Professional Addresses (2017):
Department of Statistics, 367 Evans Hall, *University of California, Berkeley,* CA 94720. USA.
Tel.: +1 (510) 642 2781; Email: anthony.quinn@berkeley.edu
Department of Electronic and Electrical Engineering, *Trinity College Dublin*, Dublin 2.
Tel.: +353 (0)1 8961580; Email: aquinn@tcd.ie

Current Post (permanent):
- *Associate Professor*, Trinity College Dublin*,* Department of Electronic and Electrical Engineering. Appointed to this post (University Lecturer) in May 1993. Promoted to this grade in June 2008.
- *Research Scientist,* Institute of Information Theory and Automation, Department of Adaptive Systems, Czech Academy of Sciences. Appointed 1st January 2018 for three years.
- Elected to *Fellowship of Trinity College Dublin* in May 2008.
- *Visiting Fulbright Scholar,* Department of Statistics, UC Berkeley, Sept. 2016 – Sept. 17.

Degrees:
PhD: University of Cambridge, 1992.
Bachelor of Engineering (Electronic): National Univ. of Ireland, Dublin, 1988. 1st place; 1st-class honours.

Professional Record:
2018-21: *Research Scientist* (three-year contract)*,* Department of Adaptive Systems, Czech Academy of Sciences, Prague, Czech Republic.
2016-2017: *Visiting Fulbright Scholar,* Department of Statistics, University of California at Berkeley, US. (one-year position).
2014-2017: *Visiting Researcher (funded)*, Department of Adaptive Systems, Czech Academy of Sciences, Prague, Czech Republic.
2009, 2011: *Invited Professor (funded),* SATIE Laboratory, École Normale Supérieure, Cachan, France.
2010, 2012: *Recurrent PhD Examiner*, École Supérieure d'Électricité (Supélec), France.
2011: *Chair,* Irish Signals and Systems Conference (ISSC), 2011.issc.ie.
2011-2013: *Director of Research in Engineering,* Trinity College Dublin.
2008-present: *Associate Professor,* Department of Electronic and Electrical Engineering, TCD.
2008: *Election to Fellowship (FTCD),* Trinity College Dublin.
2004-2005: *Research Scientist,* Department of Adaptive Systems, Czech Academy of Sciences, Prague, Czech Republic (one-year research position).
1997: *Visiting Professor (salaried),* Department of Electrical Engineering, State University of New York (SUNY), Stony Brook, U.S. (Fall Semester sabbatical position).
1993-2008: *University Lecturer*, Department of Electronic and Electrical Engineering, TCD.
1992-1993: *Visiting Fellow,* School of Electronic Engineering, Dublin City University.
1988-92: *PhD Student,* Signal Processing and Communications Group, Department of Engineering, University of Cambridge. Student of Trinity College Cambridge.

Details of Appointments and Responsibilities:
- **Research Scientist**, Department of Adaptive Systems, Czech Academy of Sciences, Prague. 2017-2021.
- **Visiting Fulbright Scholar,** Department of Statistics, University of California at Berkeley, Sept. 2016-Sept. 2017.
- **Visiting Researcher**, Department of Adaptive Systems, Czech Academy of Sciences, Prague, Sept.-Dec. 2014, Sept.-Dec. 2015, Sept.-Dec. 2016, May 2017. PI on Czech research funding agency (GAČR) grant, 16-09848S, *Rationality and Deliberation.*
- **Director of Research,** School of Engineering, Trinity College Dublin, 2011-2013. Lead author of the Full Strategy for Trinity's *Engineering, Energy and Environment Institute (E3)*. Organized funding for the E3 PhD Scholarships (three scholars) in 2013. Established TCD root-level webpage for the E3: www.tcd.ie/E3

- Appointed **Chair** of the Irish Signals and Systems Conference 2011 ([http://2011.issc.ie)](http://2011.issc.ie).

