

# Manjesh Kumar Hanawal

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CONTACT INFORMATION	Laboratoire Informatique d'Avignon 339, chemin des Meinajaries Agroparc BP 1228 84911 Avignon Cedex 9 FRANCE	office: +33 (0) 49084 3574 mobile: +33 (0) 64530 8106 e-mail: mhanawal@sophia.inria.fr
RESEARCH INTERESTS	Wireless communication and networks, Information theory, Cryptography and Network economics	
EDUCATION	<b>INRIA Sophia Antipolis &amp; University of Avignon, France</b> <i>Doctor of Philosophy</i>	<b>December 2009 – September 2013 (expected)</b>
	<ul style="list-style-type: none"><li>• Advisor: Prof. Eitan Altman</li><li>• Thesis: Spatial and Economical Analysis of Communication Networks</li></ul>	
	<b>Indian Institute of Science, Bangalore, India</b> <i>Master of Science (Engg)</i>	<b>January 2007 - February 2009</b>
	<ul style="list-style-type: none"><li>• Advisor: Prof. Rajesh Sundaresan</li><li>• Thesis: Guessing and Compression: A Large Deviations Approach</li></ul>	
	<b>National Institute of Technology, Bhopal, India</b> <i>Bachelor of Engineering</i>	<b>August 2000- April 2004</b>
	<ul style="list-style-type: none"><li>• Subject: Electronics and Communications</li><li>• Project: Speaker Verification System</li></ul>	
PROFESSIONAL EXPERIENCE	<b>Centre for Artificial Intelligence and Robotics, Bangalore, India</b> <i>Scientist-B</i>	<b>September 2004 - January 2007</b>
	<ul style="list-style-type: none"><li>• Developed and tested physical layer protocols to establish secure connection over a wireless link.</li><li>• Implemented these protocols in FPGAs and integrated with mother boards.</li></ul>	
	<b>Indian Institute of Science, Bangalore, India</b> <i>Project Associate</i>	<b>March 2009 - November 2009</b>
	<ul style="list-style-type: none"><li>• Teaching assistant for the course “Information Theory and Statistical Inference”.</li><li>• Developed password cracking algorithms based on guessing techniques.</li></ul>	
COURSES ATTENDED	Convex Optimization, Real Analysis, Discrete Mathematics, Random Processes, Information Theory, Advanced Wireless Communications, Game theory, Stochastic Geometry, Dynamic Programming.	
TALKS AND TUTORIALS	<ul style="list-style-type: none"><li>• Tutorial on Net Neutrality at Value Tools, Cargese, Corsica, France. Oct -2012.</li><li>• Presentation on “Stochastic Geometry based Problems in Green Networking and Medium Access Control” at Télécom ParisTech, Paris, France. Dec-2011.</li><li>• Presentation on “Tradeoffs in Green Networking” at INRIA-Alcatel meeting at INRIA, Rocquencourt, Paris, France. June 2011.</li><li>• Presentation on “Price of Collusion in Nonneutral Networks” at TREC, INRIA, Paris, France. May 2011.</li></ul>	
AWARDS AND HONORS	<ul style="list-style-type: none"><li>• <b>Awarded Best MSc(Engg) Thesis Medal (Prof. F M Mowdawalla Medal)</b> from Division of Electrical Sciences, IISc, Bangalore, India.</li><li>• <b>Selected as Bharti-scholar by Bharti telecom</b> (also known as Airtel, leading telecom provider in India). Awarded scholarship for the entire duration of Bachelor’s studies (4 years).</li><li>• <b>Awarded Institute Scholarship</b> by NIT Bhopal, India, for consistently maintaining top grades in the EC department.</li></ul>	

