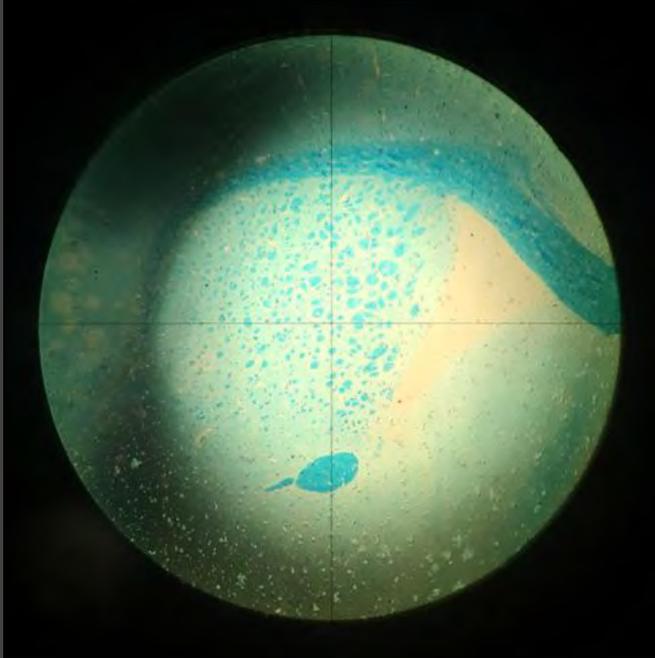
MICROBIOLOGY



DNA ANALYSES & GENETIC MODIFICATION



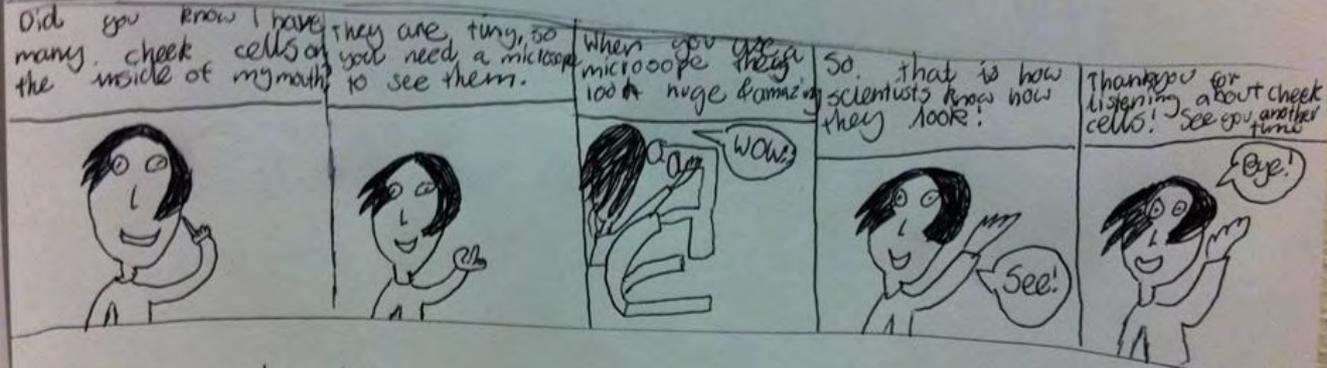
ASCUS LAB



“I’m not sure there’s any way to describe spending a rainy afternoon primarily looking at mouse brains that comes close to conveying how fascinating it actually was! Thanks to ASCUS for arranging it.”

- Rachael, member of public

Cheek cells - Comic Strip



Sophie 17/02/16

“So that is how scientists know how they look”

15. Partners



ASCUS
ART & SCIENCE



eXXpedition
MAKING THE UNSEEN SEEN



Images courtesy of eXXpedition





Gumption girls

I'm not
ready for
this job
yet...??!

