Charles Phelps Taft Research Center at the University of Cincinnati

Conference Proposal Application

I. General Information

(a) **Name:** Nageswari Shanmugalingam

(b) **Department:** Mathematical Sciences

(c) **Position:** Professor

(d) **Conference Title:** Modern Aspects of Complex Geometry: a conference in honor of Taft Professor David Minda

(e) **Beginning and Ending Dates:** 14 May 2015 – 17 May 2015

(f) **Conference Chair/Director:** Nageswari Shanmugalingam and David Herron.

(g) **Location of Events (dates and times):** University of Cincinnati, 05-14-2015 to 05-17-2015, 8:00am – 6:00pm with a 2 hour lunch break.

(h) Taft Disciplines Impacted: Mathematical Sciences

II. Budget

(a) Budgetary Summary:
Airfare for speakers: $ 23,100
Housing costs (Kingsgate UC rate): $ 14,000
Coffee/refreshments: $ 1,600
Conference dinner (43 people): 2,580
Other conference participants travel: $ 10,000
Student Worker: $ 1,000
Conference advertising: $ 1,200

(b) Subtotal: $ 52,980

(c) Cosponsors & Other Funding Sources:
Department: $ 3000 (confirmed)
A&S Dean: $ 2000 (confirmed)
NSF: $ 40,000.
Will use the Taft, A&S Dean, and Departmental support as seed money to apply for $40,000 from NSF.

(d) Requested Taft Support: $ 8,480 (Conference dinner of $2,580 and $ 5,900 to cover part of the airfare for speakers – not including Dr. Toni Beardon, whose support will be requested in an application to the "Competitive Lectures" category).

III: Narrative Description of Conference:

The goal of the conference **Modern Aspects of Complex Geometry** is to bring together researchers in the field of classical complex analysis together with the emerging field of geometric analysis in order to identify new directions of research in geometric analysis guided by the framework of classical complex analysis. Recent work in geometric analysis is based on the ideas and behavior of complex analytic functions from classical complex analysis, and we expect that this conference will identify further new directions for research in modern geometric analysis based on the entire picture that emerges from classical complex analytic research; for this goal to be achieved, we need to bring together the experts in classical complex analysis (the study of complex analytic functions between planar regions) and those working in the area of modern geometric analysis (the study of behavior of mappings between more general Riemann surfaces and higher dimensional spaces that are of interest in other areas such as differential equations, differential topology, dynamics, and physics).

Taft Professor David Minda is one of the pioneers in the transformation from classical complex analysis to modern geometric analysis, and this conference is partly in his honor as he will retire, from four decades of distinguished service to the University of Cincinnati, in May of 2015.

The organizing committee consists of Nageswari Shanmugalingam (UC), David Herron (UC), John Lewis (University of Kentucky, Lexington, KY), and Jeremy Tyson (University of Illinois at Urbana-Champaign).

The format of the conference will be 40 minute lectures delivered by experts in these two areas, with 10-15 minute informal discussions between other conference participants and the experts (speakers) in between. The conference participants/audience will consist of graduate students, beginning career mathematicians (postdoctoral researchers and pre-tenure mathematicians), and mid-career mathematicians as well as other advanced research mathematicians. Including speakers (see detailed list below) we expect 20 regional participants (8 from Univ. Cincinnati), 13 from other parts of the U.S., and 13 international participants. The conference will be for 4 days, with 25 speakers (of which, 23 have confirmed their participation so far). The tentative schedule is as follows:

14 May 2015:

8:15am-8:45am: registration
8:45am-9:20am: Welcome
9:20am-10:00am: Talk 1
10:00am-10:10am: Informal discussion
10:10am-10:50am: Talk 2
10:50am-11:00am: Informal discussion
11:00am-11:50am: Talk 3
11:50am-2:00pm: Lunch break
2:00pm- 2:40pm: Talk 4
2:40pm-2:50pm: Informal discussion
2:50pm-3:30pm Talk 5
3:30pm-4:00pm: Coffee break
4:00pm-4:40pm: Talk 6.