- **Invited Lectures in the United States, 2017:**
  - Department of Applied Mathematics and Statistics, University of California at Santa Cruz, February 2017.
  - Berkeley Laboratory for Information and System Sciences (BLISS), University of California at Berkeley, April 2017.
  - Wisconsin Institute for Discovery, University of Wisconsin at Madison, April 2017.
  - Inter-Disciplinary Distinguished Seminar Series invitee, Department of Electrical and Computer Engineering, North Carolina State University, October 2017.

- **Invited Lecture** at 1st Int. Workshop on New Computational Methods for Inverse Problems (VALUETOOLS), Paris, May 2011 (http://www.ncmip.org/2011/PlenarySpeakers.shtml). Has given ~20 other **invited lectures** internationally, such as at the 8th World Bayesian Statistics Meeting, Valencia, June 2006, and at the École Normale Supérieure (ENS), Cachan, Paris, and ONERA (the French aerospace agency), Sept. 2009.
- Appointed to **Editorial Board** of key Elsevier journal, *Signal Processing,* 2011-12.
- One-week **invited course** in *Bayesian Signal Processing* at Linköping University in Sweden (March 2008), invited by Prof. Lennart Ljung, a foundational figure in signal processing.
- Appointed **Invited Professor** (4-6 week formal research post), ENS Cachan (2009 and 2011).
- Elected to **Fellowship** at TCD in 2008.
- Unbroken record of **scholarly publication** since 1990. His monograph has sold about 400 copies to date, and is widely cited. The independence of his research is evidenced by the fact that ~18 of his papers are sole-authored. ~25 of his papers are published by the IEEE. He has given about ~51 international conference presentations.
- Member of the **Technical Programme Committee** of many international conferences, including 2015 European Signal Processing Conference (EUSIPCO). Invited to be a **reviewer** annually for the best conferences in his field, including the 2016 IEEE Image Processing conference, and for top journals such as the IEEE Trans. on Signal Processing.
- Invited to be an **assessor** of scientific grant applications for the European Commission ERC scheme (2016), French Research Agency (2012), Czech Academy of Sciences (2009 and 2012),Vienna Science and Technology Fund (2007).
- He has been an **examiner** of five PhDs in recent years, including two in French at École Normale Supérieure d'Électricité (Supélec), Paris, 2010 and 2012.
- Appointed **Visiting Professor** at S.U.N.Y., Stony Brook, New York, in 1997, where he delivered an MSc course on *Stochastic Systems* during the Fall Semester that year.
- **Member** of the IEEE (~1990-2012). Currently processing Senior Membership for which he qualifies.
- Massive sustained **lecturing** experience in his core disciplines of signal processing, information theory, and probability and statistics for electrical engineers, over 22 years.
- **Visiting Student Coordinator** in Electronic and Electrical Engineering at TCD (until 2016 incl.), coordinating major expansion in programmes into Brazil and other non-EU countries for his Department.
- Extensive experience as **independent PI**, via funded projects listed below. WP leader of major EU IST FET project (*ProDaCTool*, 1998-2002), leading research team of 3 PhD students, 2 postdocs. Currently PI of two projects funded by Science Foundation Ireland (SFI), and member of *Lero* research centre. PI on Czech grants (see first item above).

Scholarships, Honours and Prizes:
- *Fulbright Scholarship,* UC Berkeley, Sept. 2016 – Sept. 2017.
- *Visiting Scholar,* Department of Statistics, UC Berkeley, Sept. 2016 – Sept. 2017.
- *The Eamonn Ceannt Easter Week Commemoration Scholarship*, 1984, for first-place achievement in Ireland in the Leaving Certificate, in Irish and Music.
- The winner of *The Hewlett-Packard Award*, 1988, for Ireland's most innovative undergraduate project that year (*SIFE*).
- *The Anglo-Irish Scientific Scholarship*, 1988, which funded the PhD at Trinity College Cambridge.
- Awarded full *PhD Fellowships* at UC Berkeley and at Caltech, U.S., 1988 (declined).
- First prize for the *best publication* in 2007 of the Czech Institute for the Theory of Information and Automation (UTIA), for the monograph, "*The Variational Bayes Method in Signal Processing*", Smidl,

V. And Quinn, A., Springer, 2006.
- *Best mathematical paper* by a PhD student author, for '*Variational Bayes Variants of the Viterbi Algorithm*', ISSC, Dublin, Ireland, May 2011, with PhD student, Viet Hung Tran.
- *Best paper* for '*Fully Probabilistic Design for Merging Knowledge in Multi-Agent Systems*', with PhD student, Shahram Azizi, at Lero Annual Meeting, Athlone, Ireland, September 2015.