Dr. Carla Brown



Antibiotic Apocalypse by Game Dr





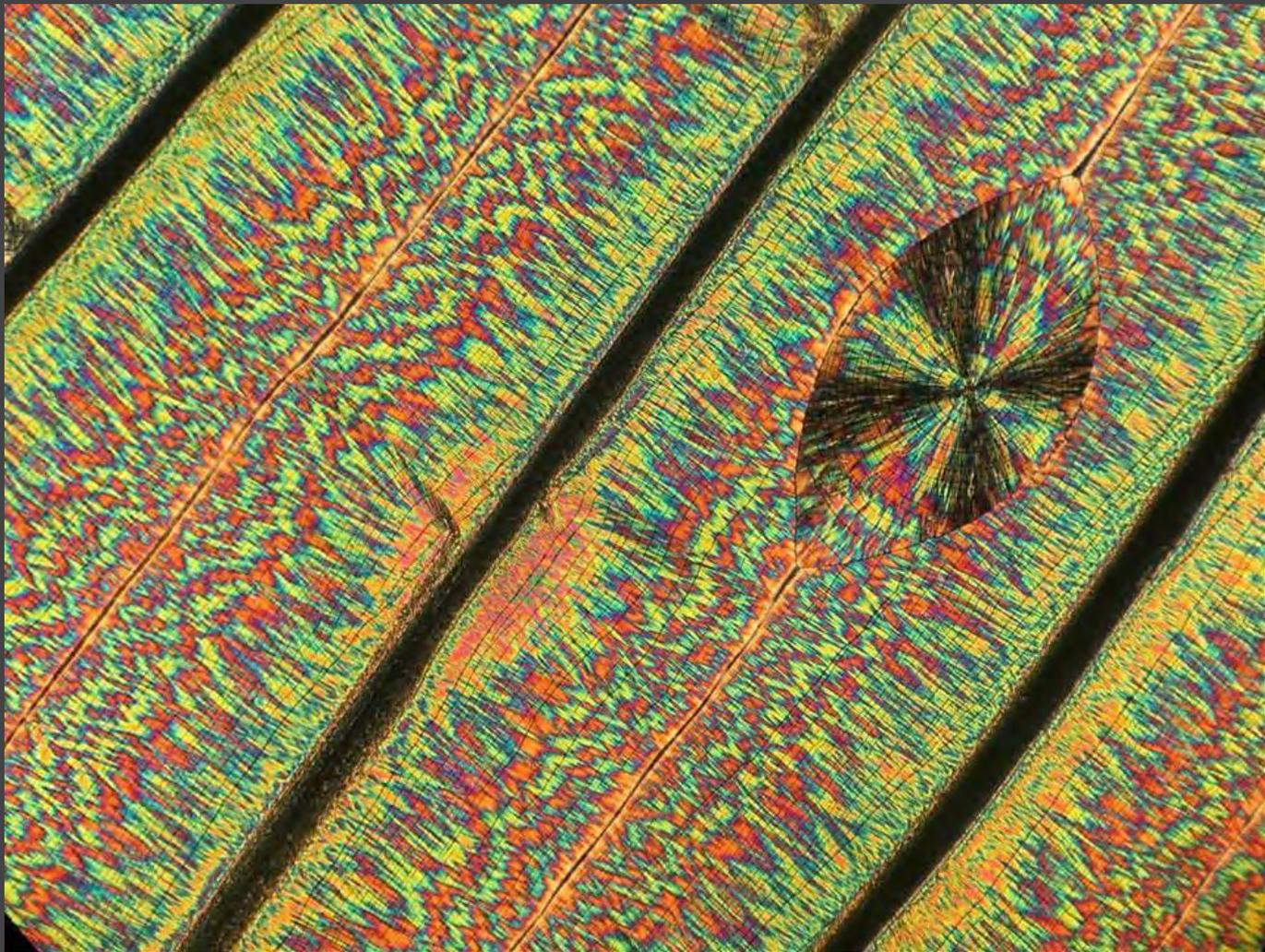
16. ASCUS Lab Community



ASCUS
ART & SCIENCE

Waad
AlBawardi
_primordialsoup





Liquid Crystal Display

EXHIBITION • 29 SEP 2018 – 27 JAN 2019

MORE INFO

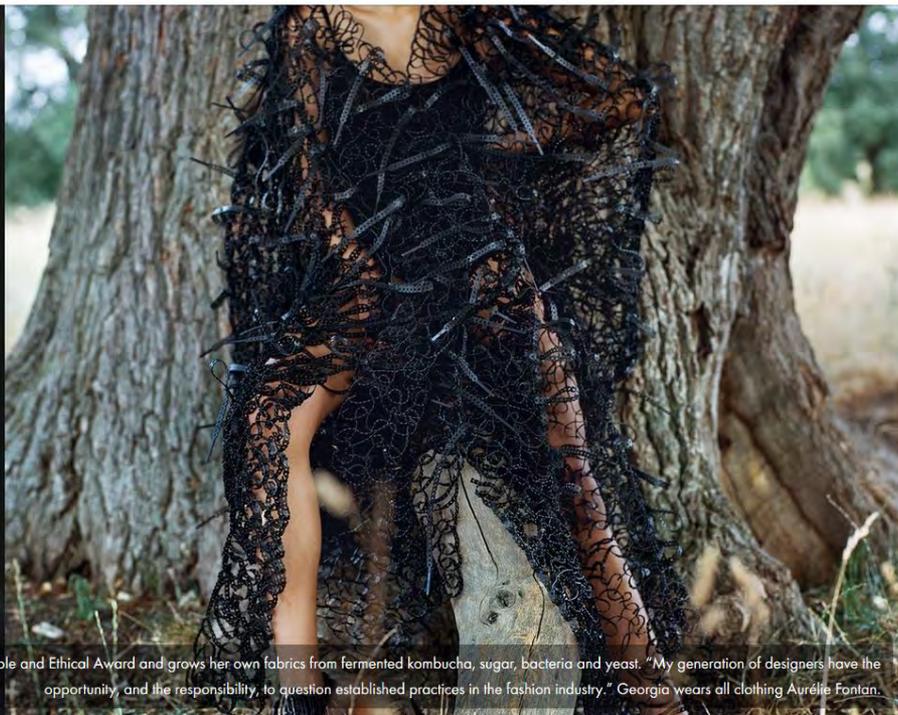
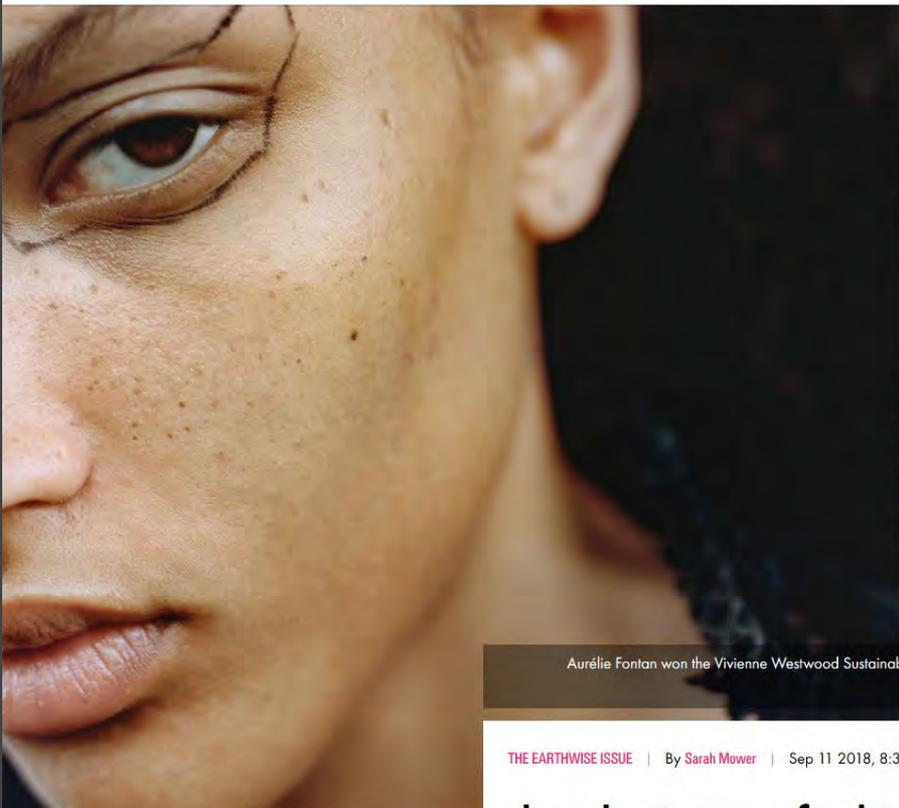
Waad AlBawardi; Lise Autogena & Joshua Portway; Ralf Baecker; Anna Barham; Karen David; The Crystal World (Jonathan Kemp, Martin Howse, Ryan Jordan); Liliane Lijn; Ann Lislegaard; Penny McCarthy; The Otolith Group; Mungo Ponton; Eva Rothschild; Ruskin Collection; Shimabuku; Kiki Smith; Suzanne Treister; Jennifer West.
Curated by Laura Sillars with Angelica Sule.