15 and 16 May 2015:

9:00am-9:40am Talk 1
9:40am-9:50am Informal discussion
9:50am-10:30am: Talk 2
10:30am-10:40am: Informal discussion
10:40am-11:20am: Talk 3
11:20am-11:30am: Informal discussion
11:30am-12:10pm: Talk 4
12:10pm-2:00pm: Lunch break
2:00pm-2:40pm: Talk 5
2:40pm-2:50pm: Informal discussion
2:50pm-3:30pm Talk 6
3:30pm-4:00pm: Coffee break
4:00pm-4:40pm: Talk 7

There will also be a Math Education talk (hour long) by Toni Beardon 5:00pm-6:00pm, followed by a conference dinner, on 15th May 2015.

17 May 2015:

9:00am-9:40am Talk 1
9:40am-9:50am Informal discussion
9:50am-10:30am: Talk 2
10:30am-10:40am: Informal discussion
10:40am-11:20am: Talk 3
11:20am-1:30pm: Lunch break
1:30pm-2:10pm: Talk 4
2:10pm-2:20pm: Informal discussion
2:20pm-3:00pm: Talk 5
3:00pm-3:30pm Discussions.
3:30pm-4:00pm: Concluding remarks

Plans for publicity: We will advertise the conference in the American Mathematical Societys Calendar of Events (cost: $700) and print 20 posters (cost: $500) to be sent to departments of mathematics at other academic institutions associated with the fields of research relevant to the conference and to institutions that have mathematicians belonging to underrepresented minority groups. In addition, we will email conference announcements to a wide group of institutions and conference participants. A conference website will be maintained on the departmental server and with links from the departmental website and college website, as well as from the Calendar of Events of the American Mathematical Society. The website information will be included in the posters as well as in the emailed conference announcements; see
`http://www.artsci.uc.edu/departments/math/complex_geometry_conference.html`

Plans for evaluation: The evaluation committee will be solicited for opinions at the end of the conference, and will be asked to write a report on the conference. This report will be submitted along with the conference report to Taft Research Center. Please see the next section for the list of evaluation committee members.

IV. Conference Details:

(a)Location of Events (dates and times): University of Cincinnati, 14-17 May 2015. See the narrative in Section III above for more detailed planned schedule.
(b) Conference Participants (Name, Role, CVs):

Speakers: (see appendix for CVs of speakers)

1. Roger Barnard (confirmed).
2. Alan Beardon (confirmed).
3. Chris Bishop (tentatively confirmed).
4. Petra Bonfert-Taylor (confirmed).
5. Mario Bonk (confirmed).
6. William Cherry (confirmed).
7. David Freeman (confirmed).
8. Hrant Hakobyan (confirmed).
9. Aimo Hinkkanen (confirmed).
10. Zair Ibragimov (tentatively confirmed).
11. Leonid Kovalev (confirmed).
12. Daniela Kraus (confirmed).
13. Donald Marshall (confirmed).
14. Jani Onninen (confirmed).
15. John Parker (confirmed).
16. Pietro Poggi-Corradini (confirmed).
17. Steffen Rohde (confirmed).
18. Oliver Roth (confirmed).
19. Eric Schippers (confirmed).
20. Marie Snipes (confirmed).
21. Alex Solynin (confirmed).
22. Ken Stephenson (confirmed).
23. Toshiyuki Sugawa (confirmed).