Highlights of Teaching Experience:
- **Trinity College Dublin: (i)** Pioneered a new Third Year module in *Probability Modelling* for electrical/computer/bio-engineers in 2009, which he continues to deliver. This has been rolled out to the entire Engineering cohort (~190 students), starting in 2016-17. **(ii)** Pioneered a new Masters module in *Statistical Signal Processing* for the Dublin Region Higher Education Alliance (DRHEA) in 2010, which he now delivers annually to the Fifth Year electrical and computer engineers in TCD. This is the only course of its kind in Ireland. **(iii)** Many years of experience in teaching Telecommunications and Signal Processing, as well as large-class (180) teaching in Second Year Analogue Electronics.
- **Linköping University, Sweden:** Delivered an intensive, one-week course in *Bayesian Signal Processing,* in 2008, as Invited Professor.
- **SUNY Stony Brook:** Invited Professor at the EECS Department in the Fall Semester 1997, delivering a full Masters module in *Stochastic Systems.*
- **Cambridge University:** Very active and engaged supervisor of undergraduate students in Control and Signal Processing, during PhD in the Engineering Department between 1988 and 1992.

History of Mentoring and Supervision:
PhDs: **FIVE** PhD students (2003, 2004, 2007, 2014, 2017).
            ONE MSc student (1995).

Postdocs: **2015-16:** funded postdoctoral position, deferred to 2017.
              2000-2002: two postdocs, each for three years.
              1998: one postdoc, for nine months.

EU Research Internships: The six-month research internships of SEVEN EU visiting students were supervised in recent years, with many others in the years before.

Details of Principal Recent Research Funding as Lead/Co-Applicant:

Source of grant	Amount; Role	Purpose of funding	Award Period
Forbairt: (Strategic Research)	£54,472 PI	Computer-Aided Diagnosis (collaboration w/St. James's)	1998-99
TCD/Queen's: (HPC Initiative)	£26,000 PI	High Performance Computing	1998-2000
EU ESPRIT LTR: (4th Framework)	£19,747 WP leader	Data clustering for operator support (pilot project)	1999
EU LTR Project: (5th Framework)	€230,400 WP leader	Probabilistic Advisory Systems	2000-2002
SFI RFP	€163,145 (PI)	Variational Bayes in Telecomms	2008-2012
Invited Professor	€8,000	Variational Bayesian Signal Processing	2009, 2011
SFI RFP	€106,500 (PI)	Bayes. Nonpar'rics in Sig. Process.	2010-2014
SFI CSET-2: Lero	€102,500	Testing Complex Systems	2011-2016
Czech Acad. Sciences	€5,600	Visiting Scientist and co-PI	2014-2016

Fulbright Commission	€9,100	Fulbright Scholar, UC Berkeley	2016-17
GACR (Grant Agency of the Czech republic)	€171,152	Stochastic Knowledge Processing	2018-21
APPROX TOTAL:	**€1,068,752**		

Recent Research Funding History:

GAČR (Grant Agency of the Czech Republic) Standard Project 2018 (18-15970S):
Title: Optimal Distributional Design for External Stochastic Knowledge Processing
Duration: 2018-2021 (three years)
Role: Principal Investigator
Value: CZK 4,376,000 (€171,152)
Sequential processing of stochastic knowledge in incompletely modelled cases, using hierarchical nonparametric techniques. The project will develop an important use case in distributed knowledge processing for a network of interacting Kalman filters.

SFI Research Frontiers Programme 2008 (08/RFP/MTH1710):
Title: On-Line Statistical Inference for Telecommunications using the Variational Bayes Approximation.
Duration: 2008-2012
Role: sole grant holder
Value: €163,145
Bayesian parametric inference for the mobile digital receiver, using the variational Bayes (VB) approximation, and leading to a new soft-synchronized turbo-receiver design.