CONFERENCE  
PUBLICATIONS

- M. K. Hanawal and E. Altman, "Network Non-Neutrality through Preferential Signaling," accepted for presentation at the 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013), to be held in Tsukuba Science City, Japan, May 2013.
- M. K. Hanawal, E. Altman and R. Sundaresan, "A Game Theoretic Analysis of Collusions in Nonneutral networks," presented at *W-PIN* Workshop, held in conjunction with *SIGMETRICS*, London, UK, June 2012. To appear in Performance Evaluation Review (PER).
- M. K. Hanawal, E. Altman and F. Baccelli, "Stochastic Geometry based Medium Access Games," in Proceedings of the 31<sup>st</sup> *International Conference on Computer Communication* (INFOCOM 2012), held at Orlando, Florida, USA, March 2012.
- M. K. Hanawal and E. Altman, "Stochastic Geometry based Jamming Games in Mobile Ad hoc Networks," in Proceedings of the 9<sup>th</sup> *International Conference on Wireless on-demand Networks and Services* (WONS 2012), held at Courmayeur, Italy, January 2012.
- E. Altman, M. K. Hanawal, R. El-Azouzi and S. Shamaï, "Tradeoffs in Green Cellular Networks," presented at *GreenMetrics* Workshop, held in conjunction with *SIGMETRICS*, San Jose, USA, June 2011. To appear in Performance Evaluation Review (PER).
- M. K. Hanawal, E. Altman, R. El-Azouzi and B. Prabu, "Spatio-temporal control for Dynamic Routing Games," in Proceedings of the 2nd *International ICST Conference on Game Theory for Networks* (GameNets 2011), Shanghai, China, April 2011.
- E. Altman, J. Rojas, S. Wong, M. K. Hanawal and Y. Xu, "Net Neutrality and Quality of Service," *invited paper* in Proceedings of the 2nd *International ICST Conference on Game Theory for Networks* (GameNets 2011), Shanghai, China, April 2011.
- E. Altman, M. K. Hanawal and R. Sundaresan, "Nonneutral network and the role of bargaining power in side payments," in Proceedings of the Fourth Workshop on *Network Control and Optimization* (NETCOOP 2010), pp. 66-73, Ghent, Belgium, November 2010.
- M. K. Hanawal and R. Sundaresan, "The Shannon Cipher System with a Guessing Wiretapper: General Sources," in Proceedings of *International Symposium on Information Theory* (ISIT-2009), Seoul, Korea, June 2009.
- M. K. Hanawal and R. Sundaresan, "Guessing Revisited: A Large Deviations Approach," in Proceedings of *National Conference on Communications* (NCC-2009), held at IIT Guwahati, India, January 2009.

JOURNAL  
PUBLICATIONS

- M. K. Hanawal, E. Altman and F. Baccelli, "Stochastic Geometry based Medium Access Games in Mobile Ad hoc Networks," *IEEE Journal of Selected Areas in Communications*, Special issue on Economics of Communication Networks and Systems, vol. 30, no. 11, pp. 2146 - 2157, December 2012. Technical Report available at [http://arxiv.org/PS\\_cache/arxiv/pdf/1112/1112.3741v1.pdf](http://arxiv.org/PS_cache/arxiv/pdf/1112/1112.3741v1.pdf).
- M. K. Hanawal and R. Sundaresan, "Guessing Revisited: A Large Deviations Approach," *IEEE Transactions on Information Theory*, vol. 57, no. 1, pp. 70-78, January 2011. Technical Report available at [http://www.pal.ece.iisc.ernet.in/PAM/tech\\_rep08/TR-PME-2008-08.pdf](http://www.pal.ece.iisc.ernet.in/PAM/tech_rep08/TR-PME-2008-08.pdf).
- M. K. Hanawal and R. Sundaresan, "The Shannon Cipher System with a Guessing Wiretapper: General Sources," *IEEE Transactions on Information Theory*, vol. 57, no. 4, April 2011. Technical Report available at [http://www.pal.ece.iisc.ernet.in/PAM/tech\\_rep09/TR-PME-2009-04.pdf](http://www.pal.ece.iisc.ernet.in/PAM/tech_rep09/TR-PME-2009-04.pdf).

ARTICLES UNDER  
REVIEW

- M. K. Hanawal, E. Altman and R. Sundaresan, "Non-neutral Network and Role of Bargaining Power in Side Payments," submitted to *Transaction on Networking*. Available online at <http://arxiv.org/abs/1204.4647v1.pdf>.
- M. K. Hanawal and E. Altman, "Stochastic Geometry based Jamming Games," submitted to *Transaction on Wireless communication*. Available online at [http://www-sop.inria.fr/members/Manjesh\\_Kumar.Hanawal/SGJamming.pdf](http://www-sop.inria.fr/members/Manjesh_Kumar.Hanawal/SGJamming.pdf).

TECHNICAL  
REPORTS  
(UNPUBLISHED)

- M. K. Hanawal and R. Sundaresan, "Randomised attacks on passwords," Technical Report TR-PME-2010-11. Available online at [http://www.pal.ece.iisc.ernet.in/PAM/docs/techreports/tech\\_rep10/TR-PME-2010-11.pdf](http://www.pal.ece.iisc.ernet.in/PAM/docs/techreports/tech_rep10/TR-PME-2010-11.pdf).

PEER REVIEWING IEEE JSAC, IEEE Wireless communications, IEEE Transactions on Vehicular Technology, ISIT, ITW, Infocom, GameSec, NetGCoop, WiOpt.

TRAVEL GRANTS EuroNF travel grant to participate in Infocom 2012, Student travel grant for the 2012 Stochastic network conference.

PROGRAMMING C,C++, JAVA (Core)  
SKILLS

SOFTWARE TOOLS MATLAB, MAPLE, ECLIPSE

SPORTS Completed Cannes half marathon 2010, Paris marathon 2011, Mumbai marathon 2012, and Nice-Cannes marathon 2012. Part of cricket teams (playing XI) at EC Department NIT Bhopal, CAIR Bangalore, and ECE department IISc, Bangalore, India.

PERSONNEL  
DETAILS

- Citizenship : Indian
- Date of Birth : 25th May 1982
- Current Address :  
No. 211, University Park  
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REFERENCES

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- **Prof. Rajesh Sundaresan**  
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