24. Matti Vuorinen (confirmed).
25. Marshall Williams.

Other conference participants:

1. Martin Chuaqui (U. Chile)
2. Chris Camfield (Hendrix College, Arkansas, pre-Tenure)
3. David Drasin (Purdue)
4. Peter Duren (Michigan)
5. Michael Goldberg (UC)
6. Peter Haasto (Oulu University, Finland)
7. David Herron (UC, organizer)
8. Seong-A Kim (South Korea)
9. Poranee Julian (UC, pre-Tenure)
10. David Lesley (San Diego State)
11. John Lewis (Univ. Kentucky, organizer)
12. William Ma (Penn. College of Technology)
13. Diego Mejia (University of Medellin, Columbia)
14. Sergei Merenkov (U. Illinois Urbana, recently Tenured)
15. David Minda (UC)
16. Brad Osgood (Stanford)
17. Thomas Ransford (U. Laval, Montreal, Canada)
18. Nageswari Shanmugalingam (UC, organizer)
19. Leonid Slavin (UC, pre-Tenure)
20. Jeremy Tyson (U. Illinois Urbana, organizer)
21. Brock Williams (Texas Tech.)
22. Jang-Mei Wu (U. Illinois Urbana)
23. Harold Bell (UC, Emeritus)
24. Dewey Estep (UC, graduate student)

25. Xining Li (UC graduate student)

26. Marcos Lopez (UC graduate student)

27. Murat Ackman (U. Kentucky, graduate student)

(c) Evaluation Committee: Kenneth Meyer (UC), Steve Pelikan (UC), Leonid Slavin (UC), Oliver Roth (Wuerzburg, Germany), Matti Vuorinen (Turku, Finland).

V. Detailed budget:

Airfare:

Roger Barnard: $500 (flight from Texas)
Alan Beardon: $1,700 (flight from London, England)
Chris Bishop: $ 500 (flight from New York)
Petra Bonfert-Taylor: $ 500 (flight from Connecticut)
Mario Bonk: $ 750 (flight from Los Angeles)
William Cherry: $ 500 (flight from Texas)
David Freeman: Local speaker; no airfare.
Hrant Hakobyan: $ 500 (flight from Kansas)
Aimo Hinkkanen: $ 500 (flight from Urbana, IL)
Zair Ibragimov: $ 750 (flight from Los Angeles)
Leonid Kovalev: $ 500 (flight from Syracuse)
Daniela Kraus: $ 1,700 (flight from Wuerzburg, Germany)
Donald Marshall: $ 750 (flight from Seattle)
Jani Onninen: $ 1,700 (flight from Jyvaskyla, Finland)
John Parker: $ 1,700 (flight from Durham, England)
Pietro Poggi-Corradini: $ 500 (flight from Kansas)
Steffen Rohde: $ 750 (flight from Seattle)
Oliver Roth: $ 1,700 (flight from Wuerzburg, Germany)
Eric Schippers: $ 800 (flight from Manitoba, Canada)
Marie Snipes: $ 200 (drive from Gambier, OH)
Alex Solynin: $ 500 (flight from Texas)
Ken Stephenson: $ 500 (flight from Tennessee)
Toshiyuki Sugawa: $ 1,700 (flight from Tohoku, Japan)
Matti Vuorinen: $ 1,700 (flight from Turku, Finland)
Marshall Williams: $ 500 (flight from Kansas)

Total airfare for speakers: $ 23,100.
Hotel for speakers (Kingsgate rate for 25 speakers): $ 14,000
Honoraria: $0
Coffee/refreshments: $ 1,600
Conference Dinner (43 people): $2,580
Other conference participants travel (partial; to be funded from NSF money): $ 10,000
Student worker: $ 1,000
Conference advertising: $ 1,200 (AMS calendar: $ 700, Poster: $ 500).

Total Expenses (expected): $ 52, 980.