SFI Research Frontiers Programme 2010 (10/RFP/MTH2877) (**top score nationally**):
Title: Bayesian Nonparametrics in Signal Processing.
Duration: 2010-2014
Role: sole grant holder
Value: €106,500
Bayesian nonparametric treatment of the nonlinear filtering problem, involving nonparametric transition kernels for the continuous hidden field and the obervation model. Application to nonstationarity modelling (voiced-unvoiced transitions and pitch tracking) in speech.

Lero Centre for Science, Engineering and Technology (CSET-2) 2011 (10/CE/11855):
Title: Test Generation Framework for Complex Critical Systems.
Duration: 2011-2017
Role: Co-leader of Work Programme 14.a (Robust Testing Environments)
Partners: TCD, UCD, IBM Dublin Software Lab. This WP forms part of the multi-institutional Lero CSET, led by the University of Limerick
Value to Applicant: €102,500
Total Value of Lero CSET: €22,400,000
Bayesian graphical modelling of large distributed networks with uncertain connections. Simulation of loading scenarios and responses using optimized stochastic approximations.

Invited Professor:
École Normale Supérieure (ENS), Cachan, Paris
Dates: 2009 (six weeks); 2011 (four weeks)
Value: €8,000
Formal, competitive, funded research position, involving delivery of research lectures at ENS Cachan, Supélec and ONERA (the French aerospace agency). Collaborative work on estimation techniques for turbo-decoding and turbo-synchronization in the mobile receiver, in the context of the RFP08 project.

Visiting Researcher and co-PI:
Department of Adaptive Systems, Czech Academy of Sciences, Prague, Sept.-Dec. 2014, Sept.-Dec. 2015, and Sept.-Dec. 2016. PI on Czech research funding agency (GAČR) grant, 16-09848S, *Rationality and Deliberation.*

Innovation/Commercialization Activity:

- *1988:* a provisional patent was awarded for the speech therapy device, *SIFE*, invented during final year at UCD. Device used in therapy at National Rehabilitation Hospital, Dublin, for many years.
- *2002:* signed consortium agreement to protect IP of EU IST project*, ProDaCTool.* The resulting *MixTools* software is used internationally in decision support systems.

Cultural and Sporting Interests, and Community Service:

- **Honorary Life Member**, Dublin University Choral Society.
- **Founder member (2005)**, New Dublin Voices, which won the National Choir of the Year in 2006.
- Strong interest in **European painting**, particularly Italian and Flemish masters of C.16 and 17.
- Strong interest in **Irish antiquity and literature**.
- **Dive Leader and Club Instructor**, Dublin University Sub-Aqua Club (currently resting).
- Active **cyclist, swimmer, hill-walker** and **yoga student** (Iyengar).
- **Board Member of Dublin University Central Athletics Committee,** 2007-12.
- Provided **careers talks in Engineering** to schoolboys in my *alma mater,* Blackrock College, Co. Dublin, for many years.

Language Skills:
English (mother tongue), *Irish* (national first language, fluent), *French* (fluent), *Italian* (excellent), *Czech* (good), *Latin* (deep academic engagement, based on A (honours) grade in Leaving Certificate).

List of Publications:

BOOK:
1. 'The Variational Bayes Method in Signal Processing'. V. Šmídl and A. Quinn. Springer, Heidelberg, 227 pp., 65 illus., Hardcover, ISBN: 978-3-540-28819-0, 2006.

INVITED BOOK CHAPTERS:
2. 'Identification of Thyroid Gland Activity in Radiotherapy'. In *Bayesian Statistics VIII,* pp. 613-618 (6 pp.), Oxford University Press, 2007. L. Jirsa, A. Quinn and F. Varga.
3. 'Lymphoscintigraphy of Upper Limbs: a Bayesian Framework'. In *Bayesian Statistics VII,* pp. 543-552 (10 pp.), Oxford Univ. Press, 2003. P. Gebouský, M. Kárný, A. Quinn.
4. 'Bayesian Identification of Non-Linear Parameters in Signal and System Models'. In *Attractors, Signals and Synergetics,* pp. 282-292 (11 pp.), Pabst Science Publishers, Berlin, 2002. A. Quinn.
5. 'Regularized Signal Identification using Bayesian Techniques'. In *Signal Analysis and Prediction,* pp. 151-162 (12 pp.), Birkhäuser Boston Inc., 1998. A. Quinn.
6. 'The Objective Admission of Ockham's Razor by Marginalization in Bayesian Model-Based Inference'. In *Mathematics in Signal Processing III*, pp. 339-357 (19 pp.), Oxford University Press, 1994. A. Quinn.