Aurélie Fontan

i-D VICE

≡ i-D news fashion culture photography music beauty think pieces straight ups podcast

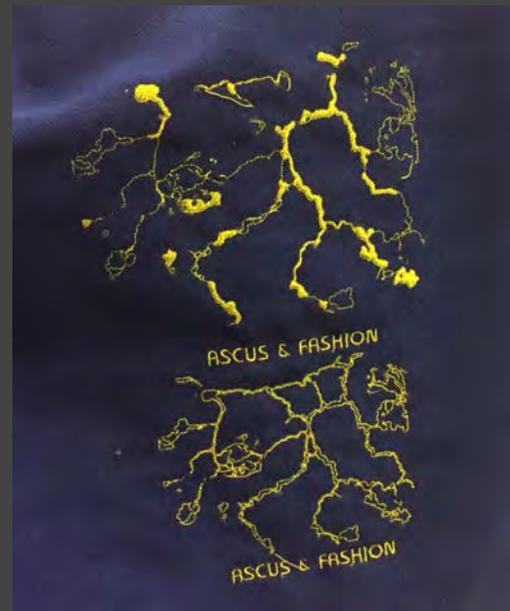


Aurélie Fontan won the Vivienne Westwood Sustainable and Ethical Award and grows her own fabrics from fermented kombucha, sugar, bacteria and yeast. "My generation of designers have the opportunity, and the responsibility, to question established practices in the fashion industry." Georgia wears all clothing Aurélie Fontan.

THE EARTHWISE ISSUE | By Sarah Mower | Sep 11 2018, 8:30am

the designers fashioning the future





aurelifontan.design









“Graduate Fashion Week: 5 Designers To Keep An Eye On”

AURÉLIE FONTAN



SCOTTISH
woman magazine

ELLE
MAGAZINE

1) **Aurélié Fontan**,
Edinburgh College of
Art. **Winner of the
Dame Vivienne
Westwood
Sustainable &
Ethical Award, M&S
Womenswear Award
and the Catwalk
Textiles Award**

Image: <https://www.scottishwomanmagazine.com/2018/09/11/science-meets-fashion/15-aurelie-fontan-399/>
Text: <https://www.elle.com/uk/fashion/a21264649/graduate-fashion-week-designers-to-keep-an-eye-on/>