Departmental support (Mathematical Sciences): $ 3,000
Support from the Dean, A&S: $ 2,000
Support to be requested from NSF: $ 40,000
Support requested from Taft: $ 8,480

APPENDIX: CV of speakers:

Dr. Toni Beardon received her Masters degree, Mathematics, University of Oxford, St. Hughs College, in 1962. Later she taught at comprehensive schools in Cambridge for 12 years, then joined the Cambridge University Faculty of Education as a Teaching and Research Associate. She started the NRICH online math club in 1996. NRICH now has a vast amount of archival mathematical material available free online and receives well over a million international visits per year. Toni served as NRICH director 1996-2001. She was awarded the Order of the British Empire in 2003 in recognition of her numerous substantial contributions to mathematics education. She retired from Cambridge in 2002 and immediately began volunteer work with the African Institute for Mathematical Sciences (AIMS) in South Africa. In 2003 Toni founded AIMSSEC, the African Institute for Mathematical Sciences Schools Enrichment Centre, to improve mathematics education in South Africa by running courses for teachers from rural and township schools to train them to be subject leaders in their communities. In 2012 AIMSSEC was one of the three winners of the UNESCO-Hamdan Bin Rashid Al-Maktoum Prize for Outstanding Practice and Performance in Enhancing the Effectiveness of Teachers.

Professor Roger Barnard, Ph.D. University of Maryland August 1971 (Advisor William Kirwan) is an expert in the fields of Complex Analysis and Mathematical Physics. He has held visiting positions at Institut Mittag-Leffler (Sweden) and University of Michigan, and is a tenured faculty member at the Department of Mathematics, Texas Tech University. He has also held the prestigious Giovanni-Prodi Chair, University of Wrzburg, Germany for the period of May 2006 - August 2006, and was the Society of Industrial and Applied Mathematics Graduate Professor of the Year awardee for 2001. Professor Barnard has 77 publications appearing in prestigious mathematical research journals, and has held many NSF research grants. He has supervised the PhD thesis of 15 students during his career so far. Professor Barnard is an editor of the following mathematical research journals: The Journal of Analysis. Computational Methods and Function Theory. The Rocky Mountain Journal of Mathematics. International Journal of Computational and Applied Mathematics.

Professor Alan Beardon, Ph.D University of London 1964 (Advisor: Walter Hayman) is the Professor in Complex Analysis at University of Cambridge (St. Catherines College-emeritus), Engluand, and is an advisor for the African Institute of Mathematics in Cape Town, South Africa.. He was the winner of the Lester Randolph Ford Award in 1997; this award is given by the Mathematical Association of America for outstanding scholarly works. Professor Beardon is an expert on geometric function theory and hyperbolic geometry, and has authored 143 publications in highly ranked mathematical research journals and has published 9 text books on complex geometry, many of which are standard texts in graduate courses in mathematics departments in the United States and England. His publications have garnered more than 1500 citations. Professor Beardon has supervised the PhD dissertation of 6 students during his career. Professor Beardon was a distinguished Taft Speaker at the University of Cincinnati in 1990 and 1991. He also serves as an editor for the African Institute of Mathematics Library Series.

Professor Chris Bishop, Ph.D University of Chicago 1987 (Advisor: Peter W. Jones) is a Professor at the Department of Mathematics, SUNY Stony Brooks. He is an expert in the areas of conformal geometry and analysis on fractals. He was an Alfred P. Sloan Research Fellow (1992) and has held many NSF research grants. He has directed the PhD thesis of 3 students, and has published 58 papers in highly ranked mathematical research journals.

Professor Petra Bonfert-Taylor, PhD Technical University of Berlin 1996 (Advisor: Christan Pommerenke) is a Professor at the Department of Mathematics, Wesleyan University, CT. She is an expert on geometric group theory and complex dynamics, She has held 3 NSF research grants and an NSF Special Semester Grant for collaborative research. She has also held a grant from the Connecticut State Department for Higher Education, and holds dissemination of mathematics and mathematics education to be as important as mathematical research. Professor Bonfert-Taylor has 20 research publications appearing in highly ranked mathematical research journals, and is an author of a Coursera course on Complex Analysis (undergraduate course).