PEER-REVIEWED RESEARCH PAPERS:

7. 'Fully Probabilistic Design for Knowledge Transfer in a Pair of Kalman Filters'. *IEEE Signal Processing Letters*. 4 pp., 2018. Early access article in press. doi: 10.1109/LSP.2017.2776223. C. Foley and A. Quinn.
8. 'Identification of Thyroid Gland Activity in Radioiodine Therapy'. *Informatics in Medicine Unlocked*. Vol. 7, 23-33 (11 pp.), 2017. L. Jirsa, F. Varga and A. Quinn.
9. 'Optimal Design of Priors Constrained by External Predictors'. *International Jour. Approximate Reasoning*. Vol. 84, 150-158 (9 pp.), 2017. A. Quinn, M. Kárný and T.V. Guy.
10. 'Hierarchical Fully Probabilistic Design for Deliberator-Based Merging in Multiple Participant Systems'. *IEEE Trans. Systems, Man, Cybernetics: Systems*. 1-9 (9 pp.), 2016. S. Azizi and A. Quinn.

11. 'Fully Probabilistic Design of Hierarchical Bayesian Models'. *Information Sciences.* Vol. 369, 532-547 (16 pp.), 2016. A. Quinn, T.V. Guy and M. Kárny.
12. 'Approximate Bayesian Filtering using Stabilized Forgetting'. *Proc. EURASIP European Sig. Process. Conf. (EUSIPCO)*, (5 pp.), Nice, France, 2015. S. Azizi and A. Quinn.
13. 'A data-driven forgetting factor for Stabilized Forgetting in Approximate Bayesian Filtering'. *Proc. 26th IET Irish Signals and Systems Conference (ISSC)*, (6 pp.), Ireland, 2015. S. Azizi and A. Quinn.
14. 'Recursive Inference for Inverse Problems using Variational Bayes Methodology'. *Proc. 5th Int. ICST Conf. on Performance Evaluation Methodologies and Tools (VALUETOOLS)*, (9 pp.), Cachan, France, 2011. A. Quinn.
15. 'The Bayesian Inference of Phase'. *Proc. IEEE Int. Conf. Acoust., Speech, Sig. Process. (ICASSP)*, (4 pp.), Prague, 2011. A. Quinn, J.-P. Barbot, P. Larzabal.
16. 'The Transformed Variational Bayes Approximation'. *Proc. IEEE Int. Conf. Acoust., Speech, Sig. Process. (ICASSP)*, (4 pp.), Prague, 2011. V. H. Tran and A. Quinn.
17. 'Variational Bayes Variants of the Viterbi Algorithm'. *Proc. 22nd IET Irish Signals and Systems Conference (ISSC)*, (6 pp.), Dublin, 2011. V. H. Tran and A. Quinn.
18. 'A Variational Bayes Extension to Turbo-Synchronization and Phase Ambiguity Resolution'. *Proc. 22nd IET Irish Signals and Systems Conference (ISSC)*, (6 pp.), Dublin, 2011. A. Das and A. Quinn.
19. 'Online Bayesian Inference for a Mixture of Known Components'. *Proc. Irish Signals and Systems Conf. (ISSC)*, pp. 106-111 (6 pp.), Cork, 2010. V. H. Tran and A. Quinn.
20. 'PI Control of First-Order Lag plus Time-Delay Plants: Root Locus Design for Optimal Stability'. *Trans. Institute of Measurement and Control,* Vol. 31, No. 5, pp. 365-379 (15 pp.), October 2009. B. Cogan, A. de Paor and A. Quinn.
21. 'Variational Bayesian Filtering'. *IEEE Trans. Sig. Processing,* Vol. 56, No. 10, pp. 5020-5030 (10 pp.), October 2008. V. Šmídl and A. Quinn.
22. 'Learning for Nonstationary Dirichlet Processes'. *Jour. Adaptive Control and Signal Processing,* Vol. 21, No. 10, pp. 1-29 (29 pp.), December 2007. A. Quinn and M. Kárný.
23. 'On Bayesian Principal Component Analysis'. *Jour. of Computational Stats. and Data Analysis,* Vol. 51, Issue 9, pp. 4101-4123 (23 pp.), May 2007. V. Šmídl and A. Quinn.
24. 'Accelerated Particle Filtering using the Variational Bayes Approximation'. *Proc. IEEE Int. Conf. on Acoust., Speech and Sig. Process. (ICASSP)*, Vol. III, pp. 1173-1176 (4 pp.), Hawaii, 2007. V. Šmídl and A. Quinn.
