

DR MAXWELL J ROBERTS

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USER RESEARCH | INFORMATION DESIGN | LECTURER

[Underground Maps Unravalled] "Max has created what can only be described as a masterpiece of design and beauty. He equally has created some truly vile monsters just to illustrate, good and bad, and what can be achieved but remaining within the rules. There is enough here to make your jaw drop and your eyes burst."

Douglas Rose, former Managing Director of FWT Studios, now independent consultant

Recognised international authority on schematic map design who drives innovation and change via a clear framework and evidence-based methodologies. Inspirational thought leader who has single-handedly influenced the field driving it to new levels of creativity. Multidisciplinary researcher, designer, lecturer, author and public speaker who uniquely combines psychology with user-research, information design, computer science and art.

- **Over thirty years of experience at research methodology**, including statistical analysis and technical report writing, with fifteen years specifically investigating usability testing and user evaluation of design.
- **Validates theories of design via laboratory and online studies**. Creates original maps optimised for visual information configuration, resulting in reduced cognitive load and improved wayfinding.
- **Pioneers alternative design principles and achieves real world impact**; demonstrable evidence of designs, methods and principles being adopted or considered in Europe, Asia and the USA.
- **Undertakes client-driven consultancy** to advise on psychological principles of design, evaluate prototypes and create bespoke maps and infographics in a variety of domains, working to remit, budget and deadlines.
- **Spearheads education of design principles**; integrates framework and research outcomes into course modules and content for undergraduate and postgraduate students. Lectures future designers internationally.
- **Raises awareness of usability-driven design**; delivers engaging presentations to international academic, industry and public audiences, produces peer-reviewed articles, books, newsletters, exhibitions and workshops.

AREAS OF EXPERTISE

Research Methods & Protocols	User Research & Usability Testing	UX Research & Design
Statistical Data Analysis	Technical Report Writing	Schematic Map Design
Visual information Communication	Human Reasoning/Problem Solving	Human Intelligence
Lectures & Presentations	Training & Workshops	Book Design & Editing

PROFESSIONAL EXPERIENCE

TUBE MAP CENTRAL (www.tubemapcentral.com)

2007 – PRESENT

TRANSIT MAP DESIGNER | CONSULTANT | RESEARCHER | PUBLIC SPEAKER

Established *Tube Map Central* as an online conduit to promote consultancy services in transit map design, research and training, publicise alternative concepts and highlight real-world applications. Worked with a range of industry, public and academic partners to create and evaluate designs and disseminate research.

- Champions evidence-based design to improve wayfinding performance and customer experience. Constructs research protocols to evaluate suitability of alternative map layouts. Designs usability tests, creates research materials, conducts statistical analysis, evaluates evidence and writes technical reports and papers.
- Highlights importance of systematic exploration as a methodology for understanding networks and generating prototypes. Personally created 200+ bespoke maps personally to explore new concepts. Set out a framework for effective design to facilitate generation of map prototypes and the evaluation of already-existing creations.
- International influencer; top four design publications cited over 240 times, clear evidence of design principle application – such as curvilinear and concentric circles map implementation in Germany – as well as inclusion in university research/teaching programmes in Germany, Austria and the Netherlands.

- Advises cartographers and map designers worldwide on the suitability of design rules, potential problems with prototypes, alternative options/solutions and scope for improvements.
- Undertakes contract UX research to evaluate client-supplied prototypes in terms of usability and user evaluations, designing/implementing all aspects of testing, and reporting outcomes and recommendations.
- Accepts client-commissioned design work, delivering proof of concept, alternative solutions, rapid prototyping and completed products. Also offers digital map reconstruction from photographs.
- Prepares, organises and delivers tailor-made lecture series, one-off presentations and exhibition lectures. Creates bespoke, engaging, hands-on workshops that encourage audiences to explore alternative concepts, promoting understanding of the complexities of design and offering insights into emerging ideas.
- Writes, edits and publishes books, newsletters and web articles. Regularly explains design concepts on BBC, ITN and Monocle as well as USA and Canadian radio channels, delivers keynote speeches at conferences and events across Europe. Features in American, European and Asian media and art, design and cartography books and journals. Has a massive internet presence.

SELECTED CONSULTANCY PROGRAMMES

- **Advised Karlsruhe Transport Authority (KVV)** on schematic/transit map design and tutored design rules, principles and options to in-house cartographer. Supported implementation of curvilinear maps across KVV transport network and explained effective design and delivery benefits in a presentation to staff.
- **Contracted by FWT Studios**, formerly a major UK designer of public transport information, to advise and implement solutions to transit map design and usability.
 - Documented, presented and gained acceptance of the importance of psychological concepts for schematic map design and wayfinding information, including cognitive load and intelligence. The importance of these flagged thereafter on relevant webpages highlighting company approaches to information design.
 - Designed and implemented a large-scale usability study of prototype route diagrams for Transport for London (Docklands Light Railway). Presented findings and achieved adoption of recommended designs.
- **Collaboration with TradePeers Ltd.** to create a set of twelve regional *Brexit Maps* using the transit map metaphor to highlight Brexit issues in a clear engaging way for business in different sectors to plan ahead.