Professor Mario Bonk, PhD Technische Universitat Carolo-Wilhelmina zu Braunschweig 1988 (Advisor: Karl-Joachim Wirths) is currently a Professor at the Department of Mathematics, UCLA. Before moving to Los Angeles in 2010, Professor Bonk was a Professor at the University of Michigan, Ann Arbor. He is an expert on geometry of hyperbolic groups and quasiconformal geometry. He has authored 47 research articles in prestigious mathematical research journals, and has co-edited two conference proceedings. Professor Bonk has held, and continues to have, consecutive NSF research grants. Professor Bonk has also served on various NSF panels. He has supervised the PhD theisis of 3 students (Michigan and Braunschweig, Germany) and co-supervised the PhD thesis of 3 other students (Michigan). Professor Bonk is an editor of the Proceedings of the American Mathematical Society.

Professor William Cherry, PhD Yale University 1993 (Advisor: Serge Lang), is a Professor at University of North Texas. His research combines the diverse fields of complex analysis and number theory using the tools of complex geometry and algebraic geometry. Professor Cherry is an editor for the Bulletin of the Korean Mathematical Society, and has held research grants from the National Security Agency and the National Science Foundation. Professor Cherry has authored 23 research papers in respected mathematical research journals, including one in one of the highest ranked mathematical research journals, American Journal of Mathematics.

Assistant Professor David Freeman, PhD University of Cincinnati 2009 (Advisor: David Herron) is an Assistant Professor (tenure track) at the Department of Mathematics, UC Blue Ash. His research interests include complex quasiconformal geometry and geometry of Lie groups. Professor Freeman has authored 4 research articles in respected mathematical research journals. His recent research classifying Carnot groups as those metric spaces that are dilation and inversion invariant is groundbreaking work on the geometry of Lie groups.

Assistant Professor Hrant Hakobyan, PhD SUNY Stony Brook 2007 (Advisor:

Chris Bishop) is an Assistant Professor (tenure track) at the Department of Mathematics, Kansas State University, Manhattan, KS. Before coming to Kansas State University, Professor Hakobyan held a visiting position at the University of Toronto. He is an expert on quasiconformal geometry and moduli. Professor Hakobyan has authored 4 research papers in highly ranked mathematical research journals.

Professor Aimo Hinkkanen, PhD University of Helsinki 1980 (Advisor: Olli Lehto) is a Professor at the Department of Mathematics at University of Illinois, Urbana-Champaign. He was awarded an Alfred P. Sloan Fellowship in 1991, and was elected a foreign member of the Finnish Academy of Science and Letters in 2005. Professor Hinkkanen is a member of the editorial board of the London Mathematical Society, and has supervised the PhD dissertation of 9 students. He is an expert in the area of quasiconformal geometry and complex hyperbolic geometry, and has authored 90 research papers published in highly ranked mathematical research journals. In addition, he has co-authored 10 interdisciplinary articles in the field of computer science. Professor Hinkkanen has held, and continues to hold, consecutive NSF research grants.

Associate Professor Zair Ibragimov, PhD University of Michigan 2002 (Advisor: Fred Gehring) is Associate Professor at the Department of Mathematics at Cal State Fullerton. He has authored 21 research papers published in respected mathematical research journals, and has organized many workshops, including one in Uzbekistan. Professor Ibragimov was awarded the 2012 International Anassilaos Prize in Mathematics for his work in hyperbolization of metric spaces.

Professor Leonid Kovalev, PhD Washington University in St. Louis 2005 (Advisor: Albert Bernstein II), is a Professor at the Department of Mathematics, Syracuse University. He is an expert on geometric variational problems, and has recently started to study Lipschitz embedding and extension properties of metric spaces. With his collegues Tadeusz Iwaniec and Jani Onninen, Professor Kovalev recently solved the long-open Nietsche conjecture on harmonic mappings between planar domains. He has co-supervised the PhD thesis of a graduate student so far, and has held many NSF research grants. Professor Kovalev has authored an impressive 40 research papers appearing in highly ranked mathematical research journals.

Dr. Daniela Kraus, PhD University of Wurzburg, Germany 2007 (Advisor: Oliver Roth) is a Research Associate at the Department of Mathematics, University of Wurzburg. Her area of expertise is complex geometry. She has authored 12 research papers in highly ranked mathematical research journals.