25. 'The Restricted Variational Bayes Approximation in Bayesian Filtering'. *Proc. IEEE Nonlinear Statist. Sig. Process. Workshop,* No. 83, pp. 1-4 (4 pp.), Cambridge, 2006. V. Šmídl and A. Quinn.
26. 'The Variational Bayes Approximation in Bayesian Filtering'. *Proc. IEEE Int. Conf. on Acoust., Speech and Sig. Process. (ICASSP)*, Vol. III, pp. 137-140 (4 pp.), Toulouse, 2006. V. Šmídl and A. Quinn.
27. 'Mixture-Based Extension of the AR Model and its Recursive Bayesian Identification'. *IEEE Trans. Sig. Process.,* Vol. 53, No. 9, pp. 3530-3542, 2005. V. Šmídl, A. Quinn.
28. 'Robust Estimation of Autoregressive Processes using a Mixture-Based Filter-Bank'. *Sys., Cont. Letts.,* Vol. 54, pp. 315-323, 2005. V. Šmídl, A. Quinn, M. Kárný, T. Guy.
29. 'Bayesian Inference of Optimal Lymphoscintigraphic Sampling Times'. *Proc. 3rd Europ. Med. And Biol. Engineering Conf. (EMBEC),* pp.3255-3259 (5 pp.), Prague, 2005. S. Doyle, A. Quinn and P. Gebouský.
30. 'The Variational EM Algorithm for On-line Identification of Extended AR Models'. *Proc. IEEE Int. Conf. on Acoust., Speech and Sig. Process. (ICASSP)*, Vol. IV, pp. 117-120 (4 pp.), Philadelphia, 2005. V. Šmídl and A. Quinn.
31. 'Bayesian Estimation of Non-stationary AR Model Parameters via an Unknown Forgetting Factor'. *Proc. IEEE Workshop on Dig. Sig. Process.*, pp. 221-225 (5 pp.), Taos (New Mexico), 2004. V. Šmídl and A. Quinn.
32. 'Fully Probabilistic Model for Functional Analysis of Medical Image Data'. *Proc. Irish Sigs., Systems Conf.*, pp. 551-556, 2004. V. Šmídl, A. Quinn, Y. Maniouloux.
33. '3-D Methods for Difference Estimation in Volumetric Data'. *Proc. IEEE Workshop on Image and Sig. Process. and its Apps. (ISPA)*, pp. 29-34 (6 pp.), Rome, 2003. E. Ranguelova and A. Quinn.
34. 'Fast Variational PCA for Functional Analysis of Dynamic Image Sequences'. *Proc. IEEE Workshop on Image and Sig. Process. and its Apps. (ISPA)*, pp. 555-560 (6 pp.), Rome, 2003. V. Šmídl and A. Quinn.
35. 'The Extended AR Model and its Bayesian Identification'. *Proc. Irish Sigs. and Systems Conf. (ISSC)*, 6 pp., Limerick, 2003. V. Šmídl and A. Quinn.
36. 'Probabilistic Advisory Systems for Data-Intensive Applications'. *Int. J. Adapt. Control Signal Processing*, Vol. 17, Issue 2, pp. 133-148 (16 pp.), March 2003. A. Quinn, P. Ettler, L. Jirsa, I. Nagy and P. Nedoma.
37. 'Difference Estimation and Compensation via Entropy Minimization in 3-D Image Segmentation'. *Proc. 2nd Int. Workshop on Spectral Methods and Multirate Sig. Process.*, pp. 131-136 (6 pp.), Toulouse, 2002. E. Ranguelova and A. Quinn.
38. 'Difference Field Estimation for Enhanced 3-D Texture Segmentation'. *Proc. Brit. Machine Vision Conf. (BMVC)*, pp. 373-383, Cardiff, 2002. E. Ranguelova, A. Quinn.
39. 'Variational Methods in Dimensionality Reduction'. *Workshop on Advances in Inf. and Control Theory*, 8 pp., Slovenia, 2002. V. Šmídl and A. Quinn.
40. 'Detection and Removal of Outliers from Multidimensional AR Processes'. *Proc. Irish Sigs., Systems Conf.*, pp. 117-121 (5 pp.), Maynooth, 2001. L. Tesař and A. Quinn.
41. 'Registration Pre-Processing for Enhanced 3-D Segmentation'. *Proc. Irish Sigs., Systems Conf.*, pp. 346-351 (6 pp.), Maynooth, 2001. E. Ranguelova and A. Quinn.