INFO DESIGN CENTRAL (www.infodesigncentral.com)

2020 – PRESENT

CONSULTANT | INFOGRAPHIC DESIGNER

Established *Info Design Central* as a joint venture with TradePeers Ltd. combining research and design to create infographics that illuminate complex economic, social and political issues.

- **Contracted by Aberfield on behalf of *first direct* bank** to design/interpret research and, from this, create a set of four transit map-style designs showing the financial events of different generations.

UNIVERSITY OF ESSEX

1993 – PRESENT

Department of Psychology (www.essex.ac.uk/people/rober72609/maxwell-roberts)

LECTURER | RESEARCHER: TRANSIT MAP DESIGN (2007 – PRESENT)

Leads groundbreaking multidisciplinary approaches to transit map design, usability testing and user evaluation, delivers positive impact for information design beyond transit maps. Combines psychology and design expertise to create maps with evidence-based reduced cognitive load for journey planning.

- **Wrote course content for a unique elective module: *Transit Maps: Past Present and Future*.** Based on research findings, this presents historical context, development of maps, psychological theories, usability testing and design techniques to third-year undergraduates. Implemented innovative and engaging hands-on assessments.
- **Invited as a guest lecturer and assessor at design schools.** Evaluated students' transit map designs from Parson's New York School of Art & Design (2011). Delivered self-contained modules on transit map design at South Essex College, UK (2010) and New Design University, St Pölten, Austria (2018).
- **Co-plans, organises and chairs ongoing Schematic Mapping Workshop** (www.schematicmapping.org) – England 2014, Austria, 2019, Germany 2021. These disseminate research findings, theories and practical applications to academics and practitioners.

LECTURER | RESEARCHER: COGNITIVE PSYCHOLOGY (1993 – PRESENT)

Joined as the fifth member of a department newly founded in 1991; today a world-class teaching and research centre with a faculty of 60 and a state-of-the-art Centre for Brain Science. Lectures to a growing undergraduate cohort, 250 per year currently. Known for attention to detail and consistency of procedural application.

- **Creates and delivers course content, coordinates module development;** lectures core/elective topics to students, including statistics and human/animal/machine intelligence – emphasising cross-disciplinary issues.
- **Supervised undergraduate and PhD research projects** including individual differences in reasoning strategies, effects of social context on reasoning, and reading and dyslexia remediation.
- **Achieved a Google H-Index of 27;** promotes research into human intelligence, psychometric testing, problem solving, reasoning, inference and decision making: authored/co-authored books and articles in peer-reviewed journals, and presented findings as an invited speaker at conferences and workshops.

DEGREES | SCHOLARSHIPS | TRAINING | AWARDS | NOMINATIONS

Training: Professional Diploma in UX Design, UX Design Institute, 2023

Award: Best International Research Impact, University of Essex, 2022

Nomination: Edward Stanford Travel Writing Award, *Airline Maps: A Century of Art & Design*, 2020

Award: NACIS Atlas of Design, Chicago EI network inspired by Frank Lloyd Wright, 2018

Training: Information Design Summer School, Simplification Centre, 2015

PhD, Psychology, University of Nottingham, 1992

Award: Gertrude Cropper Prize for Excellence in Research, University of Nottingham, 1990

Scholarship: EPS Study Visit Grant, Age & Cognitive Performance Centre, University of Manchester, 1990

Training: BPS Level A Psychometric Test Administration, Saville & Holdsworth Ltd., 1989

BSc, Psychology (First Class Hons), University of Nottingham, 1988

VISITING LECTURESHIPS | MEMBERSHIPS | EDITORIAL POSITIONS

Guest Editor, The Cartographic Journal *special issue – Beck at 90*, 2022-2023

Visiting Lecturer, New Design University, St Pölten, Austria, 2018

Member of the Design Research Society, 2018 – present

Honorary Lecturer, School of Computing, University of Kent, 2016 - 2019

Member of the Sign Design Society, 2010 – 2020

Visiting Research Fellow, Faculty of Arts & Human Sciences, London South Bank University, 2009 - 2017

Associate Editor, European Journal of Cognitive Psychology, 2009 – 2011

Editorial Board & Peer Reviewer, European Journal of Cognitive Psychology, 2005 – 2008

Associate Editor, British Journal of Psychology, 2001 – 2006

RECOMMENDED PRESENTATIONS AND WRITING (linked)

PRESENTATIONS

- [Round in circles and back again: simplicity, coherence, and the need for evidence-based design](#), Typo Berlin, Berlin, May 2016.
- [Underground Maps Unravelled](#), TEDx University of Sussex, March 2013.