Dr Máté Ravasz



United Arab Emirates

وكالة الإمارات للفضاء
UAE SPACE AGENCY



Iona Walker



Beyond Resistance





17. University Collaborations



ASCUS
ART & SCIENCE

bdc

BIODESIGN CHALLENGE

MOMA

MUSEUM OF MODERN ART

DO IT YOURSELF BIO

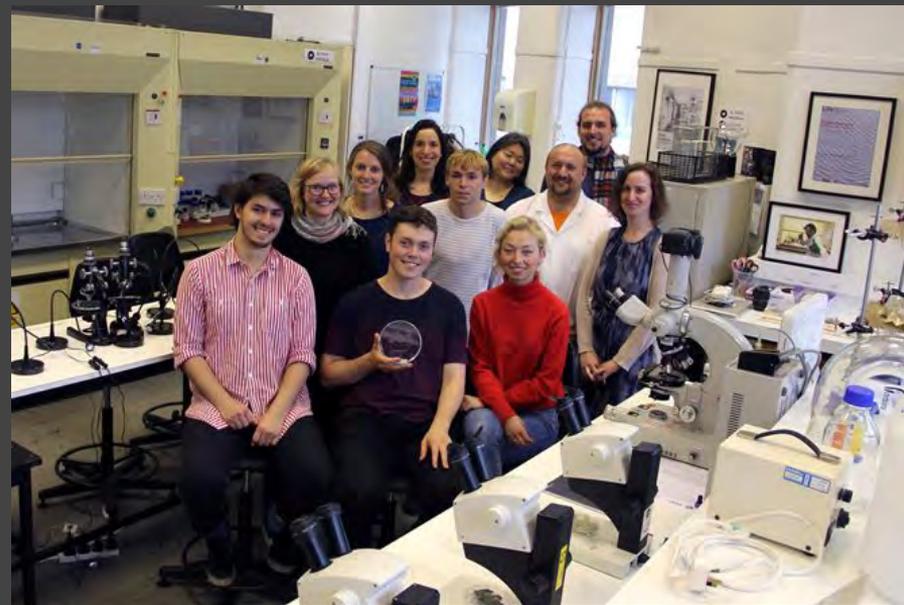


bdc

UK2029

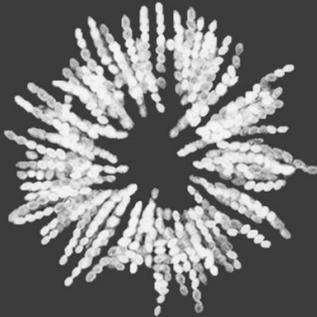
POST-NATURAL
ARTEFACTS FROM THE
UNITED KINGDOM

I
♥
NY





19. Artists in ASCUS Lab



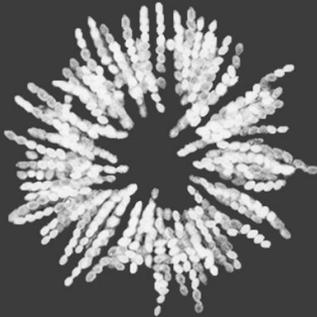
ASCUS
ART & SCIENCE

Louise MacKenzie



Beverley Hood

20. Public Engagement Workshops



ASCUS
ART & SCIENCE



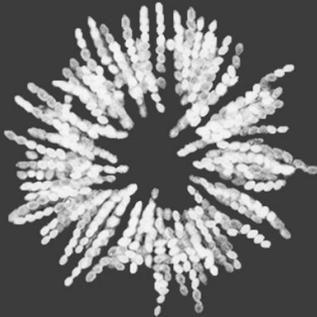
Drawing the Mind

Ana Rondelli
Jemma Pilcher
Anna Mikelson





20. CVS



ASCUS
ART & SCIENCE

Rebecca, Teo, Manolis



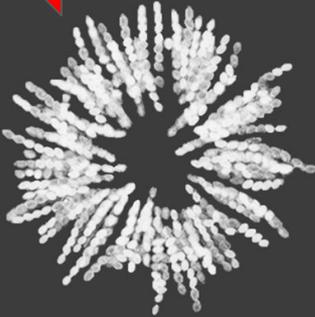








21. So what's next...
for ASCUS...
and this guy?



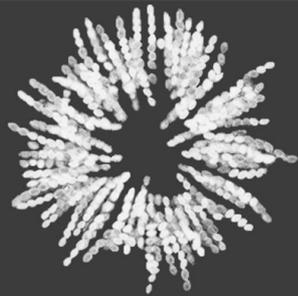
ASCUS
ART & SCIENCE

ual: central
saint martins



Heather Barnett creates art by letting slime mold do its thing. Photo: James Duncan Davidson

X



ASCUS
ART & SCIENCE

ual: central
saint martins

Professional Platform

Professor
Carole
Collet

Designing for the
biocentury

Tuesday 4 July 2017
6-8pm

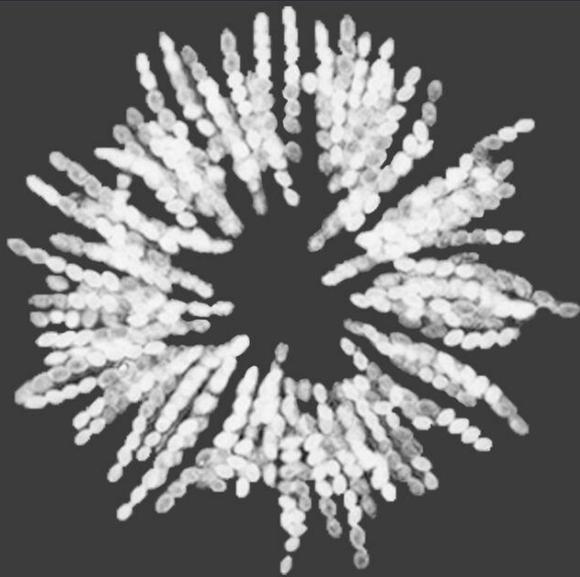
Central Saint Martins
Platform Theatre

Closing by Professor Jeremy Till, Head of Central Saint Martins,
Pro Vice-Chancellor, University of the Arts London

Registration from 6pm
Reception 7:30 - 8:30pm
Platform Theatre Foyer

Q&A <https://is.gd/TdL6e>

A photograph of a small green plant with several leaves and a single dark fruit, growing from a dense, dark, tangled mass of roots that resemble a complex network or structure.