Professor Donald E. Marshall, PhD UCLA 1976 (Advisor: John Garnett) is a Professor at the Department of Mathematics, University of Washington, Seattle. He is an internationally acknowledged expert on harmonic functions, and with John Garnett has authored a research text book on harmonic measures in the plane. Professor Marshall has held the prestigious National Merit Scholarship and the American-Scandinavian Foundations Thord-Gray Fellowship (1982-1983), and has consecutive NSF research support. Professor Don Marshall has authored 32 research papers in highly ranked mathematical research journals. He has also directed the PhD research of 2 students. Professor

Marshall is currently the Chair of the Department of Mathematics at Seattle.

Professor Jani Onninen, PhD University of Jyvaskyla, Finland 2002 (Advisor: Pekka Koskela) is a Professor at the Department of Mathematics, Syracuse University, and a Full Professor at the Department of Mathematics and Statistics, University of Jyvaskyla, Finland. He is an expert on planar quasiconformal mappings and associated geometry. Together with his collegues Tadeusz Iwaniec and Leonid Kovalev, Professor Onninen recently solved the long-open Nietsche conjecture on harmonic mappings between pnanar domains. He has held many NSF research grants, and has authored an impressive 59 research papers in highly ranked mathematical research journals.

Professor John Parker, PhD University of Cambridge 1990 (Advisor: Alan Beardon) is a Professor at the Department of Mathematical Sciences, Durham University, England. He has supervised the PhD dissertation of 5 students (University of Bielefeld, Germany-1, University of Durham, England-2, University of Science and Technology, Kumasi, Ghana-1, University of Paris VI- 1). He is an expert on hyperbolic geometry, and has authored 53 papers in highly reputed mathematical research journals. Professor Parker has also written three book reviews featured in MathReviews. He is an editor-in-chief of the journal Geometriae Dedicata.

Professor Pietro Poggi-Corradini, PhD University of Washington, Seattle 1996 (Advisor: Donald Mashall) is a Professor at the Department of Mathematics, Kansas State University, Manhattan, KS. His expertise is in harmonic analysis and nonlinear planar harmonic measures. Professor Poggi-Corradini has supervised the PhD thesis of one student so far, and has held many NSF research grants. He is one of the co-organizers of the Prairie Analysis Seminar (an annual event organized collaboratively between Kansas State and Kansas University). Professor Poggi-Corradini has written 25 research papers published in reputed mathematical research journals.

Professor Steffen Rohde, PhD Technical University of Berlin 1989 (Advisor: Christian Pommerenke) is a Professor at the Department of Mathematics, University of Washington, Seattle. He completed his Habilitation in Mathematics, Technical University of Berlin, in 1996. He held the prestigious Feodor-Lynen Fellowship of the Humboldt Foundation during 1992 to 1994, and the Eisenbud Professorship at the Mathematical Sciences Research Institute, Berkeley, for Spring 2012. Professor Rohde has held, and continues to hold, consecutive NSF research grants, and has supervised the PhD dissertation of 2 students. Professor Rohde is one of the pioneers of the study of Stochastic Loewner Equations, and has served on various NSF panels. He has authored 35 research papers in highly ranked mathematical research journals.

Professor Oliver Roth, PhD University of Wurzburg, Germany 1998 (Advisor: Stephan Ruscheweyh), is a Professor at the Department of Mathematics, University of Wurzburg. His areas of expertise are conformal geometry, geometric function theory, geometric partial differential equations, and Loewner evolution. He has supervised the PhD thesis of one student, and has published 29 research papers in highly ranked mathematical research journals.

Associate Professor Eric Schippers, PhD University of Toronto 1999 (Advisor: Ian Graham) is an Associate Professor at the Department of Mathematics, University of Manitoba. He has supervised the MSc thesis of three students, and currently holds a Canadian NSERC research grant. Professor Schippers has authored 16 research papers in reputed mathematical research journals. His specialties include geometric function theory and hyperbolic geometry.