SHORT PAPERS

- [Us versus them: Ensuring practical and psychological utility of measurements of schematic map usability](#), Schematic Mapping Workshop, TU Wien, April 2019.
- [What's your theory of effective schematic map design?](#), Schematic Mapping Workshop, University of Essex, April 2014.

BOOKS

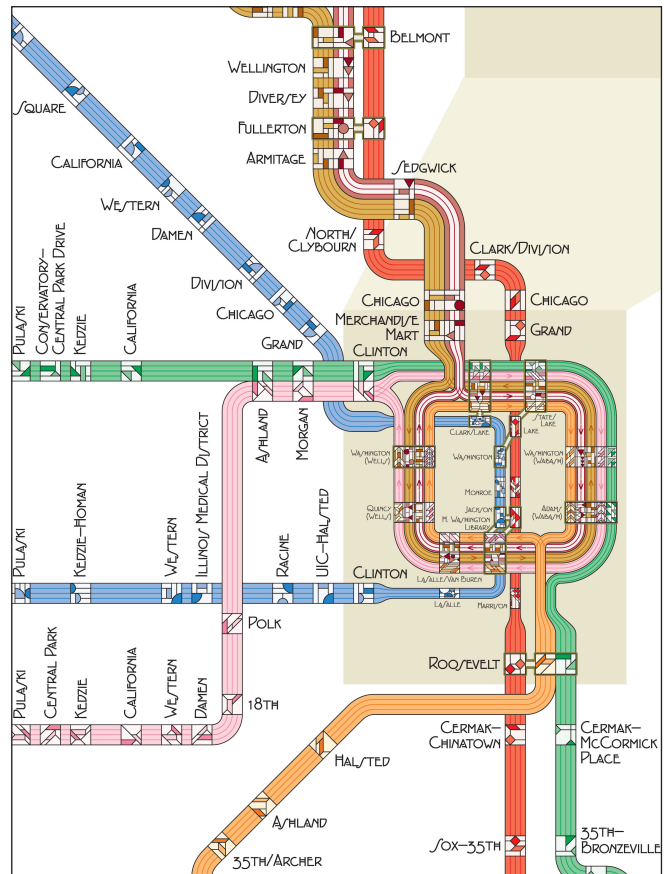
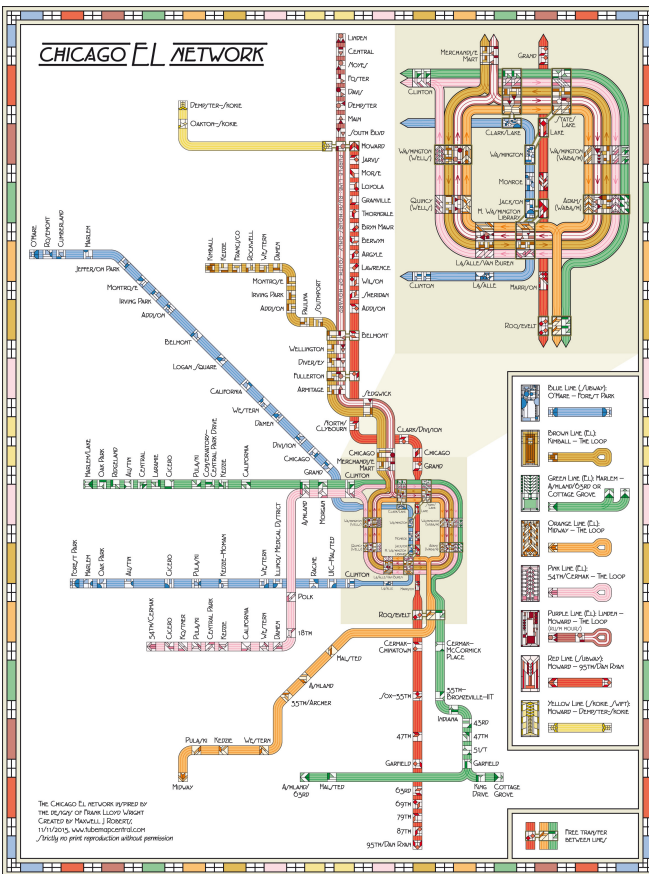
- [Airline Maps: A Century of Art and Design](#) (with Mark Ovenden), Penguin Books, 2019.
- [Underground Maps Unravelled: Explorations in Information Design](#), Published by the author, 2012.

EXAMPLES OF NOTABLE DESIGNS

PARIS CURVILINEAR: EASIER TO USE THAN OFFICIAL VERSION



CHICAGO EL INSPIRED BY FRANK LLOYD WRIGHT (ART MAP): AWARD WINNING



FULL ACADEMIC CV AVAILABLE [here](#)