42. 'On Prior Information in Principal Component Analysis'. *Proc. Irish Sigs. and Systems Conf. (ISSC)*, pp. 129-134 (6 pp.), Maynooth, 2001. V. Šmídl, M. Kárný and A. Quinn.

43. 'Mixture Analysis of Nuclear Medicine Data: Medical Decision Support'. *Proc. Irish Sigs., Systems Conf. (ISSC)*, pp. 393-398 (6 pp.), Maynooth, 2001. L. Jirsa and A. Quinn.

44. 'Method for Artefact Detection and Suppression Using Alpha-Stable Distributions'. *Proc. Int. Conf. on Artificial Neural Networks and Genetic Algs. (ICANNGA)*, 4 pp., Prague, 2001. L. Tesař and A. Quinn.

45. 'A Survey of Techniques for Pre-Processing in High-Dimensional Data Clustering'. *PhD W'shop Cybernetics, Informatics*, 9 pp., Czech Rep., 2000. L. Tesař and A. Quinn.

46. 'Disparity-Compensated Segmentation of 3-D Images'. *PhD Workshop on Cybernetics and Informatics*, 5 pp., Marianska (Czech Republic), 2000. E. Ranguelova and A. Quinn.

47. 'Analysis and Synthesis of Three-Dimensional Gaussian Markov Random Fields'. *Proc. IEEE Int. Conf. Image Process.*, 5 pp., Japan, 1999. E. Ranguelova, A. Quinn.

48. 'A Data-Driven Bayesian Sampling Scheme for Unsupervised Image Segmentation'. *Proc. IEEE Int. Conf. on Acoust., Speech and Sig. Process. (ICASSP)*, Vol. 6, No. 2307, pp. 1-4 (4 pp.), Phoenix (U.S.A.), 1999. E. Clark and A. Quinn.

49. 'A Fast and Fully Unsupervised Scheme for Model-Based Image Segmentation'. *Proc. SPIE Conf. Bayesian Inf. Inv. Probs.*, pp. 82-90, San Diego, 1998. J.Reichel, A. Quinn.

50. 'Regularization Strategies for Signal Identification'. *Proc. 1st EURASIP European Conf. on Signal Analysis and Prediction*, pp. 145-148 (4 pp.), Prague, 1997. A. Quinn.

51. 'Novel Parameter Priors for Bayesian Signal Identification'. *Proc. IEEE Int. Conf. Acoust., Speech, Sig. Process.*, Vol. 5, pp. 3909-3912 (4 pp.), Munich, 1997. A. Quinn.

52. 'Fast and Accurate Texture-Based Image Segmentation'. *Proc. IEEE Int. Conf. on Image Process.*, Vol. 3, pp. 121-124 (4 pp.), Lausanne, 1996. O. Schwartz and A. Quinn.