Assistant Professor Marie Snipes, PhD University of Michigan 2009 (Advisors: Juha Heinonen and Mario Bonk) is an Assistant Professor (tenure track) at the Department of Mathematics and Statistics, Kenyon College, Gambier, OH. She specializes in the geometry of planar harmonic measures and in the theory of flat forms and currents in Banach spaces. She has authored 5 research articles in highly ranked mathematical research journals and has published a book review in the American Mathematical Monthly. Professor Snipes has also co-authored two interdisciplinary research publications in the fields of education and medicine. She is a member of the Center for Geometric Analysis and Data.

Professor Alexander Yu. Solynin, PhD Kuban State University, Donetsk 1985 (Advisor: Igor Mityuk) is a Professor at the Department of Mathematics and Statistics, Texas Tech University. He is an expert in complex analysis and techniques of symmetrization, and has held many NSF research grants. Professor Solynin has supervised the PhD dissertation of 4 students, and has authored 67 research articles in highly ranked mathematical research journals.

Professor Kenneth Stephenson, PhD University of Wisconsin at Madison 1976 (Advisor: Walter Rudin) is a Professor at the Department of Mathematics, University of Tennessee. He is one of the pioneers in the study of circle packing theory in applications to medical imaging. Professor Stephenson has supervised the PhD dissertation of 5 students (Technical University of Berlin-1, University of Tennessee-4), and has held many NSF research grants. Professor Stephenson has authored 47 research articles in highly ranked mathematical research journals, and has also written computer programs that generate circle packings for planar domains. Professor Stephenson was also authored an expository article on circle packings in the prestigious Notices of the American Mathematical Society. He gave the Barnett Lecture at the University of Cincinnati in 2010.

Professor Toshiyuki Sugawa, PhD Kyoto University 1992, is a Professor at the Division of Mathematics, Graduate School of Information Sciences, Tohoku University, Sendai, Japan. He has authored an impressive 87 research papers in highly ranked mathematical research journals, and is an expert on geometry of univalent functions and geometric function theory.

Professor Matti Vuorinen, PhD Helsinki University 1976 (Advisors: Jussi Vaisala and Olli Martio) is a Professor at the Department of Mathematics and Statistics, University of Turku, Finland. He serves as an editor for the following journals: Editorial board membership of journals Computational Methods in Function Theory Journal of Inequalities in Pure and Applied Mathematics Journal of Analysis Advisory Committee Member of The Journal of the Indian Academy of Mathematics Journal of Inequalities

and Applications Bulletin of Mathematical Analysis and Applications Tbilisi Mathematical Journal Journal of Classical Analysis Editorial Board Member of Issues of Analysis Professor Vuorinen has supervised the PhD thesis of 12 students. He was a Humboldt Fellow from 1988 to 1989, and has served on advisory panels for European Union Marie Curie Grants and for New Zealands Marsden Grants. Professor Vuorinen has authored 179 research papers in respected mathematical research journals, and his publications have garnered an impressive number of citations (more than 1,300). He has also authored a lecture notes text book and co-edited a conference proceedings. Professor Vuorinens expertise lies in the area of planar quasiconformal mappings.

Assistant Professor Marshall Williams, PhD University of Michigan 2010 (Advisors: Juha Heinonen and Mario Bonk) is an Assistant Professor at the Department of Mathematics, Kansas State University, Manhattan, KS. Professor Williams has authored 3 research papers, published in highly ranked mathematical research journals.

CV of organizers:

Professor David Herron, PhD University of Michigan, 1984 (Advisor: Fred Gehring) is a Professor at the Department of Mathematical Sciences, University of Cincinnati. He is an expert on conformal geometry and geometric function theory, and has done ground-breaking work on extension domains and geometry; this work forms part of the basis of modern development of geometric analysis. Professor Herron has supervised the PhD thesis of 4 students, and has authored 42 research papers in highly ranked journals of mathematical research. He also organized a Taft Research Seminar in 2009-2010, and has co-organized the Rolf-Nevanlinna Colloquium workshop titled Future Trends in Geometric Function Theory at the University of Helsinki.