ASCUS

ART & SCIENCE

CELEBRATING 10 YEARS 2008-2018

DR JAMES HOWIE

- MANAGING DIRECTOR



MIRIAM WALSH

- MANAGER



DR JIRI JIROUT

- LAB TECHNICIAN



?????? ??????

- PROJECTS ADMINISTRATOR



MIRIAM WALSH

- MANAGER



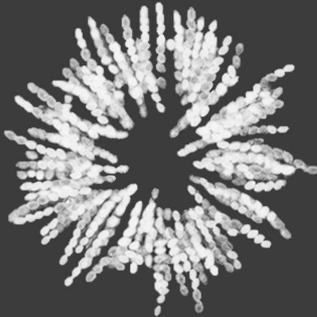
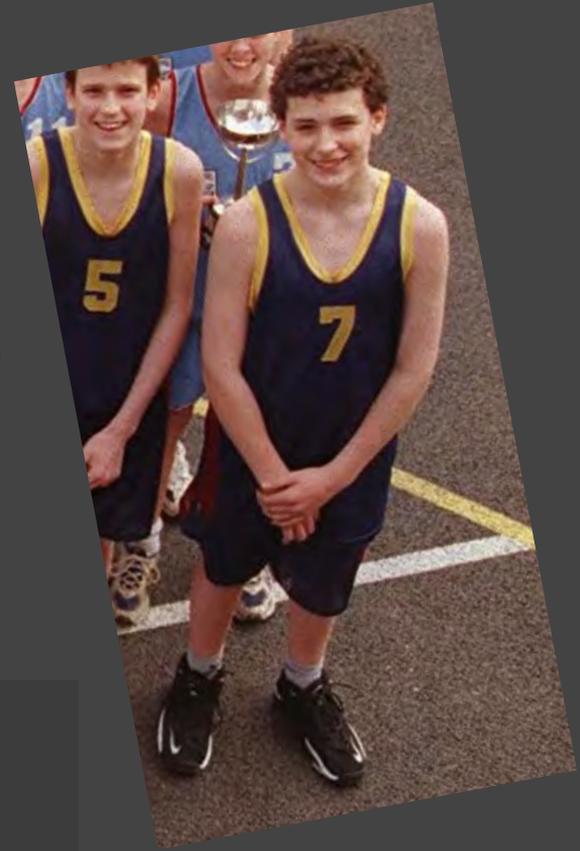
DR JIRI JIROUT

- LAB TECHNICIAN





22. Final Thoughts?



ASCUS
ART & SCIENCE
CELEBRATING 10 YEARS 2008-2018



20 September - **TONIGHT!**

19:00 - 23:00

Ticket prices:

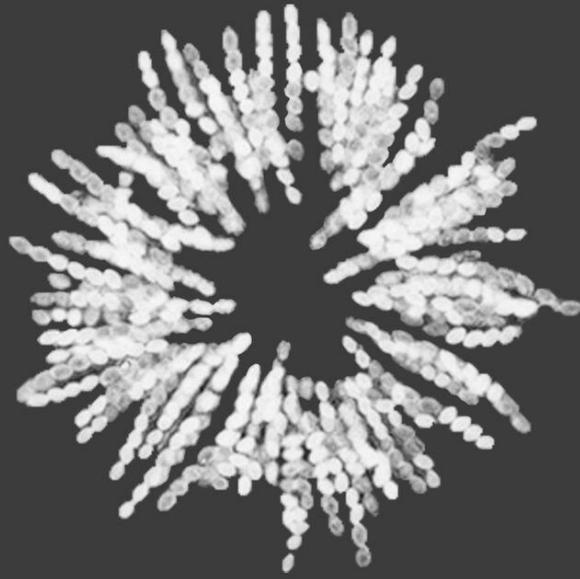
£5 InterSci members*

£7 non-InterSci members

£8 on the door

All of the money raised on the night
will go towards a second Art &
Science on a postcard event hosted
by InterSci and ASCUS lab!





ASCUS

ART & SCIENCE

CELEBRATING 10 YEARS 2008-2018