53. 'New Approaches to Markov Random Field-Based Image Segmentation'. *Proc. Irish DSP and Control Conf.*, pp. 323-330 (8 pp.), Dublin, 1996. O. Schwartz and A. Quinn.

54. 'A Mathematical Framework for Signal Identification'. *Proc. 8th URSI Symposium on Radio Science*, No. 7, 17 pp., Royal Irish Academy, Dublin, 1996. A. Quinn.

55. 'The Modelling of Signals and Systems amid Uncertainty: a Bayesian Perspective'. *Proc. EURACO Workshop on Recent Results in Robust and Adaptive Control*, pp. 514-531 (18 pp.), Florence, 1995. A. Quinn.

56. 'Texture Analysis of Terrain Images using a Markov Random Field Model'. *Proc. 5th IEE Int. Conf. Im. Proces., Apps.*, pp.781-785, Edinbur., 1995. M.C. Musgrave, A. Quinn.

57. 'A General Complexity Measure for Signal Identification using Bayesian Inference'. *Proc. IEEE W'shop Nonlin. Sig., Image Process.*, pp843-846, Greece, 1995. A. Quinn.

58. 'Prediction of the Threshold and Asymptotic Behaviour of Bayesian Signal Parameter Estimators'. *Signal Processing VII: Proc. 7th EURASIP European Sig. Process. Conf. (EUSIPCO)*, Vol. 3, pp. 1839-1842 (4 pp.), Edinburgh, 1994. A. Quinn.

59. 'A New Objective Measure of Signal Complexity using Bayesian Inference'. *Proc. 7th IEEE SP Workshop on Statist. Sig., Array Process.*, 4 pp., Quebec City, 1994. A. Quinn.

60. 'New Lower Bounds to the Variance of Signal Parameter Estimators using Bayesian Inference'. *Proc. IEEE Int. Conf. Acoust., Sp., Sig. Process.*, pp.493-496, 1994. A. Quinn.

61. 'A Consistent, Numerically Efficient Bayesian Framework for Combining the Selection, Detection and Estimation Tasks in Model-Based Signal Processing'. *Proc. IEEE Int. Conf. Acoust., Sp., Sig. Proc.*, Vol. 4, pp.65-68, Minneapolis, 1993. A. Quinn.

62. 'Censored Marginal a Posteriori Bayesian Inference for Signal Models'. *Proc. IEEE Winter Workshop on Nonlinear Dig. Signal Process.*, Section 6.3, No. 5, pp. 1-6 (6 pp.), Tampere (Finland), 1993. A. Quinn.

63. 'A Unified Approach to Model-Based Signal Processing using Bayesian Marginal Inference'. *Proc. 6th IEEE SP Workshop on Statist. Signal and Array Process. (SSAP)*, 4 pp., Victoria (Canada), 1992. A. Quinn.

64. 'Threshold-Free Bayesian Estimation using Censored Marginal Inference'. *Signal Processing VI: Proc. 6th EURASIP European Sig. Process. Conf. (EUSIPCO)*, Vol. 2, pp. 677-680 (4 pp.), Brussels, 1992. A. Quinn.

65. 'The Sinusoidal Instantaneous Frequency Extractor: A New Instrument for use in Speech Therapy'. *Innovation et Technologie en Biologie et Médecine*, Vol. 13, No. 6, pp. 635-640 (6 pp.), July 1992. A. M. de Paor, A. P. Quinn and A. J. Murphy.

66. 'Performance of Bayesian Estimators in the Superresolution of Signal Parameters'. *Proc. IEEE Int. Conf., Acoust., Sp., Sig. Proc*, 297-300, San Fran.,1992. A. Quinn.

67. 'A Study of Joint and Marginal Bayesian Estimators for the Parameters of Periodic Signals in Gaussian White Noise'. *Proc. IEEE Int. Conf. On Comms. Systems (ICCS)*, Section 27, No. 1, pp. 1-5 (5 pp.), Singapore, 1990. A. Quinn and M. D. Macleod.