Professor John Lewis, PhD University of Illinois at Urbana-Champaign, 1970 (Advisor: Maurice Heins) is a Professor at the Department of Mathematics, University of Kentucky, Lexington. Professor Lewis is an expert on geometric function theory and partial differential equations, and his recent groundbreaking work on the boundary Harnack principle for nonlinear elliptic equations has appeared in prestigious mathematics journals such as the Journal of the American Mathematical Society and the Annals of Mathematics. He has supervised the PhD thesis of 3 students, is currently supervising the dissertation of one student, and has authored an impressive 94 research papers in highly ranked mathematical research journals.

Professor Nageswari Shanmugalingam, PhD University of Michigan, 1999 (Advisor: Juha Heinonen) is a Professor at the Department of Mathematical Sciences, University of Cincinnati. Her field of expertise is analysis on metric measure spaces, an emerging field with foundations in geometric function theory, complex analysis, and partial differential equations. She has supervised the PhD thesis of 1 student, and is currently supervising the PhD dissertation of 3 students. She has also authored 48 research papers published in highly ranked mathematical research journals, and organized a Taft Research Seminar in 2008-2009. She is currently serving as an editor for the following mathematical research journals: Conformal Geometry and Dynamics, Demonstratio Matematica, and International Journal of Mathematics and Mathematical Sciences. Professor Tyson has co-organized the Rolf-Nevanlinna Colloquium workshop titled Future Trends in Geometric Function Theory at the University of Helsinki. She was awarded the University of Cincinnati McMicken Deans Award for Distinguished Scholarship in 2008.

Professor Jeremy Tyson, PhD University of Michigan, 1999 (Advisor: Juha Heinonen) is a Professor at the Department of Mathematics, University of Illinois at Urbana-Champaign. His fields of expertise are geometric measure theory and analysis on Heisenberg groups, and quasiconformal mapping theory. Professor Tyson has supervised the PhD thesis of 2 students, and is currently supervising the PhD thesis of 3 students. He has authored 41 research papers appearing in highly ranked mathematical research journals, and is a co-author of a text book on subRiemannian spaces; this book is now a standard reference for those working on the geometry of Heisenberg groups. Professor Tyson has co-organized the Rolf-Nevanlinna Colloquium workshop titled Fu-

ture Trends in Geometric Function Theory at the University of Helsinki. He is currently serving as an editor for the following mathematical research journals: Proceedings of the American Mathematical Society, Journal of Fractal Geometry, and Complex Analysis and its Synergies. Professor Tyson is currently a Fellow of the American Mathematical Society.

CV of Taft Professor David Minda: Professor Minda is a Charles Phelps Taft Professor at the Department of Mathematical Sciences, University of Cincinnati, and a Fellow of the Graduate School at the University of Cincinnati. Taft Professor David Minda earned his PhD from the University of California, San Diego, in 1970 (Advisor: Burton Rodin). He is an expert on hyperbolic geometry and complex analysis, and is one of those at the forefront of transforming classical complex analysis into the modern field of geometric function theory. He has authored an impressive 120 publications in highly ranked mathematical research journals, and is currently working on a text book on Riemann surfaces. Taft Professor Minda has supervised the PhD dissertation of 4 students, and has held a Research Fellowship at the African Institute of Mathematical Sciences. He is also well-admired for his dedication to education, and his contributions in this area was recognized by the University of Cincinnati with an award of the Dolly Cohen Award for Teaching Excellence in 2001, and he also won the Mathematical Association of America Distinguished College or University Teaching Award in 2002. His stellar contributions to the foundational research in mathematics were recognized by the University of Cincinnati in 1997 with a McMicken Deans Award for Distinguished Scholarship.